

APPENDIX C
Monitoring Well Information



APPENDIX C:
MONITORING WELL INFORMATION
CONTENTS

Description	Page
Pictures of Monitoring Well Cluster Completions	C-1
 <u>MW-1S</u>	
Lithologic Log.....	C-6
As-Built	C-9
 <u>MW-1M</u>	
Lithologic Log.....	C-10
As-Built	C-16
 <u>MW-1D</u>	
Lithologic Log.....	C-17
Geophysical Logs	C-26
As-Built	C-35
 <u>MW-3S</u>	
Lithologic Log.....	C-36
As-Built	C-39
 <u>MW-3M</u>	
Lithologic Log.....	C-40
As-Built	C-46

MW-3D

Lithologic Log C-47
As-Built C-56

MW-4S

Lithologic Log C-57
As-Built C-60

MW-4M

Lithologic Log C-61
As-Built C-68

MW-4D

Lithologic Log C-69
Geophysical Logs C-78
As-Built C-88

MW-5S(P)

Lithologic Log C-89
As-Built C-92

MW-5M

Lithologic Log C-93
As-Built C-102

MW-5D

Lithologic Log C-103
Geophysical Logs C-115
As-Built C-127

MW-6S

Lithologic LogC-128
As-BuiltC-130

MW-6M

Lithologic LogC-131
As-BuiltC-137

MW-6M(L)

Lithologic LogC-138
Geophysical LogsC-147
As-BuiltC-157

MW-7S

Lithologic LogC-158
As-BuiltC-161

MW-7M

Lithologic LogC-162
Geophysical LogC-168
As-BuiltC-174

MW-7D

Lithologic LogC-175
Geophysical LogsC-185
As-BuiltC-195

MW-8S

Lithologic LogC-196
As-BuiltC-199

MW-8M

Lithologic LogC-200
As-BuiltC-206

MW-8D

Lithologic LogC-207
Geophysical LogsC-217
As-BuiltC-228

MW-9S

Lithologic LogC-229
As-BuiltC-233

MW-9M

Lithologic LogC-234
As-BuiltC-240

MW-9D

Lithologic LogC-241
Geophysical LogsC-252
As-BuiltC-260

APPENDIX C: MONITORING WELL INFORMATION

PICTURES OF MONITORING WELL CLUSTER COMPLETIONS



MW-1



MW-3



MW-4



MW-5



MW-6



MW-7

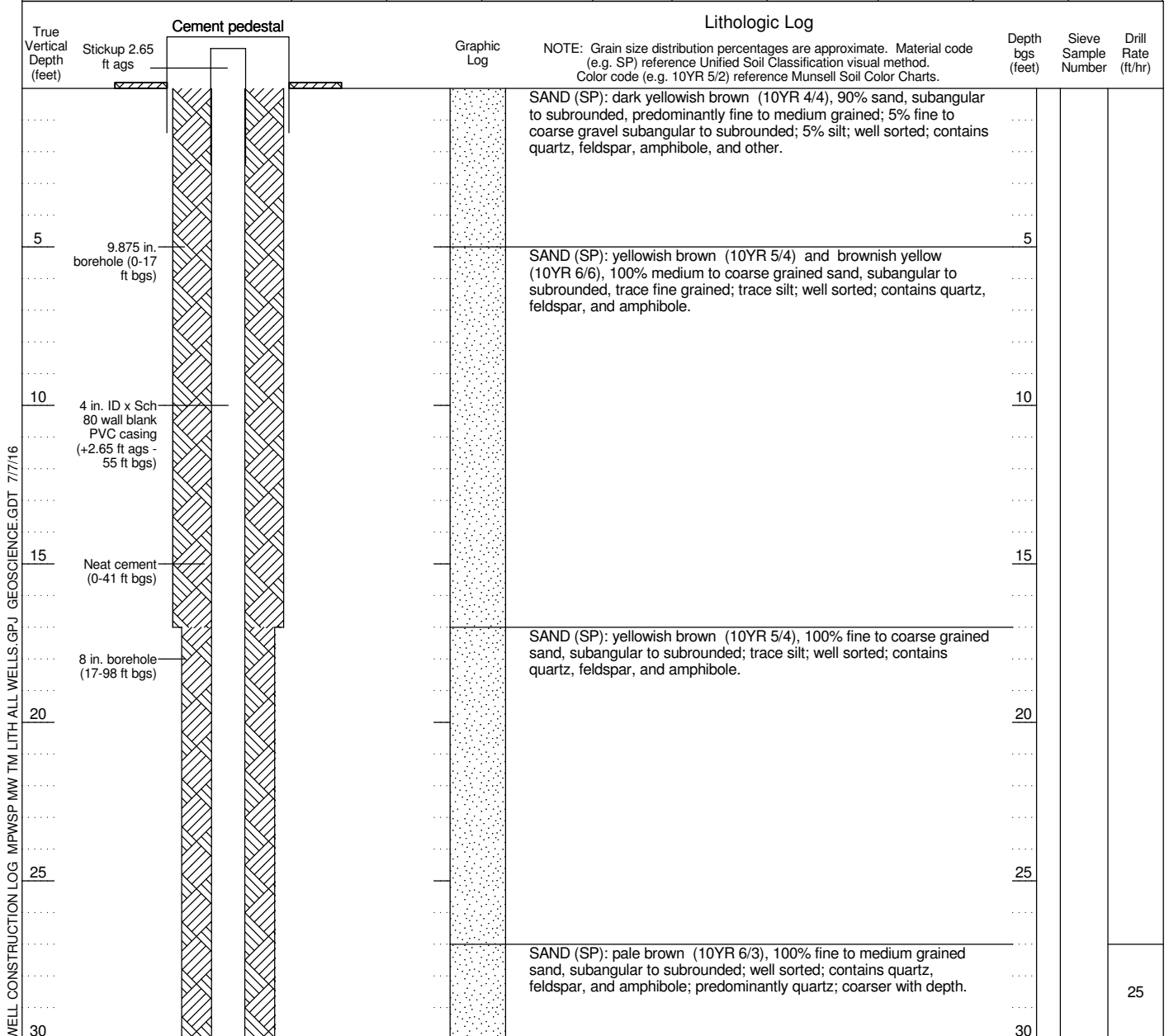


MW-8



MW-9

WELL NUMBER MPWSP MW-1S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA CEMEX							
REPORT DATE			LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling A. Patricio										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.65	55	57.65	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	55	95	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	9.875, 8 in	Blank	95	97.5	2.5	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	27.86 ft NAVD88									
TOC ELEVATION	30.51 ft NAVD88 (RP)									
START DATE	1/24/15									
FINISH DATE	1/26/15									



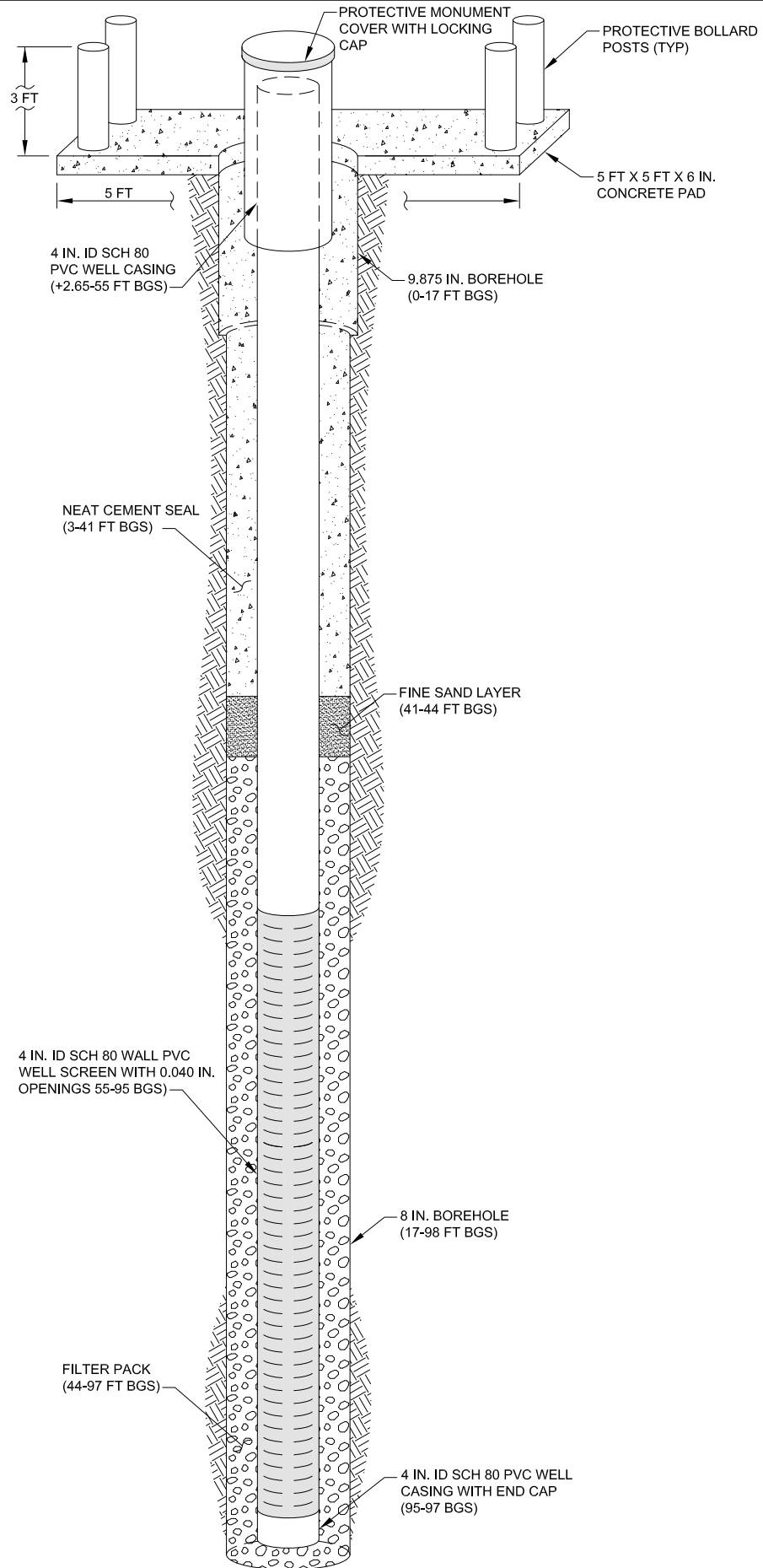
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1S		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35					35		
40					40		25
45	CEMEX Monterey Lapis Lustre #60 fine sand seal (41-44.5 ft bgs)				45		
50	CEMEX Monterey Lapis Lustre #3 filter pack (44.5-98 ft bgs)			SAND WITH GRAVEL (SP): light yellowish brown (10YR 6/4), 75% fine to coarse grained sand, subangular to subrounded; 25% fine gravel up to 15 mm, subangular to subrounded; well sorted; contains quartz, feldspar, mica, amphibole, and other; abundance of minerals.	50		
55				SAND (SP): light olive brown (2.5Y 5/3), 95% fine to medium grained sand, subangular; 5% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other; high content of dark minerals.	55		
60	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (55-95 ft bgs)				60		8.75
65				SAND (SP): olive brown (2.5Y 4/3), 95% sand, subangular, very fine to fine grained; 5% silt; well sorted; contains quartz, feldspar, and mica; high mica content.	65		
70				SAND (SP): olive (5Y 4/3) and olive (5Y 4/4), 100% sand, subangular, very fine to fine grained; trace silt; well sorted; contains	70		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

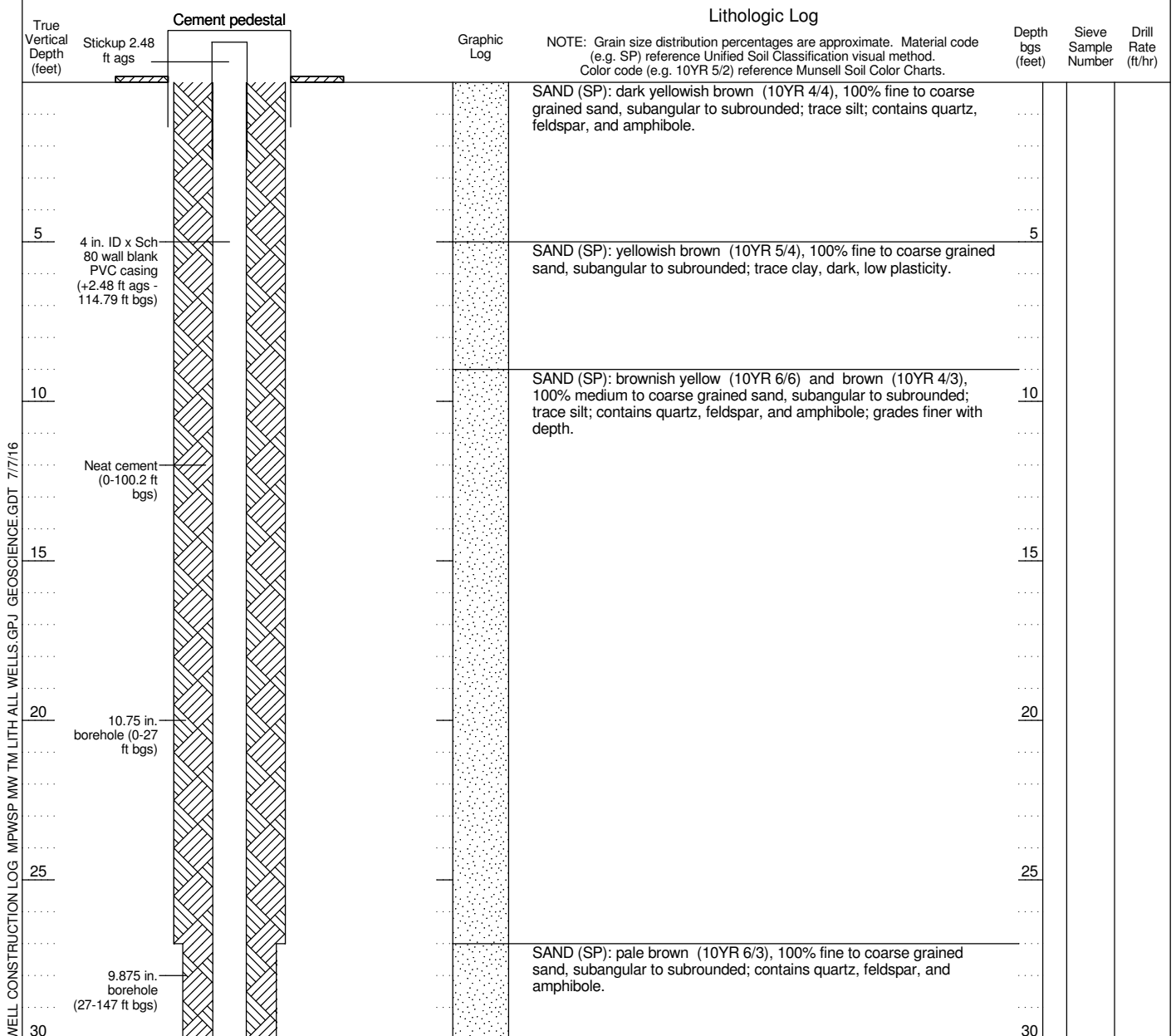
WELL NUMBER MPWSP MW-1S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			quartz, feldspar, and mica; high mica content.	
75				
80				8.75
85			SAND (SP): olive (5Y 4/4), 90% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 10 mm, subangular to subrounded; 5% silt; medium sorted; contains quartz, feldspar, mica, and amphibole.	
90			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 75% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel up to 42 mm, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	
95			SAND (SP): light olive brown (2.5Y 5/3), 95% fine to medium grained sand, subangular; 5% silt; well sorted; contains quartz, feldspar, mica, and amphibole; high mica content.	10
	Blank casing with end cap (95-97.5 ft bgs)		SAND WITH GRAVEL (SP): yellowish brown (10YR 5/8), 85% fine to coarse grained sand, subangular to subrounded; 15% fine gravel up to 15 mm, subangular to subrounded; medium sorted; contains quartz, feldspar, and amphibole.	
	TD 98 ft bgs		SAND WITH SILT (SP-SM): pale olive (5Y 6/3), 90% fine to medium grained sand, subangular to subrounded, trace coarse; 10% silt; trace fine gravel subangular to subrounded; well sorted; contains quartz, feldspar, mica, and amphibole.	
			Bottom of borehole at 98 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG							
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA CEMEX							
REPORT DATE		LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling A. Patricio									
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
ProSonic 600T	Blank	-2.48	114.79	117.27	PVC	Sch 80	4 / ID		
DRILLING METHOD	Sonic								
SAMPLING METHOD	Core	Screen	114.79	224.79	110	PVC	Sch 80	4 / ID	Slotted
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	224.79	227.5	2.71	PVC	Sch 80	4 / ID	
SURFACE ELEVATION	27.38 ft NAVD88								
TOC ELEVATION	29.86 ft NAVD88 (RP)								
START DATE	1/20/15								
FINISH DATE	1/24/15								



WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35					35		
40				SAND (SP): pale brown (10YR 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; contains quartz, feldspar, and amphibole.	40		
45					45		
50				SAND WITH GRAVEL (SP): light yellowish brown (10YR 6/4), 80% fine to coarse grained sand, subangular to subrounded; 20% fine gravel up to 12 mm, subangular to subrounded; contains quartz, feldspar, mica, and amphibole; high amphibole content.	50		
55				SAND (SP): light olive brown (2.5Y 5/3), 95% fine to medium grained sand, subangular; 5% silt; contains quartz, feldspar, mica, and amphibole; high dark mineral content.	55		
60					60		
65				SAND (SP): olive brown (2.5Y 4/3), 95% sand, subangular, very fine to fine grained; 5% silt; well sorted; contains quartz, mica, and amphibole; high mica content.	65		
70				SAND (SP): olive brown (2.5Y 4/3), 100% sand, subangular, very fine to fine grained; trace silt; well sorted; contains quartz, mica, and	70		13.3

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16





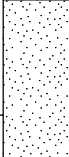
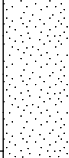
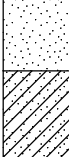

WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			amphibole; high mica content.	
75				75
80				80
85			SAND (SP): light olive brown (2.5Y 5/3), 95% fine to coarse grained sand, subangular to subrounded, predominantly medium to coarse sand; 5% fine gravel subangular to subrounded; contains feldspar, amphibole, and trace quartz.	85
			SAND WITH GRAVEL (SP): yellowish red (5YR 5/6), 80% fine to coarse grained sand, subangular to subrounded; 20% fine gravel up to 10 mm, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
			SAND (SP): dark yellowish brown (10YR 4/4), 95% sand, subangular, very fine to fine grained; 5% silt; well sorted; contains quartz, feldspar, mica, and amphibole.	
90			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 80% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel up to 45 mm, subangular to subrounded; trace cobbles; contains quartz, feldspar, mica, and amphibole.	90
95			SAND (SP): light olive brown (2.5Y 5/3), 100% fine to medium grained sand, subangular; contains quartz, feldspar, mica, and amphibole; grades finer with depth; high mica content.	95
100			SAND WITH SILT (SP-SM): brown (10YR 4/3), 90% fine grained sand, subangular to subrounded, trace coarse grains; 10% silt; well sorted; contains quartz, feldspar, mica, and amphibole.	100
105	CEMEX Monterey #60 fine sand seal (100.2-104 ft bgs)			105
	CEMEX Monterey #3 filter pack (104-227.5 ft bgs)			
110				110

13.3

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
115			SAND (SP): brownish yellow (10YR 6/6) and gray (5Y 6/1), 100% fine to coarse grained sand, subangular to subrounded; trace silt; contains quartz, feldspar, and amphibole; iron oxidation.	115
120	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (114.79-224.79 ft bgs)		SILTY SAND (SM): strong brown (7.5YR 5/6), 85% fine to medium grained sand, subrounded, predominately fine sand; 15% silt; contains quartz, feldspar, mica, and amphibole.	120
125			SILTY SAND (SM): light yellowish brown (10YR 6/4), 75% fine grained sand, subangular; 25% silt; well sorted; contains quartz, feldspar, mica, and amphibole.	125
130			SAND (SP): reddish yellow (7.5YR 6/8), 85% fine to coarse grained sand, angular to subangular; 10% fine to coarse gravel angular to subangular; 5% clay, low plasticity. CLAYEY SAND (SC): pale olive (5Y 6/3), 85% fine grained sand, subangular; 15% clay, low plasticity; contains quartz, and amphibole. SAND WITH GRAVEL (SP): brown (7.5YR 5/4), 80% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel subangular to subrounded; 5% clay, low to medium plasticity, clay balls.	130
135			SILTY SAND (SM): dark yellowish brown (10YR 4/4), 85% fine to medium grained sand, subrounded; 15% silt; contains quartz, feldspar, and amphibole; high dark mineral content.	135
140				140
145				145
150	8 in. borehole (147-227.5 ft)		FAT CLAY WITH SAND (CH): light olive brown (2.5Y 5/4) and pale olive (5Y 6/3), 85% clay, medium plasticity; 15% fine to medium grained sand, subangular; contains quartz, mica, and amphibole.	150

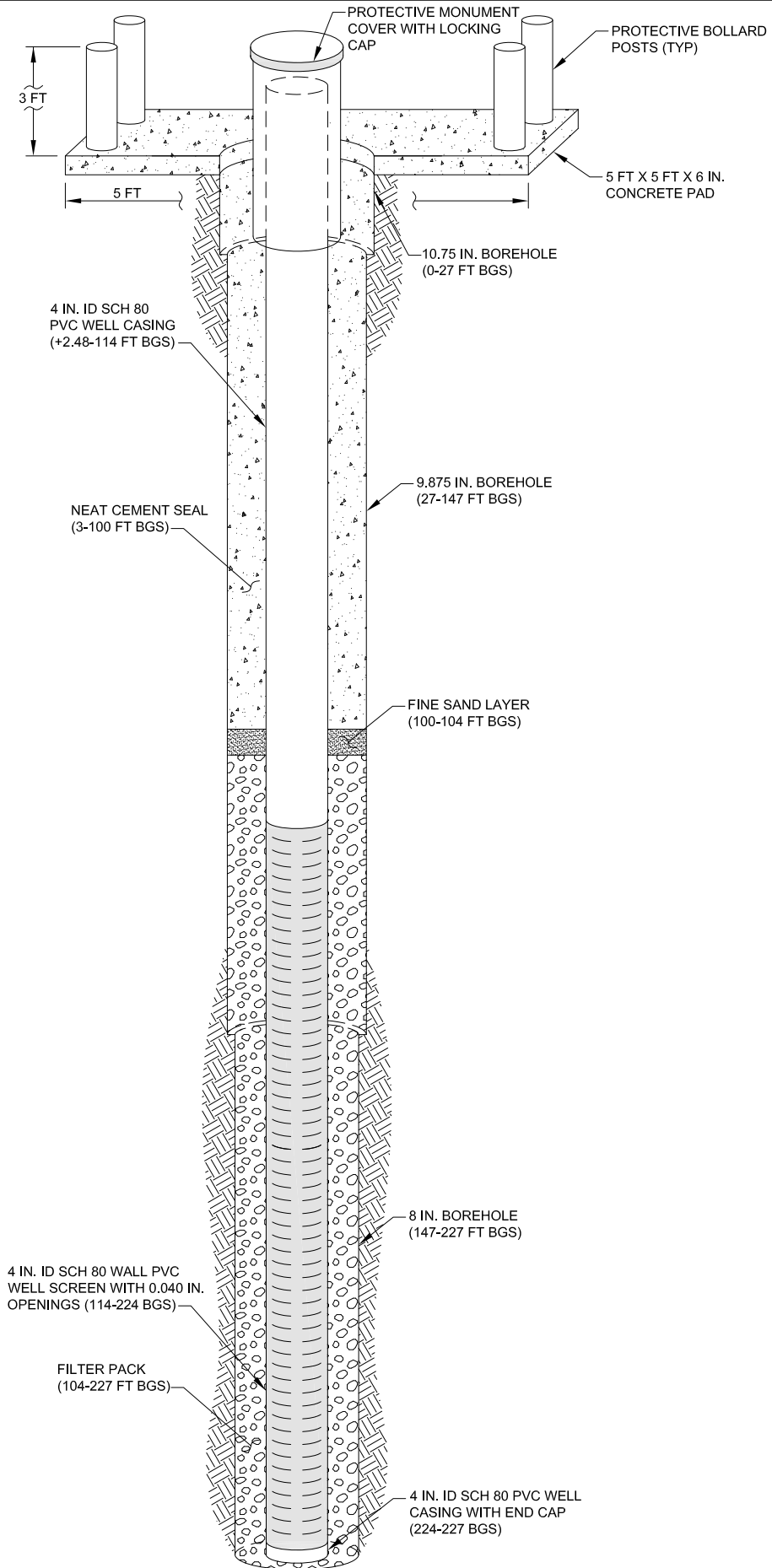
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
155			CLAYEY SAND (SC): light olive brown (2.5Y 5/4), 80% fine to medium grained sand, subangular; 20% clay, low plasticity; contains quartz, mica, and amphibole.	155
160			CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), 75% fine to medium grained sand, subangular to subrounded; 25% clay, low plasticity; contains quartz, feldspar, and amphibole.	160
165				165
170			SAND (SP): dark yellowish brown (10YR 4/4), 95% fine to medium grained sand, subangular, trace coarse sand; 5% silt.	170
175				175
180			CLAYEY SAND (SC): yellowish red (5YR 4/6) and olive gray (5Y 4/2), 85% fine to medium grained sand, subangular to subrounded; 15% clay, low plasticity; weak cementation; contains quartz, feldspar, and amphibole; high dark mineral content.	180
185				185
190			SAND (SP): dark brown (10YR 3/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; weak cementation; contains quartz, feldspar, and amphibole; high dark mineral content.	190

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

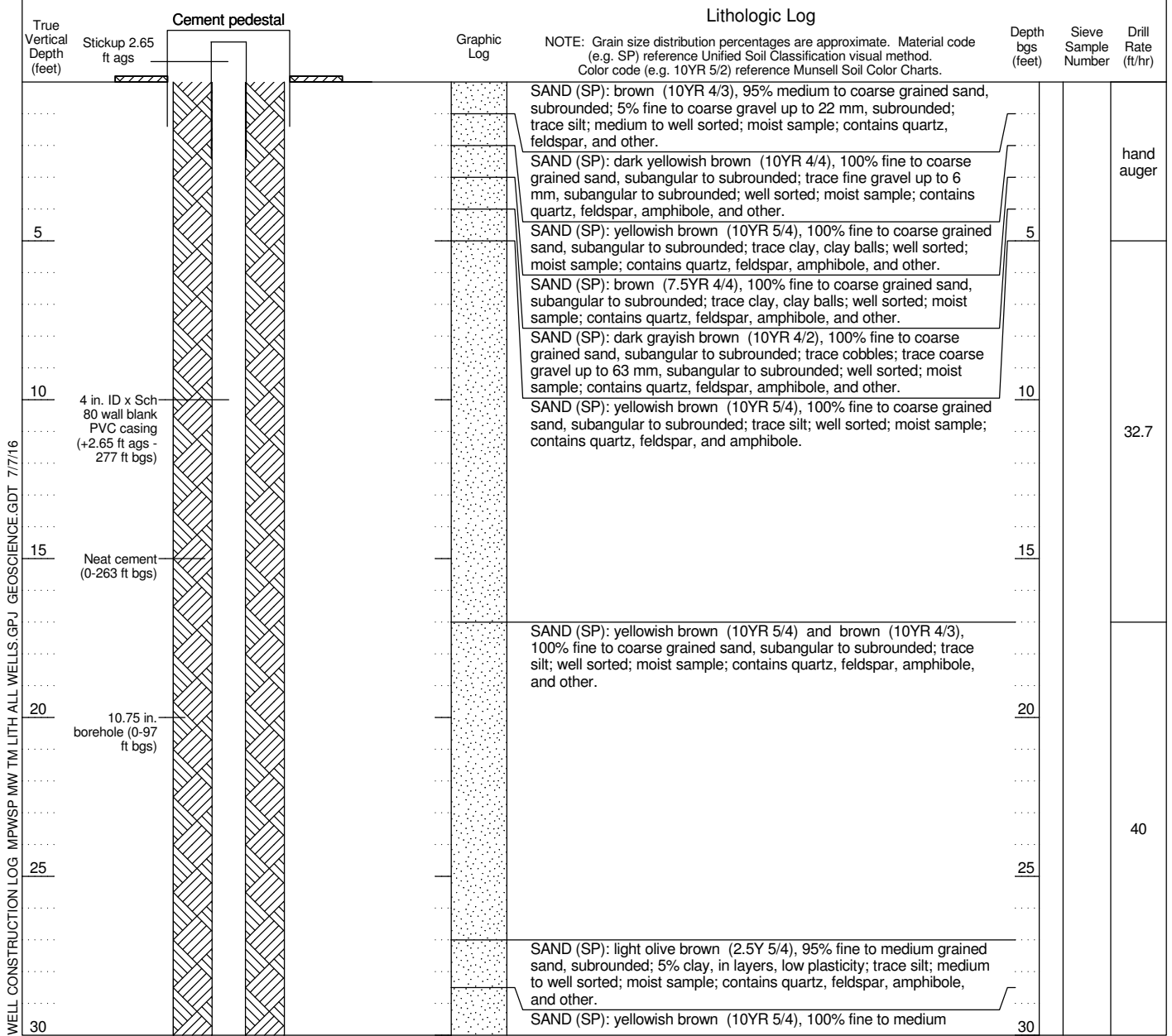
WELL NUMBER MPWSP MW-1M		BOREHOLE LITHOLOGIC LOG (continued)				
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA			
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log <small>NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.</small>	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
195				195		
200			SAND WITH SILT (SP-SM): dark brown (10YR 3/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; contains quartz, feldspar, and amphibole; high dark mineral content.	200		
205			SILT (ML): light olive brown (2.5Y 5/3), 100% silt, brittle.	205		
210			SAND WITH CLAY (SP-SC): pale olive (5Y 6/3), 85% fine to coarse grained sand, subangular; 10% clay, low plasticity; 5% fine gravel subangular, trace coarse gravel; contains quartz, feldspar, mica, and amphibole.	210		
215			CLAYEY SAND (SC): light olive gray (5Y 6/2), 75% fine to coarse grained sand, subangular to subrounded; 15% clay, low plasticity; 10% fine to coarse gravel subangular to subrounded.	215		
220			SAND (SP): olive (5Y 5/3) and light olive gray (5Y 6/2), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; contains quartz, feldspar, mica, and amphibole; predominantly quartz.	220		
225			SILT (ML): light olive brown (2.5Y 5/4), 100% silt, low plasticity; contains mica.	225		
	Blank casing with end cap (224.79-227.5 ft bgs)					
	TD 227.5 ft bgs		Bottom of borehole at 227.5 feet.			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA CEMEX							
REPORT DATE			LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling A. Patricio										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.65	277	279.65	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	277	327	50	PVC	Sch 80	4 / ID	Slotted 0.04	
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	327	329.55	2.55	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	27.03 ft NAVD88									
TOC ELEVATION	29.68 ft NAVD88 (RP)									
START DATE	12/10/14									
FINISH DATE	12/19/14									



WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet) | Sieve Sample Number | Drill Rate (ft/hr)
			grained sand, subrounded; trace silt; well sorted; moist sample; contains quartz, feldspar, amphibole, and other.	
35			SAND (SP): pale brown (10YR 6/3), 100% fine to coarse grained sand, angular to subangular; well sorted; moist sample; contains quartz, feldspar, mica, amphibole, and other.	35 | 1
40			SAND (SP): pale brown (10YR 6/3), 100% fine to coarse grained sand, angular to subangular; well sorted; moist sample; contains quartz, feldspar, mica, amphibole, and other; saturated at 41 ft bgs.	40 | 2
45				
50			SAND WITH GRAVEL (SP): light yellowish brown (10YR 6/4), 85% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 27 mm, subangular to subrounded; medium sorted; saturated sample; contains quartz, feldspar, amphibole, and other.	50 | 3
55			SAND (SP): light olive brown (2.5Y 5/3), 95% fine to medium grained sand, subangular to subrounded; 5% clay, clay balls, low plasticity; trace fine gravel up to 5 mm, subangular to subrounded; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other.	55
60			SAND (SP): light olive brown (2.5Y 5/3), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel up to 5 mm, subangular to subrounded; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.	60
65			SAND (SP): brown (10YR 4/3), 100% fine grained sand, subrounded; trace silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.	65
70			SAND (SP): brown (10YR 5/3), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel up to 10 mm, subangular to subrounded; trace silt; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other; very fine sand with gravel and trace silt at 69-70 ft bgs.	70 | 4

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-1D** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log			
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
75			SILTY SAND (SM): olive brown (2.5Y 4/3), 85% fine grained sand, subangular to subrounded; 15% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.	75		40
80			SAND (SP): light olive brown (2.5Y 5/4), 95% fine to coarse grained sand, angular to subangular; 5% silt; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.	80		16.7
85			SILTY SAND (SM): olive brown (2.5Y 4/3), 85% fine grained sand, subangular to subrounded; 15% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.	85		5
90			SAND WITH GRAVEL (SP): yellowish red (5YR 5/6), 65% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel up to 55 mm, subangular to subrounded; 5% clay, low plasticity; poorly sorted; contains quartz, amphibole, and other.	90		
95			SAND WITH GRAVEL (SP): yellowish red (5YR 5/6), 85% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 22 mm, subangular to subrounded; trace clay; medium sorted; contains quartz, feldspar, amphibole, and other.	95		
100			SAND (SP): light olive brown (2.5Y 5/4), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel up to 11 mm, subangular to subrounded; trace clay; medium to well sorted; contains quartz, feldspar, amphibole, and other.	100		46.2
105			SAND (SP): light olive brown (2.5Y 5/4), 100% fine to medium grained sand, subangular to subrounded; trace silt; well sorted; contains quartz, feldspar, mica, and other.	105		
110			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 85% fine to coarse grained sand, subrounded; 15% fine to coarse gravel up to 32 mm, subrounded; trace clay; medium sorted; contains quartz, feldspar, amphibole, and other.	110		
110			SAND (SP): light olive brown (2.5Y 5/3), 100% fine to medium grained sand, subangular, grading finer towards bottom; trace clay; well sorted; contains quartz, feldspar, mica, amphibole, and other.	110		
110			SAND WITH SILT (SP-SM): brown (10YR 4/3), 85% fine to coarse grained sand, subangular to subrounded; 10% silt; 5% fine gravel up to 6 mm, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, amphibole, and other.	110		
110			SILTY SAND (SM): brown (10YR 4/3) and olive brown (2.5Y 4/3), 75% fine grained sand, subangular to subrounded; 25% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other; shells from 106-109 ft bgs.	110		21.4
110				110		150

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

9.875 in. borehole (97-247 ft bgs)

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
						6	
115			SAND (SP): yellowish red (5YR 5/8) and light yellowish brown (2.5Y 6/4), 100% fine to coarse grained sand, subangular to subrounded; trace silt; well sorted; contains quartz, feldspar, amphibole, and other; yellowish red from 114.4-117 ft bgs.		115	7	150
120					120		
125			SILTY SAND (SM): strong brown (7.5YR 5/6) and yellowish brown (10YR 5/4), 85% fine to medium grained sand, subrounded, predominantly fine, pockets of coarse sand and trace gravel; 15% silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other.		125		
130			SAND (SP): yellowish brown (10YR 5/4), 85% fine to coarse grained sand, angular to subangular; 10% fine gravel up to 5 mm, angular to subangular; 5% silt; poorly to medium sorted; contains quartz, feldspar, amphibole, and other. CLAYEY SAND (SC): strong brown (7.5YR 5/6), 80% fine grained sand, subangular; 20% clay, low plasticity; well sorted; contains quartz, amphibole, and other; with visible alteration. SAND WITH CLAY AND GRAVEL (SP-SC): brown (7.5YR 5/4) and yellowish red (5YR 4/6), 75% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 61 mm, subangular to subrounded; 10% clay, medium plasticity; medium sorted; contains quartz, feldspar, mica, amphibole, and other.		130	8	19
135			SILTY SAND (SM): (2.5YR 6/3), 80% fine to coarse grained sand, subangular to subrounded; 15% silt, low plasticity; 5% fine gravel up to 5 mm, subangular to subrounded; medium sorted; contains quartz, mica, and amphibole. SILT (ML): brown (7.5YR 5/4) and strong brown (7.5YR 4/6), 95% silt, low plasticity; 5% fine to medium grained sand, subangular; trace clay, 140.2-147 ft bgs; contains quartz, and other.		135		
140					140		
145					145		17.1
150			FAT CLAY (CH): dark grayish brown (2.5Y 4/2), 100% clay, high plasticity; trace medium grained sand, subrounded; contains quartz, and other. CLAYEY SAND (SC): light olive brown (2.5Y 5/4), 85% fine to		150		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lgs (feet)	Sieve Sample Number
155			medium grained sand, subangular; 15% clay, low plasticity; medium sorted; contains quartz, amphibole, and other.	9
160			CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), 85% fine grained sand, subangular; 15% clay, low to medium plasticity; medium sorted; contains quartz, amphibole, and other.	10
165				
170			SAND (SP): dark yellowish brown (10YR 4/4), 95% fine to medium grained sand, subangular, trace coarse; 5% silt; well sorted; contains quartz, feldspar, amphibole, and other.	11
175				
180			CLAYEY SAND (SC): yellowish red (5YR 4/6) and olive gray (5Y 4/2), 85% fine to medium grained sand, subangular to subrounded; 15% clay, low to high plasticity; medium sorted; contains quartz, feldspar, amphibole, and other; with visible alteration.	11
185				
190				11

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lbs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195					195		8.6
200				SILTY SAND (SM): dark brown (10YR 3/3), 85% fine to medium grained sand, subangular to subrounded, predominantly fine; 15% silt; medium sorted; contains quartz, amphibole, and other.	200		
205					205		16
210					210		
215				FAT CLAY (CH): light olive brown (2.5Y 5/3), 100% clay, high plasticity; trace fine grained sand, subangular; contains quartz, and other.	215		
220					220		12
225				FAT CLAY WITH SAND (CH): olive yellow (2.5Y 6/6), 85% clay, medium to high plasticity; 15% fine to medium grained sand, subangular; contains quartz, feldspar, mica, amphibole, and other.	225		20
230				FAT CLAY (CH): olive gray (5Y 5/2), 100% clay, high plasticity; with visible alteration.	230		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
235				20
240				
245			SANDY CLAY (CL): light olive gray (5Y 6/2), 65% clay, low to medium plasticity; 35% fine to medium grained sand, subangular; contains quartz, mica, amphibole, and other.	
			SAND WITH GRAVEL (SP): light yellowish brown (2.5Y 6/3), 55% fine to coarse grained sand, subangular; 40% fine to coarse gravel up to 46 mm, subangular, one large cobble; 5% clay; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.	13
			FAT CLAY (CH): pale olive (5Y 6/3) and dark gray (N4), 100% clay, high plasticity.	14
250	8 in. borehole (247-337 ft bgs)			3.7
255				
260				17
265	CEMEX Monterey Lapis Lustre #60 fine sand seal (263-267 ft bgs)		SANDY FAT CLAY (CH): light olive brown (2.5Y 5/3), 60% clay, medium to high plasticity; 30% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel up to 53 mm, subangular to subrounded; contains quartz, amphibole, and other.	
	CEMEX Monterey Lapis Lustre #3 filter pack (267-337 ft bgs)		CLAY WITH SAND (CL): olive gray (5Y 5/2), 85% clay, medium plasticity; 10% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 5 mm, subangular to subrounded; contains quartz, feldspar, mica, amphibole, and other.	
270			SAND WITH CLAY AND GRAVEL (SP-SC): light brownish gray (2.5Y	14.6

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)
275			6/2), 75% fine to coarse grained sand, subangular; 15% fine to coarse gravel up to 19 mm, subangular; 10% clay, low to medium plasticity; poorly sorted; contains quartz, feldspar, amphibole, and other; predominantly quartz.	
275			CLAYEY GRAVEL WITH SAND (GC): light yellowish brown (10YR 6/4) and dark gray (N4), 45% fine to coarse gravel up to 75 mm, subangular; 40% fine to coarse grained sand, subangular; 15% clay, low to medium plasticity; trace cobbles; poorly sorted; contains quartz, feldspar, mica, amphibole, and other; trace cobbles to 81 mm; chert.	275
280	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (277-327 ft bgs)		FAT CLAY (CH): olive brown (2.5Y 4/3), 100% clay, medium plasticity, brittle; trace fine to medium grained sand, subangular to subrounded.	
280			SAND (SP): pale brown (10YR 6/3), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel up to 7 mm, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, amphibole, and other; some grading.	15
285			SAND WITH GRAVEL (SP): grayish brown (10YR 5/2), 65% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel up to 21 mm, subangular to subrounded; 5% clay, low plasticity; poorly sorted; contains quartz, feldspar, amphibole, and other.	16
290			SANDY SILT (ML): brown (7.5YR 5/4), 70% silt; 30% fine grained sand, subrounded, very fine; contains quartz, feldspar, mica, and other.	17
295			SAND (SP): light yellowish brown (10YR 6/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 5 mm, subangular to subrounded; trace silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other.	14.6
305			SAND WITH CLAY AND GRAVEL (SW-SC): yellowish brown (10YR 5/4), 65% medium to coarse grained sand, subangular to subrounded, predominantly fine to medium; 25% fine to coarse gravel up to 20 mm, subangular to subrounded; 10% clay, low plasticity; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.	
310				310

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-1D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
315					315	18	14.6
320			SAND (SP): brown (7.5YR 4/2), 95% fine to medium grained sand, subrounded, predominantly very fine to fine; 5% silt; well sorted; contains quartz, amphibole, and other.			19	
325			SILT (ML): brown (7.5YR 4/4), 100% silt, low plasticity; trace fine grained sand, subrounded; contains quartz, mica, and other.		320		
330	Blank casing with end cap (327-329.5 ft bgs)		SAND (SP): brown (10YR 5/3), 100% fine to medium grained sand, subangular to subrounded; trace silt; well sorted; contains quartz, mica, amphibole, and other.		325		
335			FAT CLAY (CH): dark yellowish brown (10YR 4/4) and olive gray (5Y 5/2), 100% clay, high plasticity, brittle from 327-329.3 ft bgs.		330		7.9
	TD 337 ft bgs				335		
			Bottom of borehole at 337 feet.				

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19027	Company CASCAD DRILLING
Well MPWSP MW-1D	
Field MARINA	
County MONTEREY	State CA

Location
CEMEX PLANT OFF OF LAPIS RD.
GPS: N 36o 42.787' W 121o 48.350'
Other Services:
DUAL INDUCTION
GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	12-14-2014		
Run Number	ONE		
Depth Driller	334'		
Depth Logger	334'		
Bottom Logged Interval	334'		
Top Log Interval	0'		
Open Hole Size	9" (97'-247')	8" (247'-337')	
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	26'		
Bentonite Seal	N/A		
Time Well Ready	1200		
Time Logger on Bottom	1330		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	J. SOBOLEW		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10"	0'	97'				
TWO	9"	97'	247'				
THREE	8"	247'	337'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	10"	N/A	0'	97'
Prot. String				
Production String	4" PVC	SCH 80	0'	334'
Liner				

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19027.db
 Dataset Pathname TEMP
 Dataset Creation Sun Dec 14 13:47:01 2014

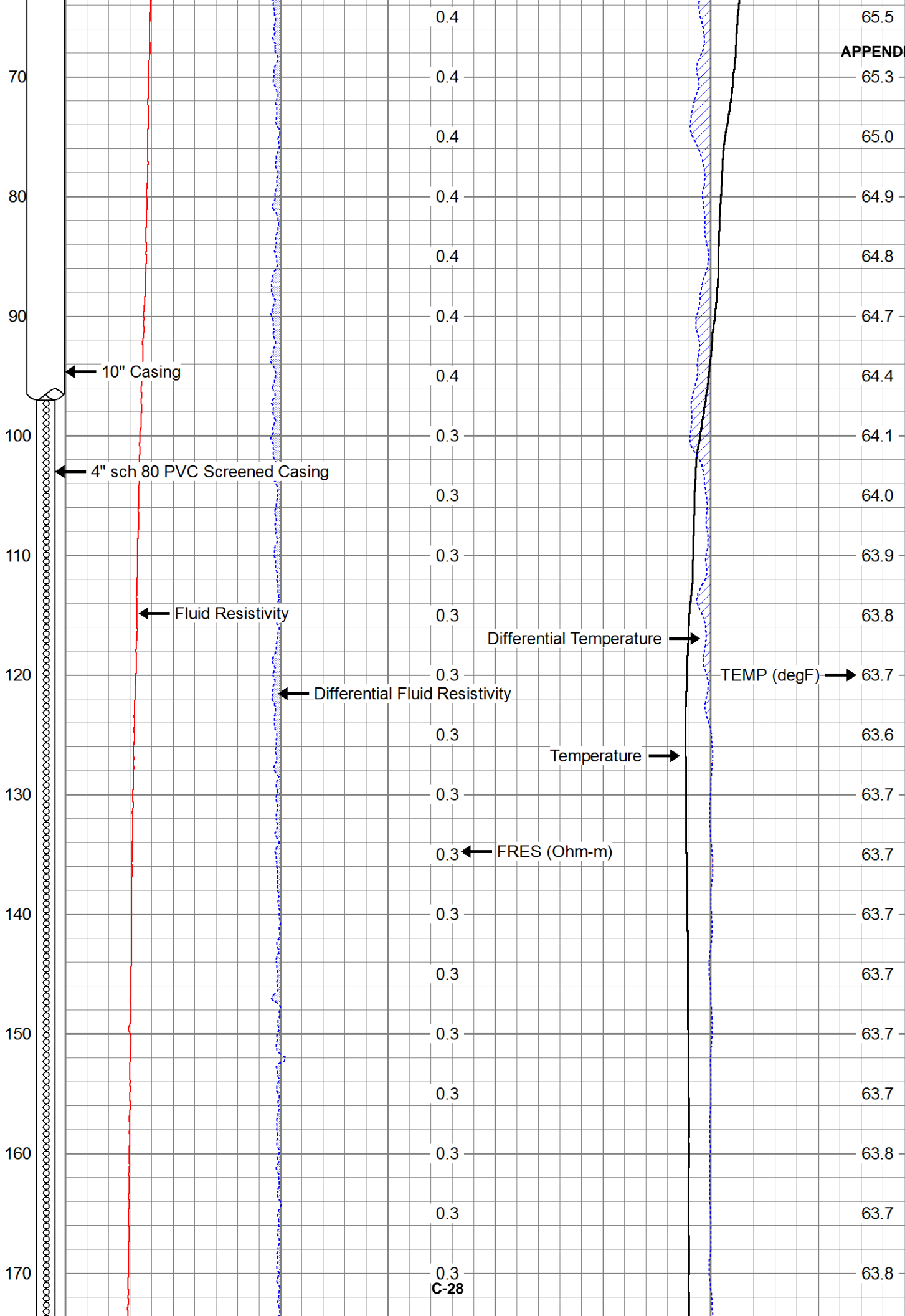
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 Performed: Wed Aug 29 07:13:35 2012

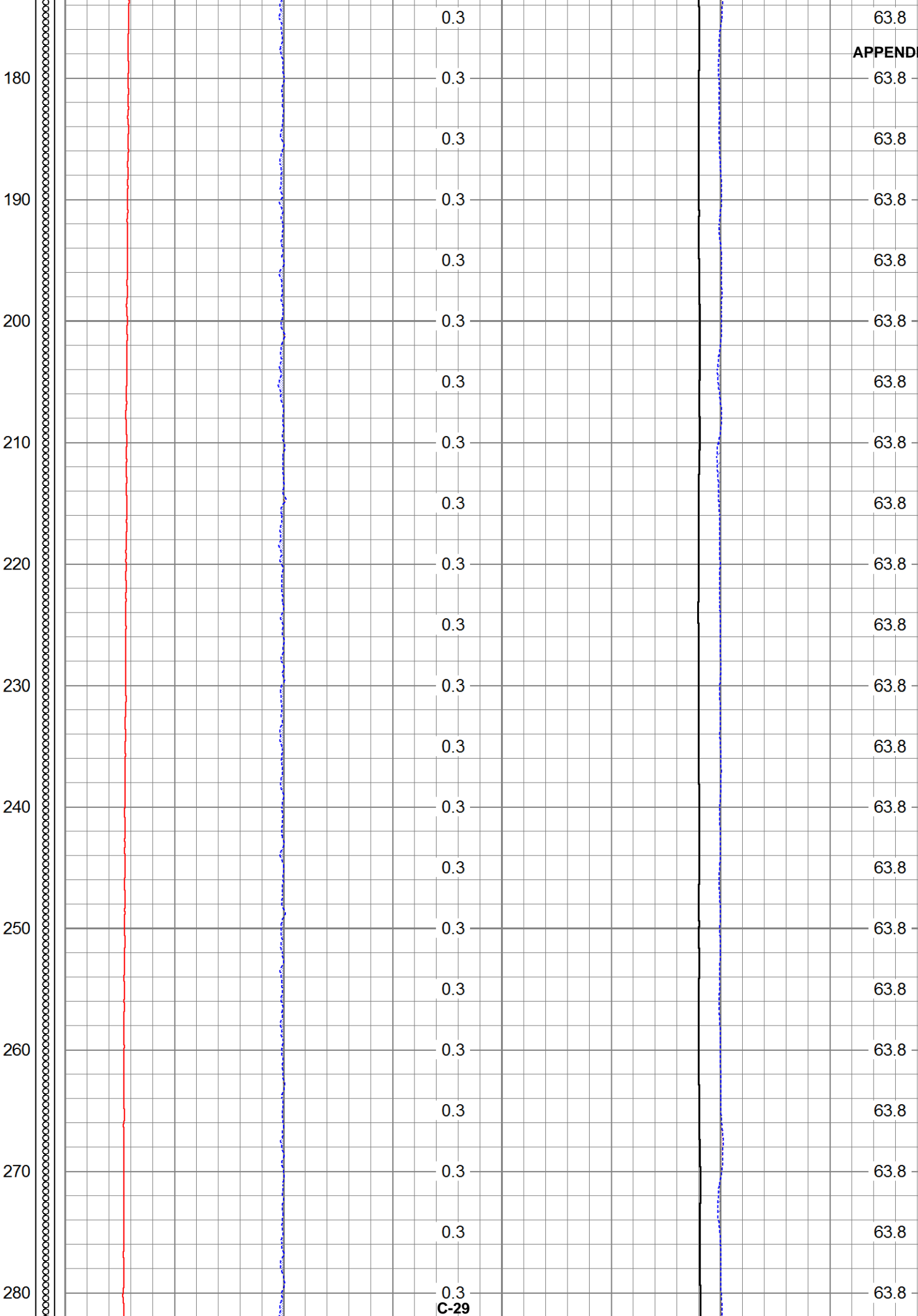
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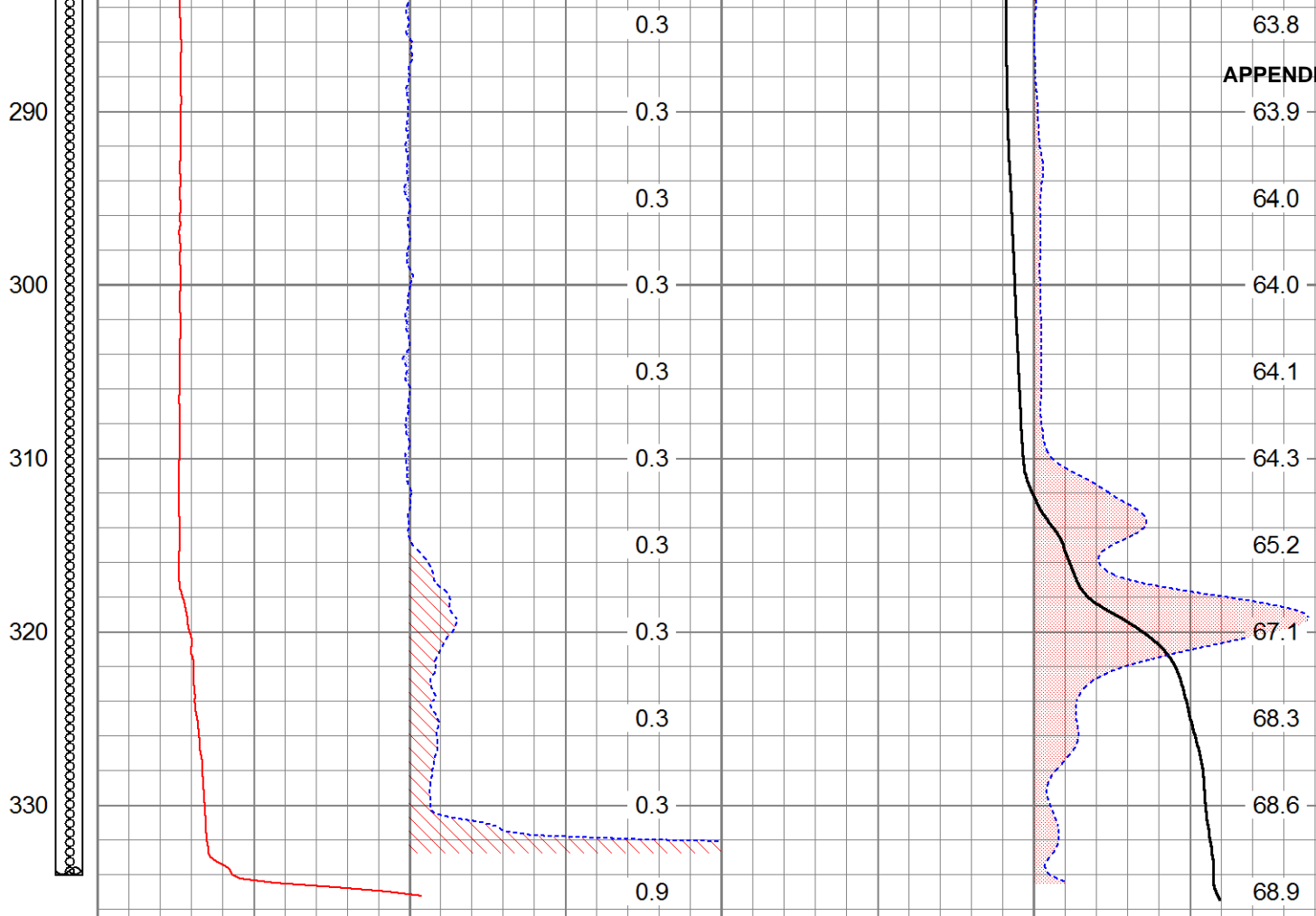
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 Dataset Pathname TEMP
 Presentation Format frttemp2
 Dataset Creation Sun Dec 14 13:47:01 2014
 Charted by Depth in Feet scaled 1:120

0	Fluid Resistivity (Ohm-m)	2	57	Temperature (degF)	72
-0.06	Differential Fluid Resistivity (Ohm-m)	0.06	-0.75	Differential Temperature (degF)	0.75
FRES (Ohm-m)			TEMP (degF)		









0	Fluid Resistivity (Ohm-m)	2.57	57	Temperature (degF)	72
-0.06	Differential Fluid Resistivity (Ohm-m)	0.06	-0.75	Differential Temperature (degF)	0.75
	FRES (Ohm-m)			TEMP (degF)	

PACIFIC SURVEYS

DUAL INDUCTION GAMMA-RAY

Job No. 19027
 Company CASCADe DRILLING
 Well MPWSP MW-1D
 Field MARINA
 County MONTEREY State CA

Location
 CEMEX PLANT OFF OF LAPIS RD.
 GPS: N 36o 42.787' W 121o 48.350'

Other Services:
 TEMPERATURE
 FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	12-14-2014		
Run Number	ONE		
Depth Driller	334'		
Depth Logger	334'		
Bottom Logged Interval	334'		
Top Log Interval	0'		
Open Hole Size	9" (97'-247')	8" (247'-337')	
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	26'		
Bentonite Seal	N/A		
Time Well Ready	1200		
Time Logger on Bottom	1330		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	J. SOBOLEW		
Borehole Record			
Run Number	Bit	From	To
ONE	10"	0'	97'
TWO	9"	97'	247'
THREE	8"	247'	337'
Tubing Record			
Casing Record	Size	Wgt/Ft	Top
Surface String	10"	N/A	0'
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			334'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19027.db
 Dataset Pathname dil
 Dataset Creation Sun Dec 14 14:35:19 2014

Serial-Model:
Surface Cal Performed:

0001-ALT
Sat Dec 13 17:32:36 2014

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1405.080	3665.050	cps	0.000	612.000	mmho/m	0.271	-380.495
Medium	2052.170	14102.500	cps	0.000	1960.000	mmho/m	0.163	-333.788

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Dec 13 17:32:47 2014

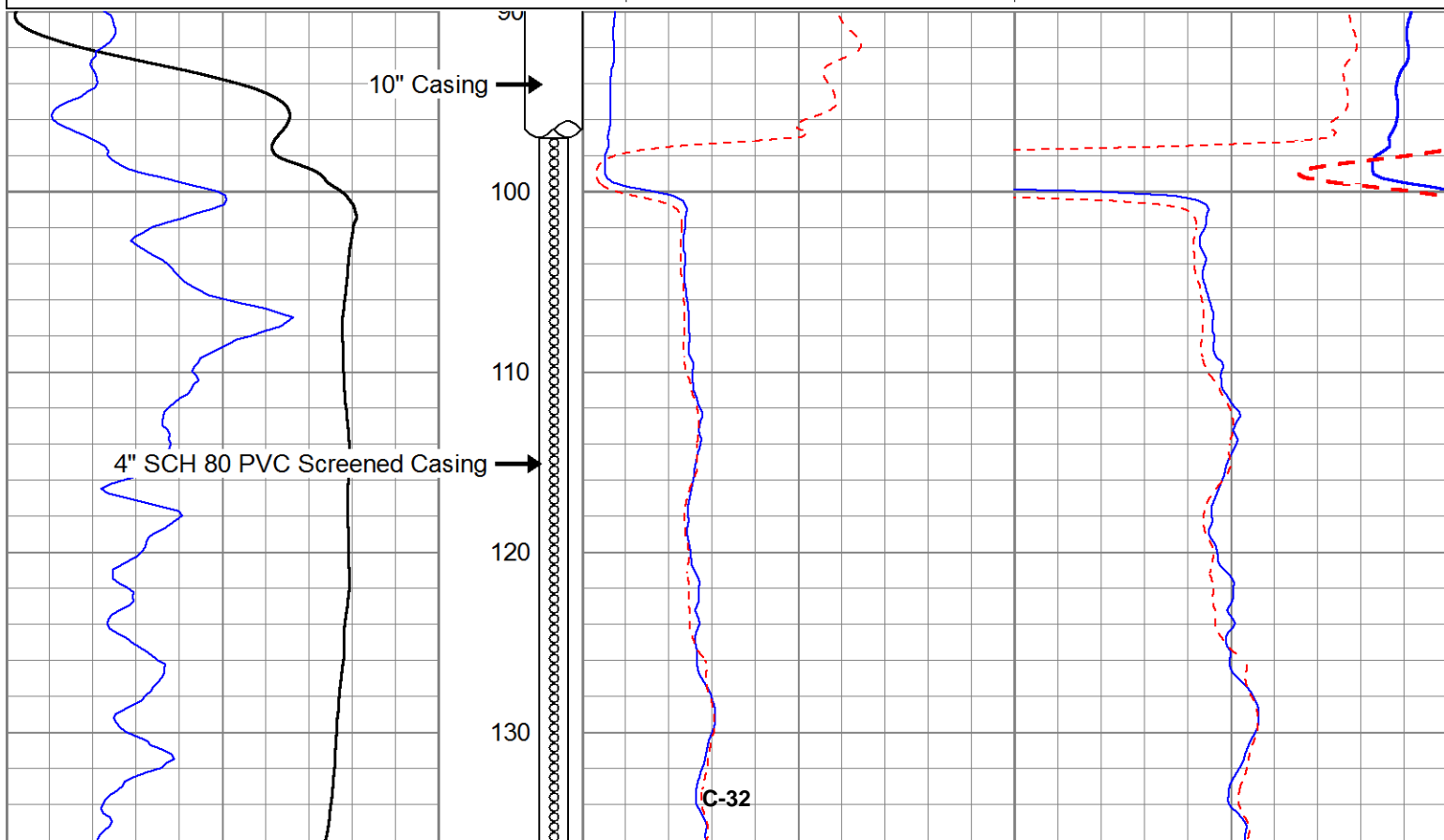
Calibrator Value: 162.0 GAPI

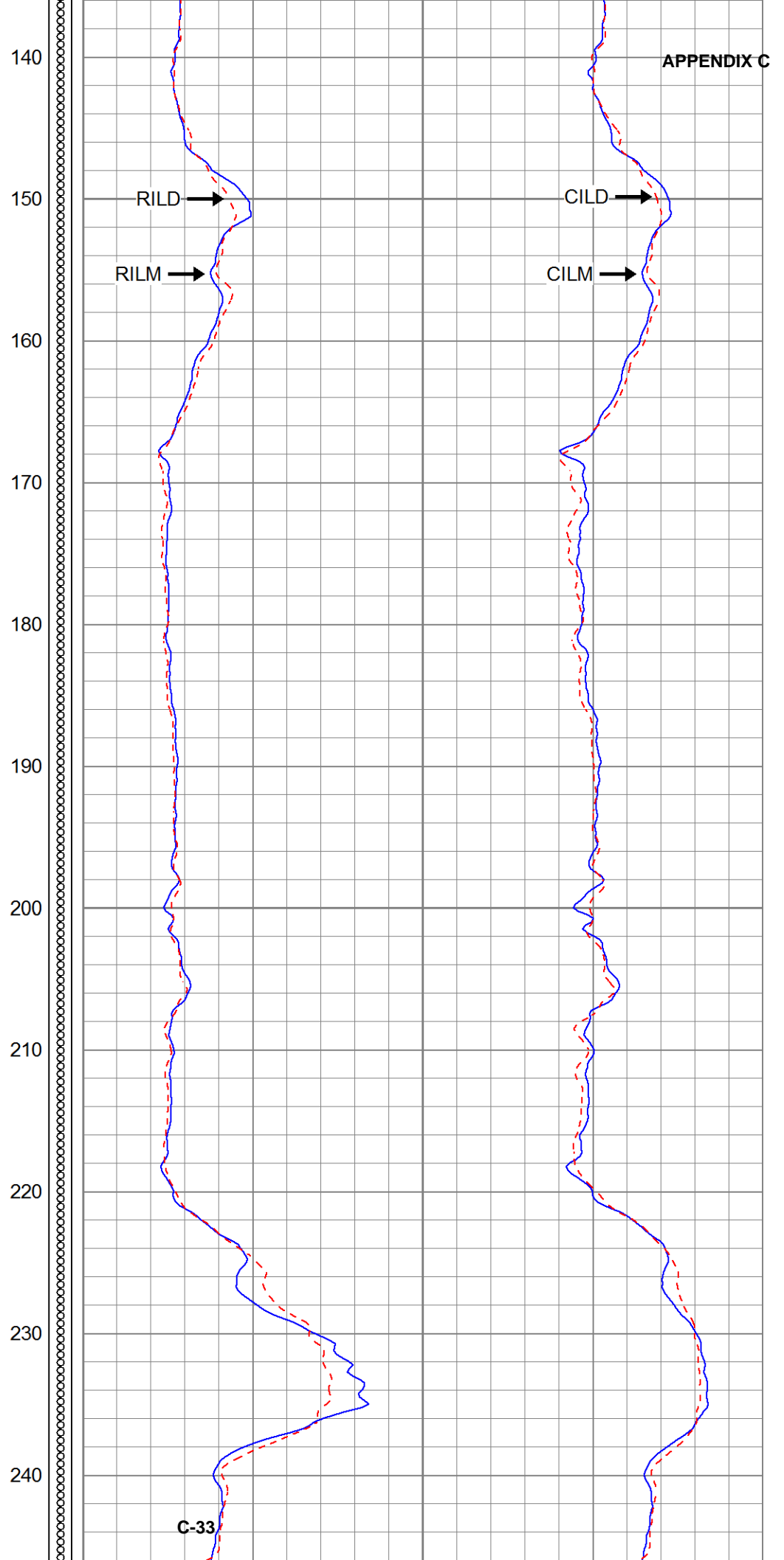
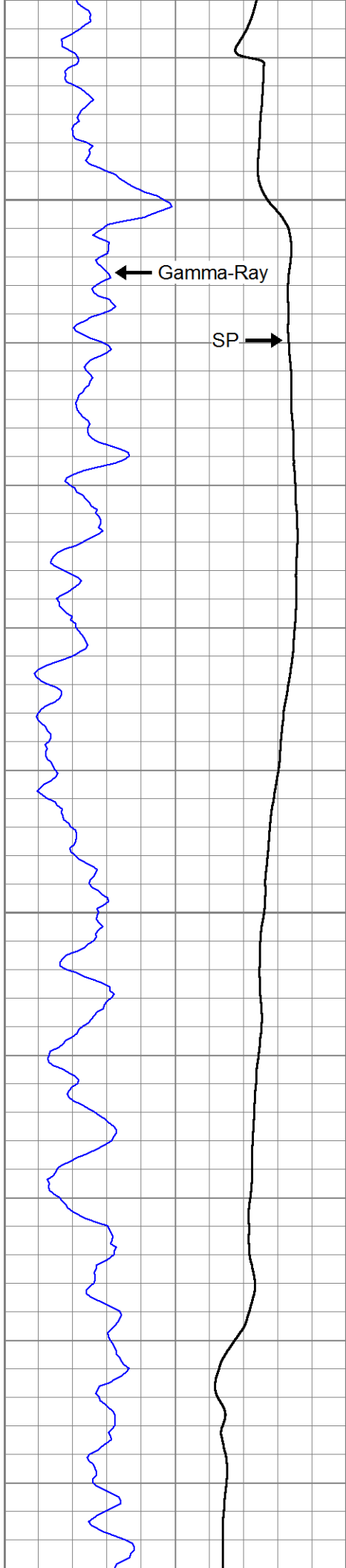
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 Calibrator Reading: 180.8 cps

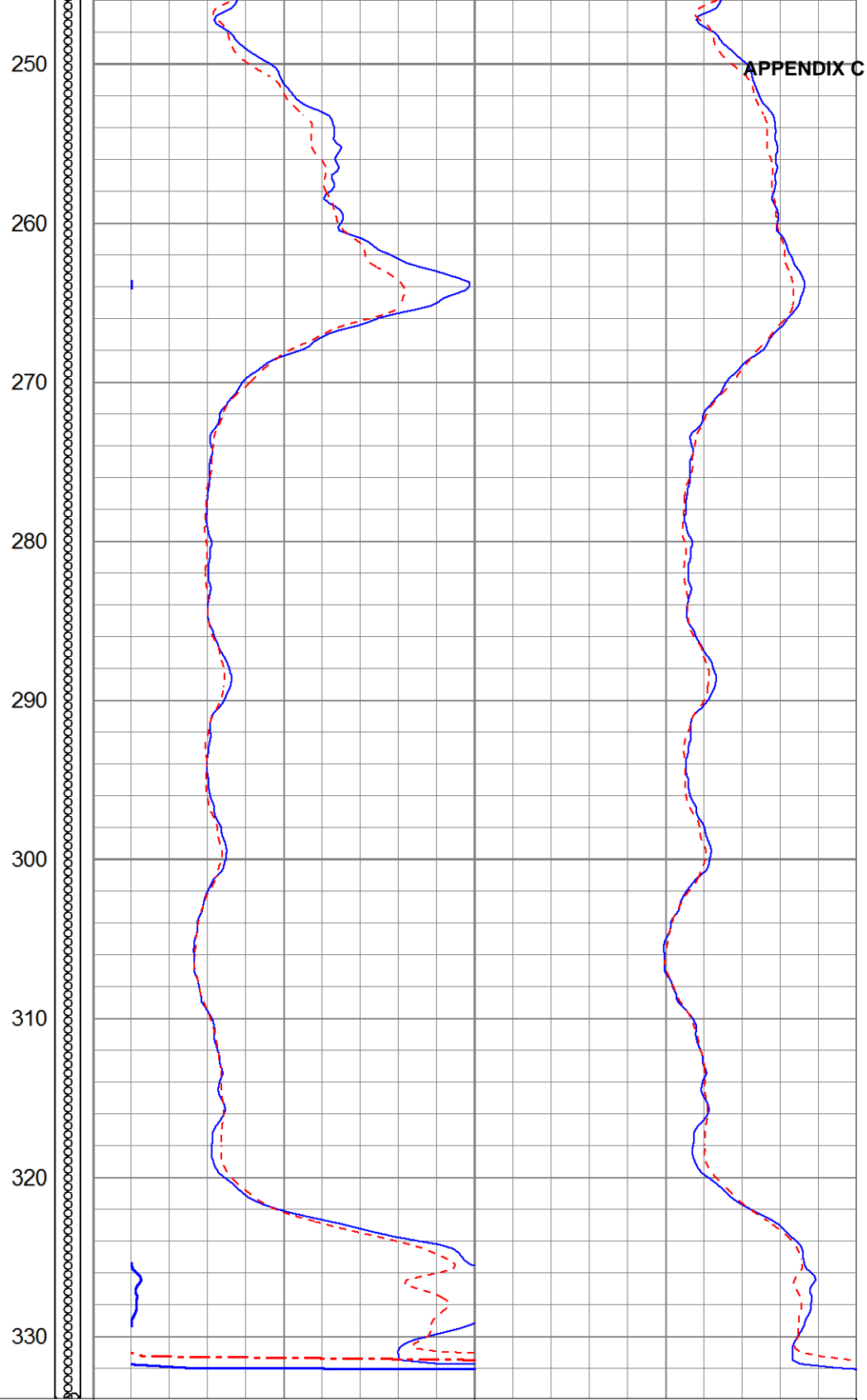
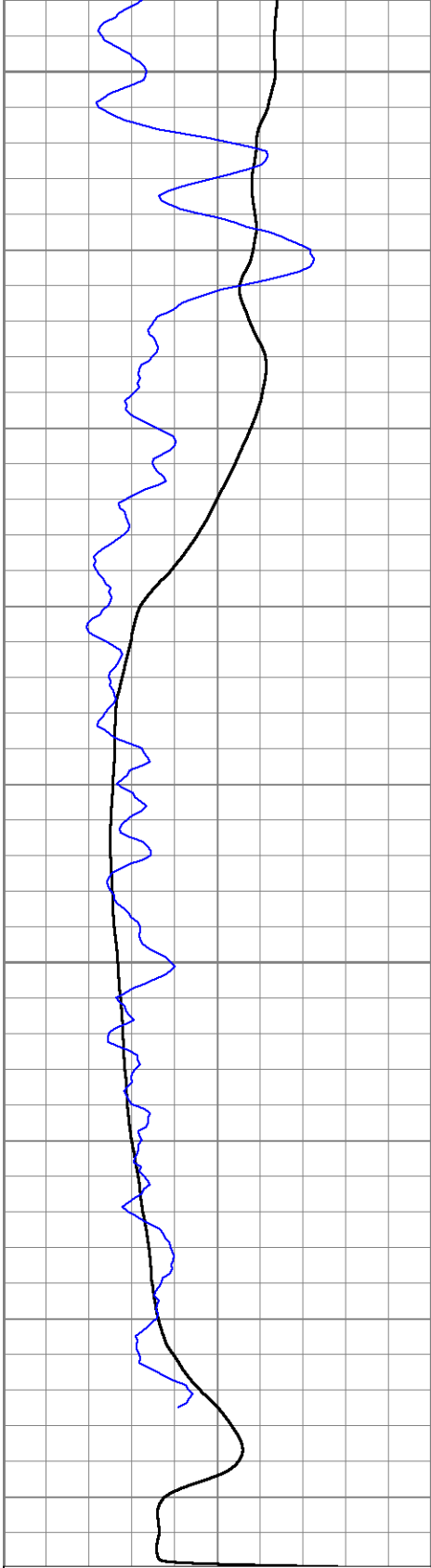
Sensitivity: 1.2020 GAPI/cps

Database File 19027.db
 Dataset Pathname dil
 Presentation Format dil_ps
 Dataset Creation Sun Dec 14 14:35:19 2014
 Charted by Depth in Feet scaled 1:120

-100	SP (mV)	0	0	RILM (Ohm-m)	5	1500	CILM (mmho/m)	0
30	Gamma Ray (GAPI)	130	0	RILD (Ohm-m)	5	1500	CILD (mmho/m)	0
			5	RILM backup (Ohm-m)	50	15000	CILM backup (mmho/m)	1500
			5	RILD backup (Ohm-m)	50	15000	CILD backup (mmho/m)	1500

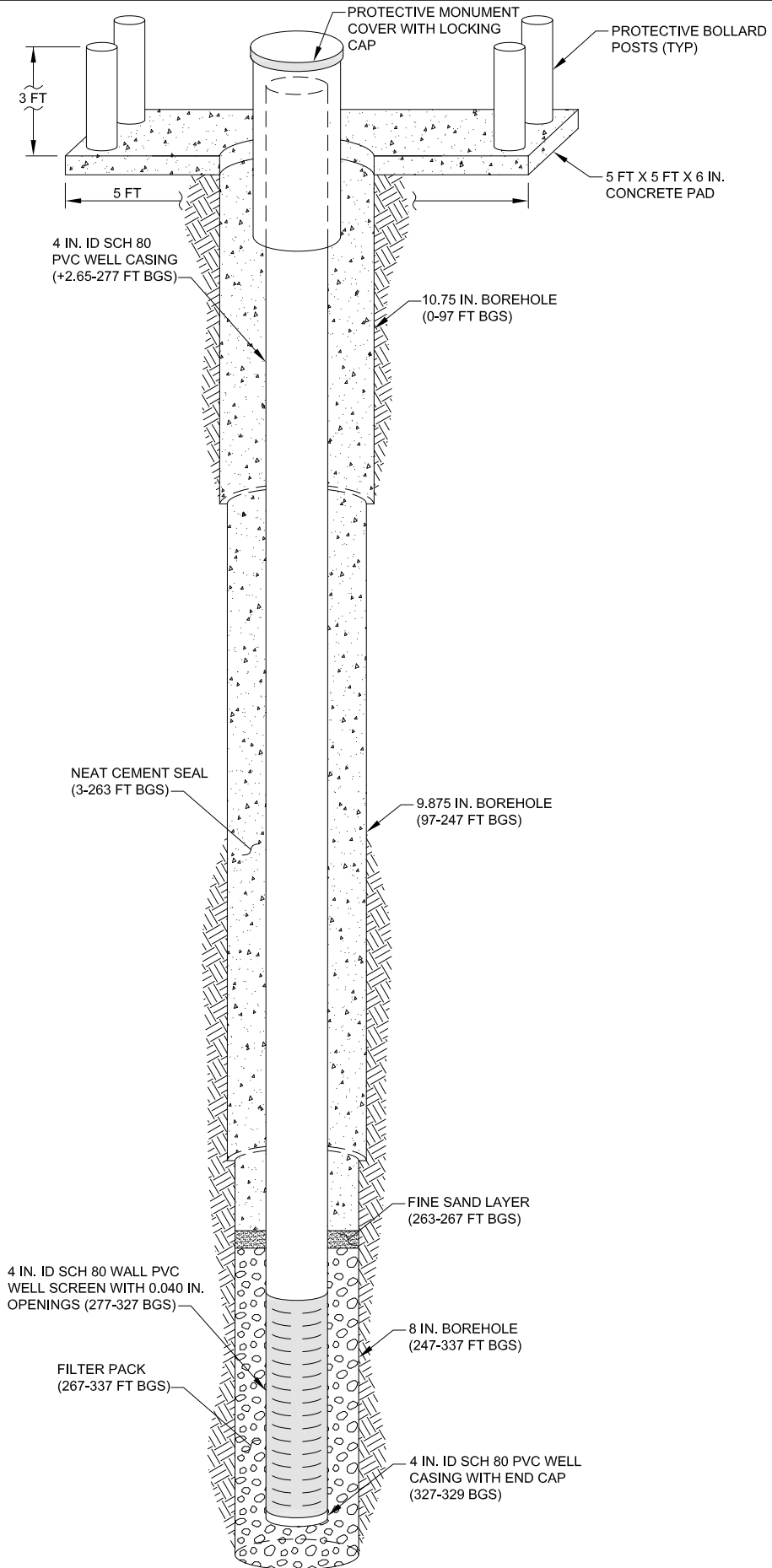






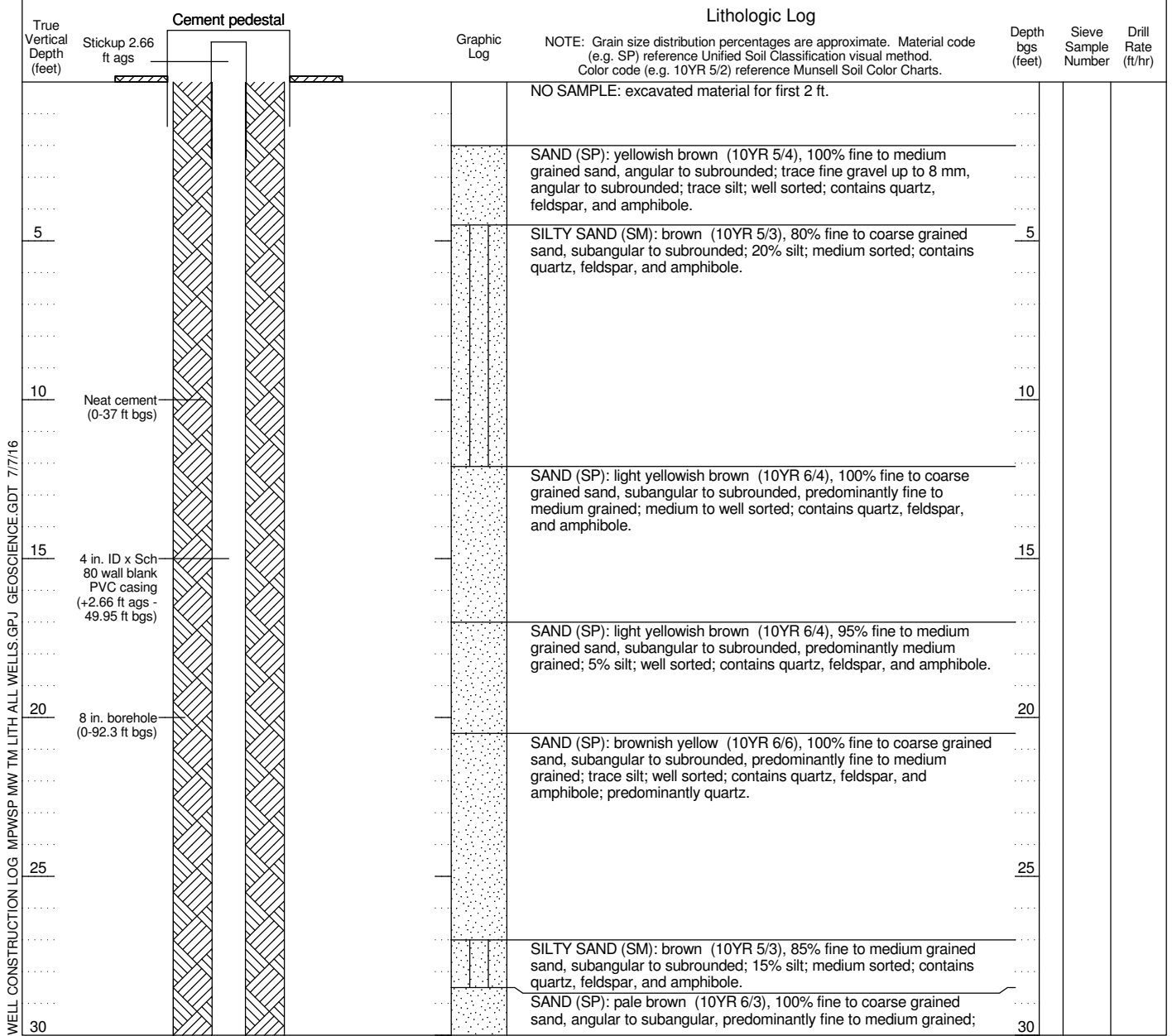
-100	SP (mV)	0
30	Gamma Ray (GAPI)	130

0	RILM (Ohm-m)	5	1500	CILM (mmho/m)	0
0	RILD (Ohm-m)	5	1500	CILD (mmho/m)	0
5	RILM backup (Ohm-m)	50	15000	CILM backup (mmho/m)	1500
5	RILD backup (Ohm-m)	50	15000	CILD backup (mmho/m)	1500



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-3S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA CEMEX								
REPORT DATE		DRILLING CONTRACTOR Cascade Drilling								
DRILLING CONTRACTOR DRILLER		LOGGED BY J. Sobolew								
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.66	49.95	52.61	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	49.95	89.95	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	89.95	92.3	2.35	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	34.50 ft NAVD88									
TOC ELEVATION	37.16 ft NAVD88 (RP)									
START DATE	2/18/15									
FINISH DATE	2/19/15									

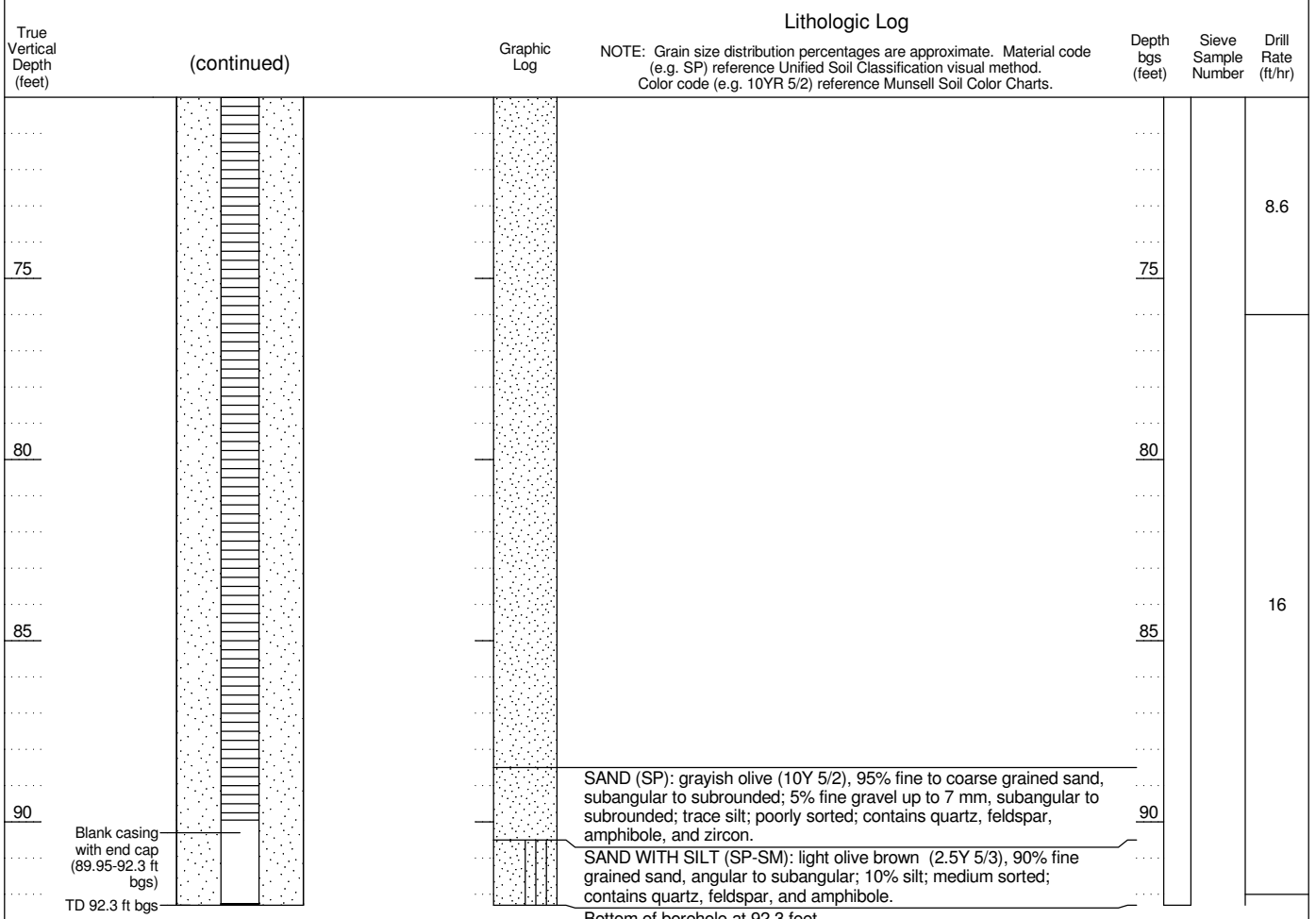


WELL NUMBER MPWSP MW-3S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			medium sorted; contains quartz, feldspar, and amphibole; water level at approximately 33 ft bgs.	
35				35
	CEMEX Monterey Lapis Lustre #60 fine sand seal (37-40 ft bgs)		SAND (SP); pale brown (10YR 6/3), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; medium sorted; contains quartz, feldspar, and amphibole.	
40				40
	CEMEX Monterey Lapis Lustre #3 filter pack (40-92.3 ft bgs)			
45				45
50				50
			SAND (SP); light olive gray (5Y 6/2), 90% fine to coarse grained sand, subangular; 10% fine gravel; trace silt; medium sorted; contains quartz, feldspar, mica, and amphibole.	
55				55
	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (49.95-89.95 ft bgs)			
60				60
			SAND (SP); olive (5Y 5/3), 100% sand, subangular to subrounded, very fine to fine grained; trace silt; well sorted; contains quartz, feldspar, mica, and amphibole; high mica content.	
65				65
			SAND (SP); olive brown (2.5Y 4/3), 95% sand, subrounded, fine to very fine, trace medium grained; 5% silt; well sorted; contains quartz, mica, and amphibole; high mica content.	
70				70

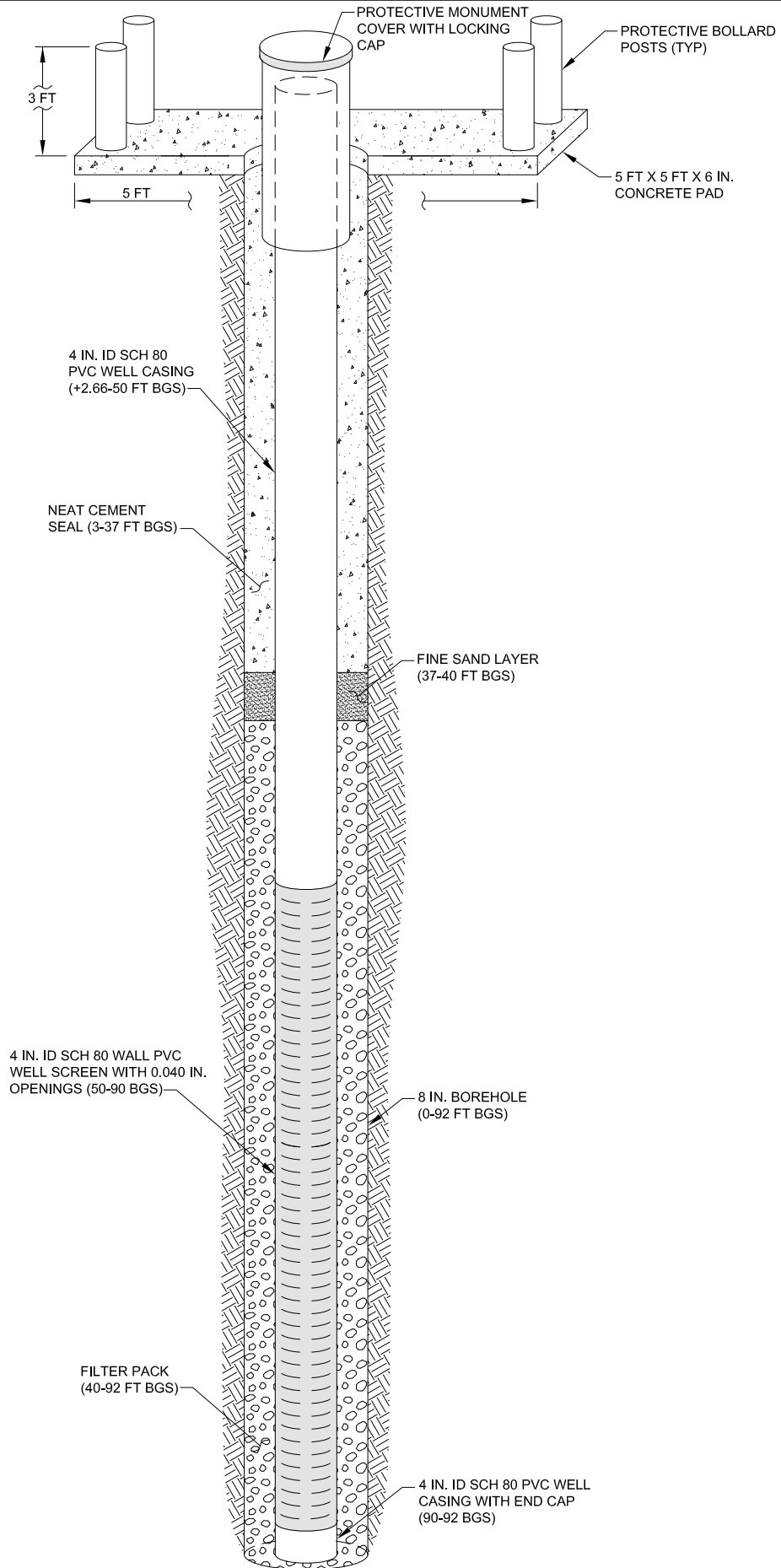
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-3S** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT PROJECT NUMBER **Cal Am 14077-15** LOCATION **Marina, CA**

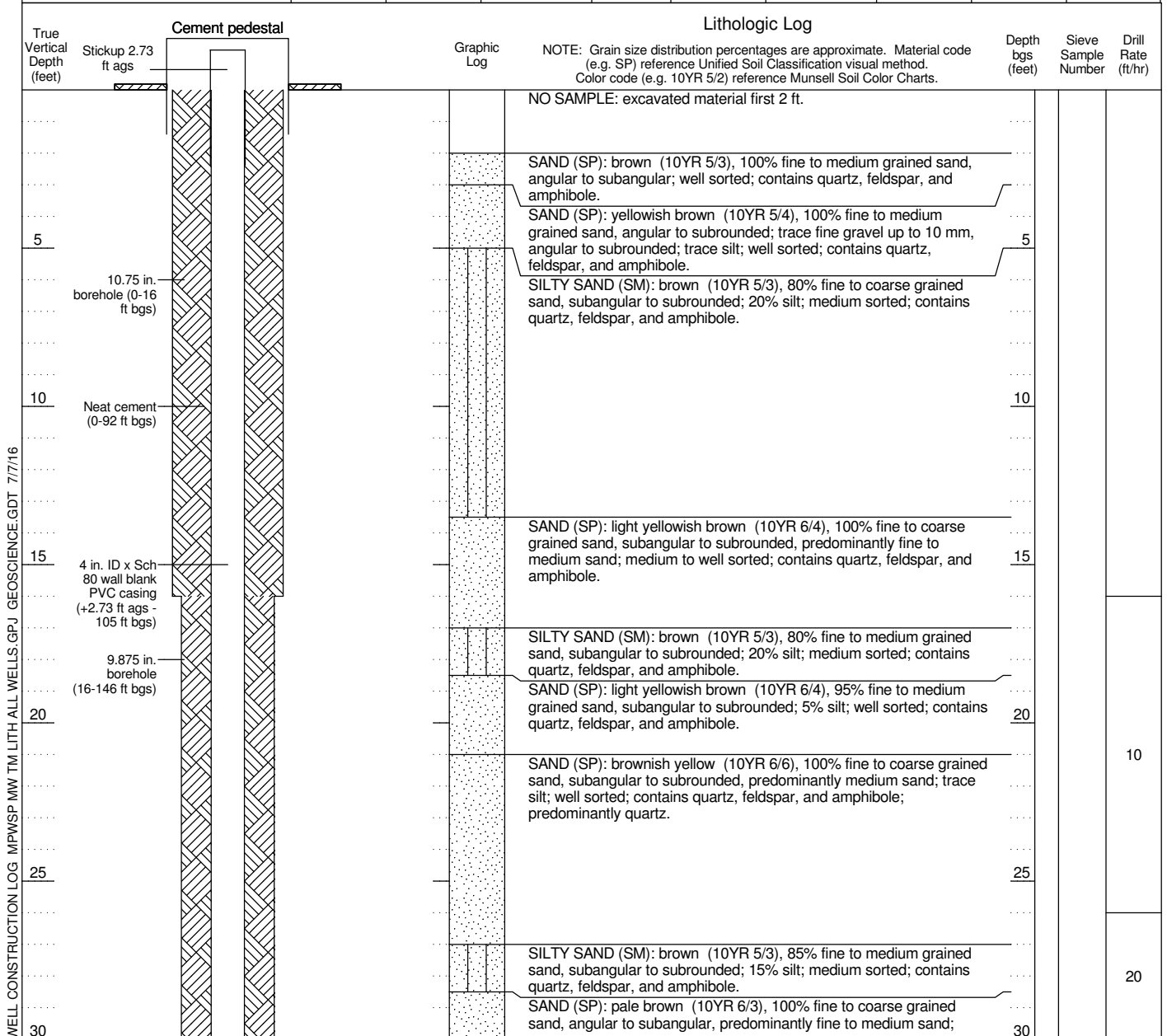


WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-3M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA CEMEX							
REPORT DATE			LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.73	105	107.73	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	105	215	110	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	215	217.345	2.345	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	34.62 ft NAVD88									
TOC ELEVATION	37.35 ft NAVD88 (RP)									
START DATE	2/09/15									
FINISH DATE	2/17/15									



WELL NUMBER MPWSP MW-3M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			medium sorted; contains quartz, feldspar, and amphibole; water level at approximately 30 ft bgs.	
35				35
			SAND (SP): pale brown (10YR 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; trace silt; medium sorted; contains quartz, feldspar, and amphibole.	20
40				40
45				45
50				50
55			SAND (SP): light olive gray (5Y 6/2), 100% fine to coarse grained sand, subangular; trace silt; medium sorted; contains quartz, feldspar, mica, and amphibole.	55
60				60
65			SAND (SP): olive (5Y 5/3), 100% fine grained sand, subangular to subrounded, very fine to fine sand; trace silt; well sorted; contains quartz, feldspar, mica, and amphibole; high biotite mica content.	65
70			SAND (SP): olive brown (2.5Y 4/3), 95% sand, subrounded, very fine to fine and trace medium sand; 5% silt; well sorted; contains quartz, mica, and amphibole; high mica content.	70

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
75				
80				
85				
90			SAND (SP): grayish olive (10Y 5/2), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel up to 7 mm, subangular to subrounded; trace silt; poorly sorted; contains feldspar; contains quartz, feldspar, amphibole, and zircon.	
95	CEMEX Monterey Lapis Lustre #60 fine sand seal (92-94 ft bgs)		SAND (SP): light yellowish brown (2.5Y 6/4), 95% fine to coarse grained sand, subangular to subrounded, predominantly medium to coarse sand; 5% fine gravel up to 9 mm, subangular to subrounded; trace silt; medium sorted; contains quartz, feldspar, mica, and amphibole.	
100	CEMEX Monterey Lapis Lustre #3 filter pack (94-218.5 ft bgs)		SAND WITH SILT (SP-SM): light olive brown (2.5Y 5/3), 90% fine grained sand, angular to subangular; 10% silt; well sorted; contains quartz, feldspar, and amphibole; contains shells.	10
105			SAND (SP): light yellowish brown (2.5Y 6/3), 85% fine to coarse grained sand, subangular to subrounded; 10% fine gravel up to 12 mm, subangular to subrounded; 5% silt; medium sorted; contains quartz, feldspar, and amphibole; alternates grain size from fine to medium to fine to coarse to fine to medium from 96 to 107 ft bgs.	
110	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (105-215 ft bgs)		SILTY SAND (SM): light olive brown (2.5Y 5/3), 80% fine grained sand, angular to subangular; 20% silt; contains quartz, feldspar, mica, and amphibole; contains shells from 114 to 116 ft.	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-3M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT PROJECT NUMBER **Cal Am 14077-15** LOCATION **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115					115		
120				SAND (SP): light olive brown (2.5Y 5/3) and olive (5Y 5/4), 95% fine to medium grained sand, subangular to subrounded, trace coarse sand; 5% clay; well sorted; contains quartz, feldspar, and amphibole; 10% fine to coarse gravel from 116 to 119 ft; becomes finer with increasing depth; oxidation.	120		
125				FAT CLAY (CH): olive (5Y 5/3), 100% clay, medium plasticity.	125		
130				SAND (SP): light gray (2.5Y 7/2), 95% fine to medium grained sand, subangular to subrounded, trace coarse sand; 5% silt; well sorted; contains some amphibole but predominantly quartz; oxidation.	130		
135				CLAYEY SAND (SC): light olive brown (2.5Y 5/4), 75% fine grained sand, subangular; 25% clay; medium to well sorted; contains quartz, mica, and amphibole.	135		
140				SILTY SAND (SM): pale olive (5Y 6/3), 80% fine to coarse grained sand, subangular to subrounded; 15% silt; 5% fine gravel up to 10 mm, subangular to subrounded; poorly to medium sorted; contains quartz, feldspar, mica, and amphibole. CLAYEY SAND (SC): pale olive (5Y 6/3), 85% fine grained sand, subangular to subrounded; 15% clay, low plasticity; well sorted; contains quartz, feldspar, and amphibole.	140		
145				CLAYEY SAND WITH GRAVEL (SC): dark yellowish brown (10YR 4/4), 65% fine to coarse grained sand, subangular to subrounded; 20% clay, low plasticity; 15% fine to coarse gravel up to 20 mm, subangular to subrounded; poorly sorted; contains quartz, feldspar, and amphibole; gravel grades finer with depth.	145		
				SAND WITH CLAY AND GRAVEL (SP-SC): pale olive (5Y 6/3), 70% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel up to 20 mm, subangular to subrounded; 10% clay; poorly to medium sorted; contains quartz, feldspar, and amphibole.			
				SAND WITH SILT (SP-SM): yellowish brown (10YR 5/6), 90% fine grained sand, subrounded; 10% silt; well sorted; contains quartz, feldspar, and amphibole.	150		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

8 in. borehole
(146-230 ft bgs)

WELL NUMBER **MPWSP MW-3M** **BOREHOLE LITHOLOGIC LOG (continued)**

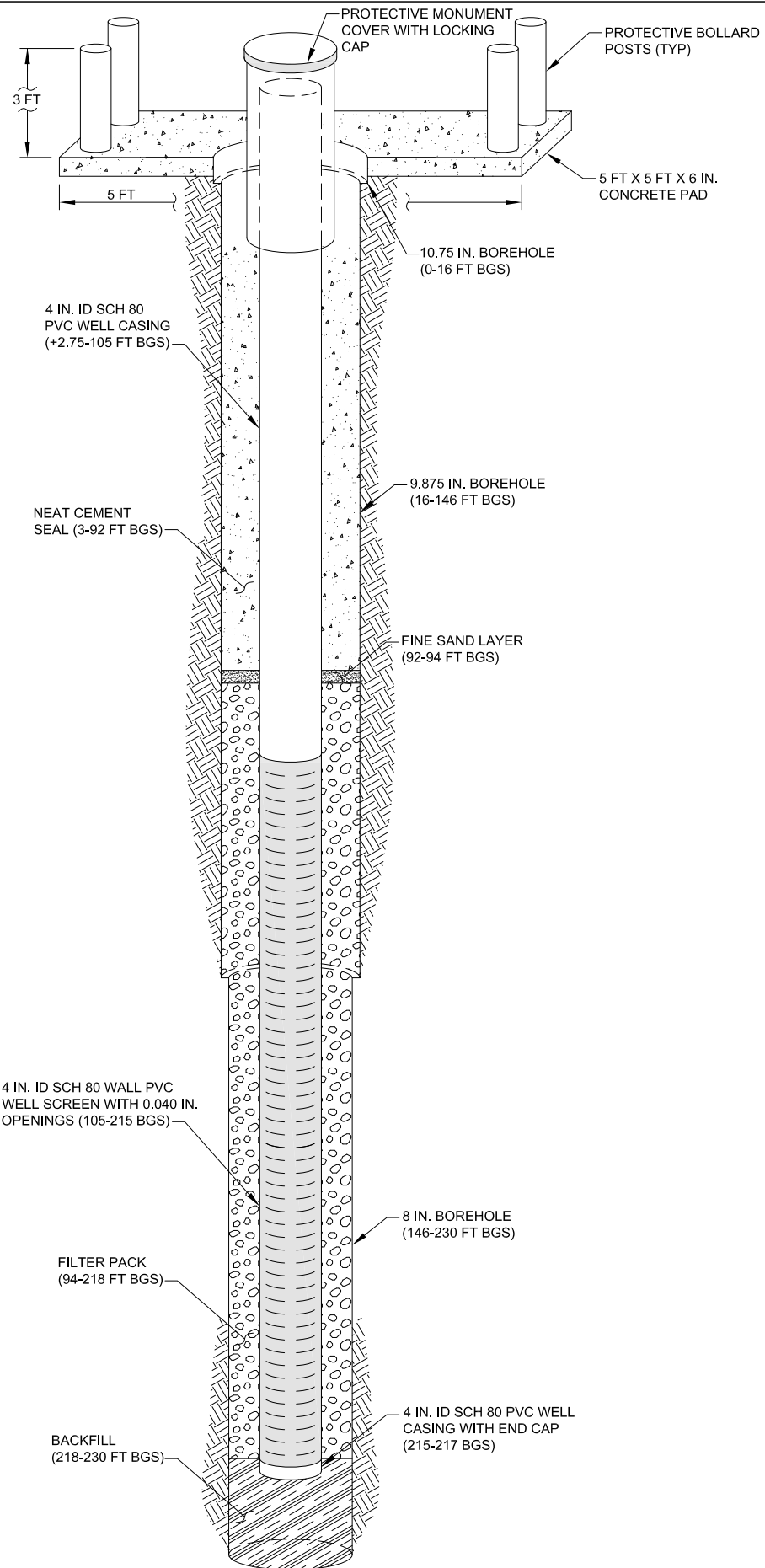
CLIENT PROJECT NUMBER **Cal Am 14077-15** LOCATION **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
155					155		
160				SAND (SP): dark yellowish brown (10YR 4/6), 95% sand, subangular to subrounded, fine to very fine sand; 5% silt; well sorted; weak cementation; contains quartz, feldspar, and amphibole.	160		
165				FAT CLAY (CH): brown (10YR 4/3), 100% clay, high plasticity; trace fine grained sand; up to 10% fine to medium sand from 165 to 166 ft bgs.	165		
170				SAND WITH SILT (SP-SM): pale olive (5Y 6/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; well sorted; contains quartz, mica, and amphibole.	170		
175				SAND (SP): olive (5Y 5/3), 95% fine to medium grained sand; 5% silt; well sorted; contains quartz, mica, and amphibole; interbeds of medium to high plasticity.	175		
180				SAND (SP): pale olive (5Y 6/3), 95% fine to medium grained sand, subangular to subrounded, interbeds of coarse sand; 5% silt; well sorted; contains quartz, feldspar, mica, and amphibole.	180		
185				SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to medium grained sand, subangular to subrounded; trace silt; well sorted; weak cementation; contains quartz, mica, and amphibole; high dark mineral content.	185		
190					190		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

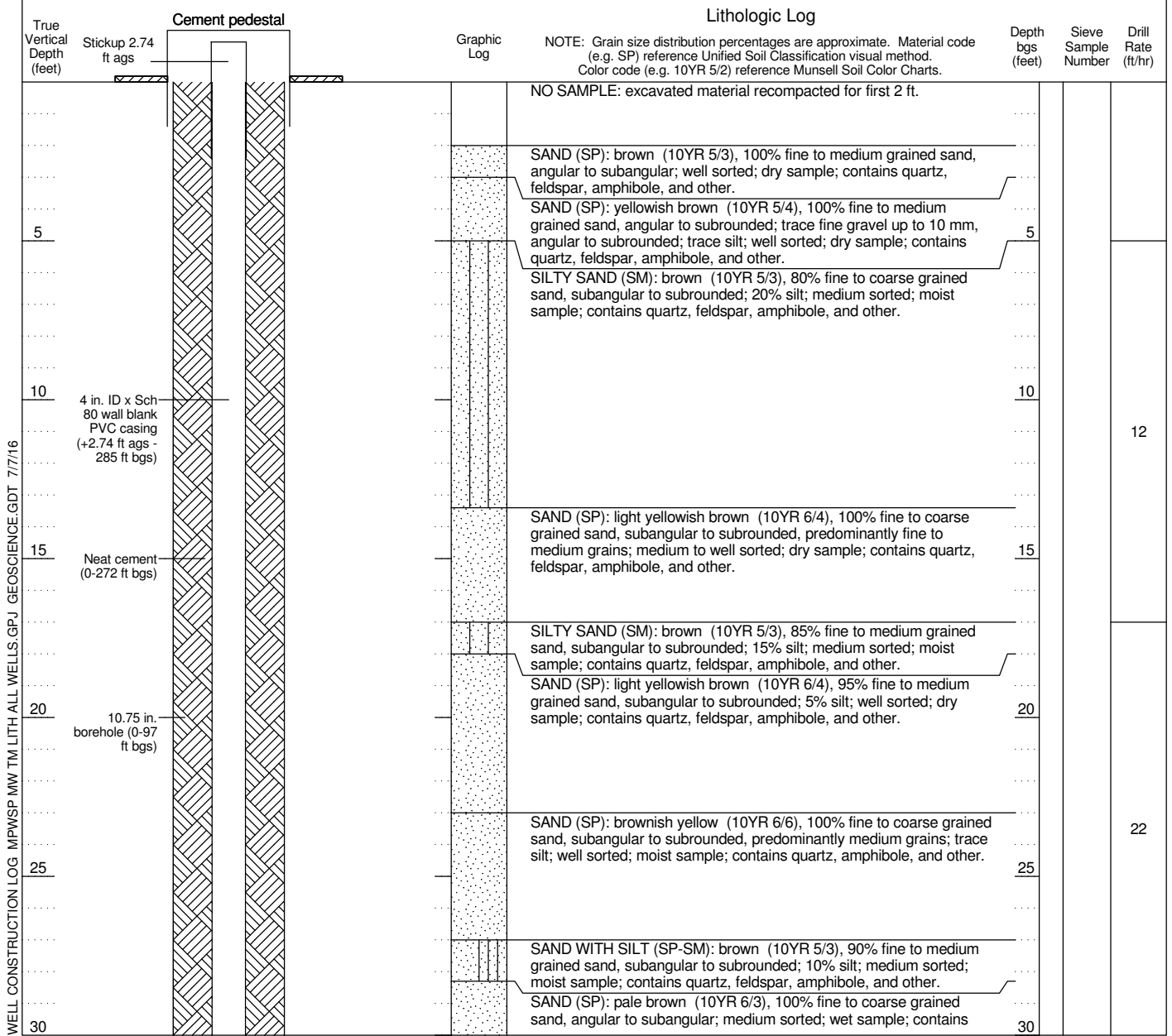
WELL NUMBER MPWSP MW-3M		BOREHOLE LITHOLOGIC LOG (continued)				
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA			
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log <small>NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.</small>	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
195			CLAYEY SAND (SC): brown (7.5YR 4/4), 70% fine grained sand, subrounded; 30% clay, low plasticity; well sorted; weak cementation; contains quartz, feldspar, and amphibole.	195		12
200			SANDY CLAY (CL): yellowish brown (10YR 5/6), 60% clay, low to medium plasticity; 40% fine grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole.			
200			CLAYEY SAND (SC): dark yellowish brown (10YR 4/6), 65% fine grained sand, subangular to subrounded; 35% clay, low plasticity; well sorted; contains quartz, feldspar, and amphibole; high content dark mineral content.	200		
205			SILTY SAND (SM): brown (10YR 5/3), 60% fine grained sand, subangular to subrounded; 40% silt; well sorted; weak cementation; contains quartz, feldspar, and amphibole; high dark mineral content.	205		
210			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; well sorted; weak cementation; contains quartz, feldspar, and amphibole; high dark mineral content; oxidation.	210		
210			SANDY CLAY (CL): olive brown (2.5Y 4/3), 70% clay, low to high plasticity; 30% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole.	210		
215			CLAY (CL): olive (5Y 5/3), 100% clay, medium plasticity; oxidation from 213 to 214.5 ft.	215		
220	Blank casing with end cap (215-217.345 ft bgs)		SAND (SP): pale olive (5Y 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; trace gravel subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	220		
220			SAND (SP): olive (5Y 4/3), 90% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; 5% silt; well sorted; contains quartz, feldspar, mica, and amphibole.	220		
225	Backfill with native material (218.5-230 ft bgs)		SAND (SP): light olive gray (5Y 6/2), 85% fine to coarse grained sand, angular to subrounded; 10% fine gravel up to 16 mm, angular to subrounded; 5% silt; medium sorted; contains quartz, feldspar, mica, and amphibole.	225		
230	TD 230 ft bgs		SILT WITH SAND (ML): olive (5Y 5/3), 85% silt; 15% fine to medium grained sand, subrounded; contains quartz.	230		
230			SANDY SILT (ML): light olive brown (2.5Y 5/4), 70% silt; 30% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	230		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG							
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA CEMEX							
REPORT DATE		LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling A. Patricio									
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
ProSonic 600T	Blank	-2.74	285	287.74	PVC	Sch 80	4 / ID		
DRILLING METHOD	Sonic	Blank	285	330	45	PVC	Sch 80	4 / ID	0.04
SAMPLING METHOD	Core	Screen	285	330	45	PVC	Sch 80	4 / ID	Slotted
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	330	332.26	2.26	PVC	Sch 80	4 / ID	
SURFACE ELEVATION	34.19 ft NAVD88								
TOC ELEVATION	36.93 ft NAVD88 (RP)								
START DATE	2/02/15								
FINISH DATE	2/09/15								



WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			quartz, feldspar, amphibole, and other.				
35					35		22
40			SAND (SP): pale brown (10YR 6/3), 95% fine to coarse grained sand, angular to subangular; 5% fine gravel up to 5 mm, angular to subangular; trace silt; medium to well sorted; wet sample; contains quartz, feldspar, amphibole, and other; 10% gravel from 50.1-50.2 ft bgs.		40		
45					45		
50					50		
55			SAND (SP): light olive gray (5Y 6/2), 100% fine to coarse grained sand, subangular; trace silt; medium to well sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other; fine to medium sand (52.4 to 54.6 ft bgs) grading to coarse sand (54.6 to 60.7 ft bgs).		55	X	1
60					60		
65			SAND (SP): olive (5Y 5/3), 100% sand, subangular to subrounded, very fine to fine; trace silt; well sorted; moist sample; contains quartz, feldspar, mica, amphibole, and other; high mica and biotite content.		65		
70			SAND (SP): olive brown (2.5Y 4/3), 95% sand, subrounded, very fine to fine with trace medium grains; 5% silt; well sorted; wet sample; contains quartz, mica, amphibole, and other; high mica content.		70		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
75				
80				
85				
90			SAND (SW): grayish olive (10Y 5/2), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel up to 7 mm, subangular to subrounded; trace silt; poorly sorted; moist sample; contains quartz, mica, amphibole, and other; contains zircons.	
95			SAND (SP): light yellowish brown (2.5Y 6/4), 95% fine to coarse grained sand, subangular to subrounded, predominantly medium to coarse grains; 5% fine gravel up to 17 mm, subangular to subrounded; trace silt; medium sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other. SAND WITH SILT (SP-SM): light olive brown (2.5Y 5/3), 90% fine grained sand, angular to subangular; 10% silt; well sorted; wet sample; contains quartz, feldspar, amphibole, and other.	2
100	9.875 in. borehole (97-247 ft bgs)		SAND (SP): light yellowish brown (2.5Y 6/3), 90% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 15 mm, subangular to subrounded; 5% silt; medium sorted; wet sample; contains quartz, feldspar, amphibole, and other.	
105			SAND (SP): pale olive (5Y 6/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; well sorted; moist sample; contains quartz, feldspar, mica, amphibole, and other. SAND WITH SILT (SP-SM): olive (5Y 5/3), 90% sand, angular to subangular, very fine to fine; 10% silt; well sorted; moist sample; contains quartz, feldspar, amphibole, and other.	3
110				

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115					115		
120				SAND (SP): light olive brown (2.5Y 5/3) and pale olive (5Y 6/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; well sorted; contains quartz, feldspar, amphibole, and other; pale olive from 112.5 to 117 ft.	120		
125					125	4	
130				SAND (SP): light gray (2.5Y 7/2), 95% fine to medium grained sand, subangular to subrounded, trace coarse; 5% silt; well sorted; contains quartz, and amphibole; predominantly quartz.	130		20
135					135		
140				CLAYEY SAND (SC): light olive brown (2.5Y 5/4), 85% fine grained sand, subangular; 15% clay, low plasticity; well sorted; contains quartz, mica, amphibole, and other.	140		
145				SILTY SAND (SM): pale olive (5Y 6/3), 80% fine to coarse grained sand, subangular to subrounded; 15% silt; 5% fine gravel up to 38 mm, subangular to subrounded; poorly to medium sorted; contains quartz, feldspar, mica, and amphibole.	145		
				CLAYEY SAND (SC): pale olive (5Y 6/3), 85% fine grained sand, subangular to subrounded; 15% clay, low plasticity; well sorted; contains quartz, feldspar, and amphibole.			
				CLAYEY SAND WITH GRAVEL (SC): dark yellowish brown (10YR 4/4), 65% fine to coarse grained sand, subangular to subrounded; 20% clay, low plasticity; 15% fine to coarse gravel up to 20 mm, subangular to subrounded; poorly sorted; contains quartz, feldspar, amphibole, and other.			15
				CLAY (CH): light olive brown (2.5Y 5/3), 100% clay, high plasticity.	145		
				SAND WITH CLAY AND GRAVEL (SP-SC): pale olive (5Y 6/3), 70% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel up to 20 mm, subangular to subrounded; 10% clay, low to medium plasticity; poorly to medium sorted; contains quartz, feldspar, amphibole, and other.		5	
150				SAND WITH GRAVEL (SP): light olive gray (5Y 6/2), 75% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel; medium sorted; contains quartz, feldspar, amphibole, and	150		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-3D** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 Marina, CA

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
155			other.		155		15
160			SAND WITH SILT (SP-SM): yellowish brown (10YR 5/6), 90% sand, subrounded, very fine to fine; 10% silt; well sorted; contains quartz, feldspar, amphibole, and other.		160		
165			SAND (SP): dark yellowish brown (10YR 4/6), 95% sand, subangular to subrounded, very fine to fine; 5% silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other.		165		6
170			CLAY (CH): brown (10YR 4/3), 100% clay, high plasticity; contains mica; trace fine mica.		170		
175			SILTY SAND (SM): pale olive (5Y 6/3), 85% fine grained sand, subangular to subrounded; 15% silt; well sorted; contains quartz, mica, amphibole, and other.		175		6
180			SILT (ML): light olive brown (2.5Y 5/4), 100% silt, brittle; low plasticity; thin interbeds of medium to coarse sand from 170.5 to 171 ft bgs.		180		
185			SAND (SP): olive (5Y 5/3), 95% fine to medium grained sand; 5% silt; well sorted; contains quartz, mica, and amphibole; interbeds of high to medium plasticity clay.		185		6
190			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to medium grained sand, subangular to subrounded; trace silt; well sorted; weak cementation; contains quartz, mica, amphibole, and other; high dark mineral content.		190		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195			CLAYEY SAND (SC): brown (7.5YR 4/4), 60% fine grained sand, subrounded; 40% clay, low plasticity; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other.	195			
			SANDY CLAY (CL): yellowish brown (10YR 5/6), 60% clay, low to medium plasticity; 40% fine grained sand, subangular to subrounded; contains quartz, feldspar, amphibole, and other.				
200			SANDY CLAY (CL): dark yellowish brown (10YR 4/6), 60% clay, low plasticity; 40% fine grained sand, subangular to subrounded; contains quartz, feldspar, amphibole, and other; high dark mineral content.	200			
			SANDY SILT (ML): brown (10YR 5/3), 55% silt; 45% fine grained sand, subangular to subrounded; weak cementation; contains quartz, feldspar, amphibole, and other; high dark mineral content.				
205			SILTY SAND (SM): light olive brown (2.5Y 5/3), 60% fine to medium grained sand, subangular to subrounded; 40% silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other; high dark mineral content.	205	7		
			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other; oxidation; high dark mineral content.				
210			SILTY SAND (SM): olive (5Y 5/3), 80% fine to medium grained sand, subangular to subrounded; 20% silt; well sorted; contains quartz, feldspar, amphibole, and other; high abundance of minerals; oxidation from 215 to 216 ft.	210	8		
			SILT (ML): olive (5Y 5/3), 100% silt, brittle; low plasticity.				
215			SAND (SP): pale olive (5Y 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other.	215			
			SAND WITH CLAY AND GRAVEL (SP-SC): pale olive (5Y 6/3), 75% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 25 mm, subangular to subrounded; 10% clay, low plasticity; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.				
220			SAND (SP): light olive gray (5Y 6/2), 85% fine to coarse grained sand, angular to subangular; 10% fine gravel angular to subangular; 5% clay; medium sorted; contains quartz, feldspar, mica, and amphibole.	220			
			SANDY SILT (ML): olive (5Y 5/3), 65% silt, low plasticity; 35% fine grained sand, subangular; contains quartz, and mica.				
225				225	9		
230				230		5	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			SAND WITH SILT (SP-SM): light olive brown (2.5Y 5/4), 90% fine to medium grained sand, subangular to subrounded; 10% silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other.				
235			SILT (ML): light olive brown (2.5Y 5/3), 100% silt; medium plasticity; trace mica.		235		10
240					240		
245			CLAY (CH): olive brown (2.5Y 4/4), 100% clay, medium to high plasticity.		245		5
			CLAY (CH): dark greenish gray (10Y 4/1), 100% clay, high plasticity; olive (5Y 5/3) from 247-249.3 ft bgs.				
250	8 in. borehole (247 - 332.5 ft bgs)		CLAYEY SAND (SC): olive (5Y 4/3), 85% fine grained sand, subangular; 15% clay, low plasticity; well sorted; weak cementation; contains quartz, feldspar, mica, amphibole, and other.		250		
			SAND WITH CLAY (SP-SC): olive (5Y 5/3), 85% fine to coarse grained sand, subangular to subrounded; 10% clay; 5% fine to coarse gravel up to 19 mm, subangular to subrounded; medium sorted; contains quartz, mica, amphibole, and other.				
255			SAND (SP): olive gray (5Y 5/2), 85% medium to coarse grained sand, subangular to subrounded; 10% gravel up to 12 mm, subangular to subrounded; 5% clay; medium sorted; contains quartz, feldspar, mica, amphibole, and other.		255		11
260			SAND (SP): light brownish gray (2.5Y 6/2), 80% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 26 mm; 5% clay; medium sorted; contains quartz, feldspar, mica, amphibole, and other.		260		
265			CLAY (CH): olive (5Y 5/3), 100% clay, high plasticity.		265		15
270					270		

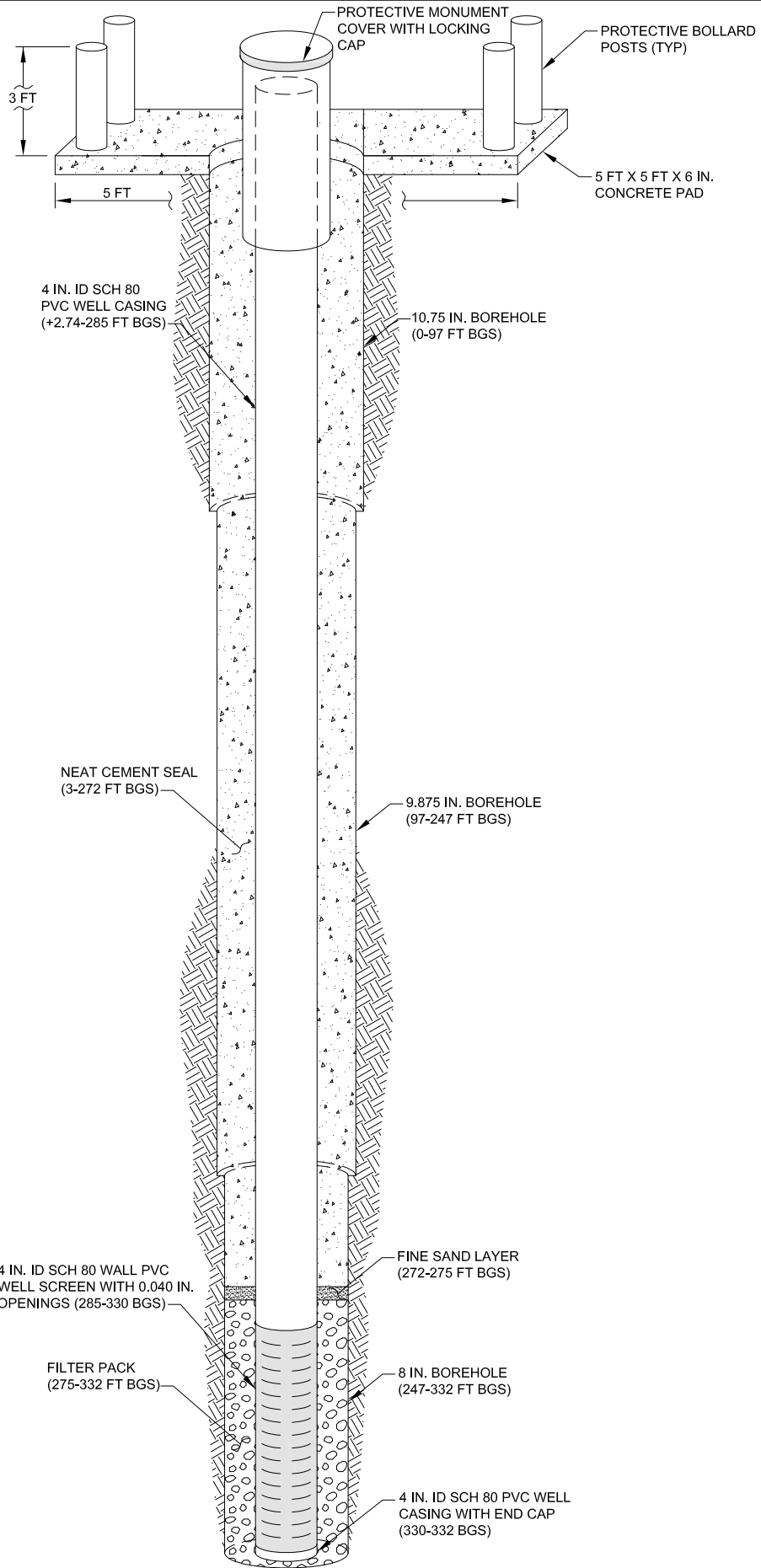
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
275	CEMEX Monterey Lapis Lustre #60 fine sand seal (272-275 ft bgs)		CLAY (CL): olive gray (5Y 5/2), 80% clay, low to medium plasticity; 15% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 15 mm; contains quartz, feldspar, amphibole, and other.	275
280	CEMEX Monterey Lapis Lustre #3 filter pack (275-332.5 ft bgs)		GRAVELLY CLAY (CL): pale olive (5Y 6/3), 60% clay, medium plasticity; 30% fine to coarse gravel up to 45 mm, subrounded; 10% fine to coarse grained sand, subrounded; contains quartz, feldspar, amphibole, and other.	
			SAND WITH CLAY (SP-SC): olive gray (5Y 5/2), 90% fine grained sand, subangular to subrounded, trace medium grains; 10% clay, no to low plasticity; medium to well sorted; contains quartz, mica, amphibole, and other.	12
285			SANDY CLAY (CL): pale olive (5Y 6/3), 55% clay, low plasticity; 30% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 60 mm, subangular to subrounded; contains quartz, mica, and amphibole; increased gravel with depth to 35%.	
			CLAY (CH): light olive brown (2.5Y 5/4), 100% clay, medium to high plasticity.	
290	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (285-330 ft bgs)		SAND (SP): light olive brown (2.5Y 5/4), 95% fine to medium grained sand, subangular to subrounded, trace coarse; 5% clay; contains quartz, feldspar, mica, and amphibole.	285
			SAND (SP): grayish brown (2.5Y 5/2), 95% fine to coarse grained sand, subangular to subrounded; 5% fine to coarse gravel up to 40 mm; trace clay; contains quartz, feldspar, mica, and amphibole.	290
295			SAND WITH GRAVEL (SP): light yellowish brown (2.5Y 6/3), 70% medium to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel up to 35 mm, subangular to subrounded; 5% clay; contains quartz, feldspar, mica, and amphibole.	
			CLAY (CH): yellowish brown (10YR 5/6), 100% clay, medium plasticity; trace interbeds of medium to coarse sand.	295
300			SAND WITH CLAY AND GRAVEL (SP-SC): light olive brown (2.5Y 5/3), 65% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel up to 22 mm, subangular to subrounded; 10% clay, low plasticity; medium sorted; contains quartz, feldspar, mica, and amphibole.	300
			SAND (SP): light olive brown (2.5Y 5/6), 95% fine to medium grained sand, subangular to subrounded; 5% clay; well sorted; contains quartz, feldspar, mica, and amphibole.	13
305			SAND (SP): olive brown (2.5Y 4/3), 85% fine to coarse grained sand; 10% fine gravel up to 6 mm; 5% clay; medium sorted; contains quartz, feldspar, mica, and amphibole.	305
				14
310				310

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

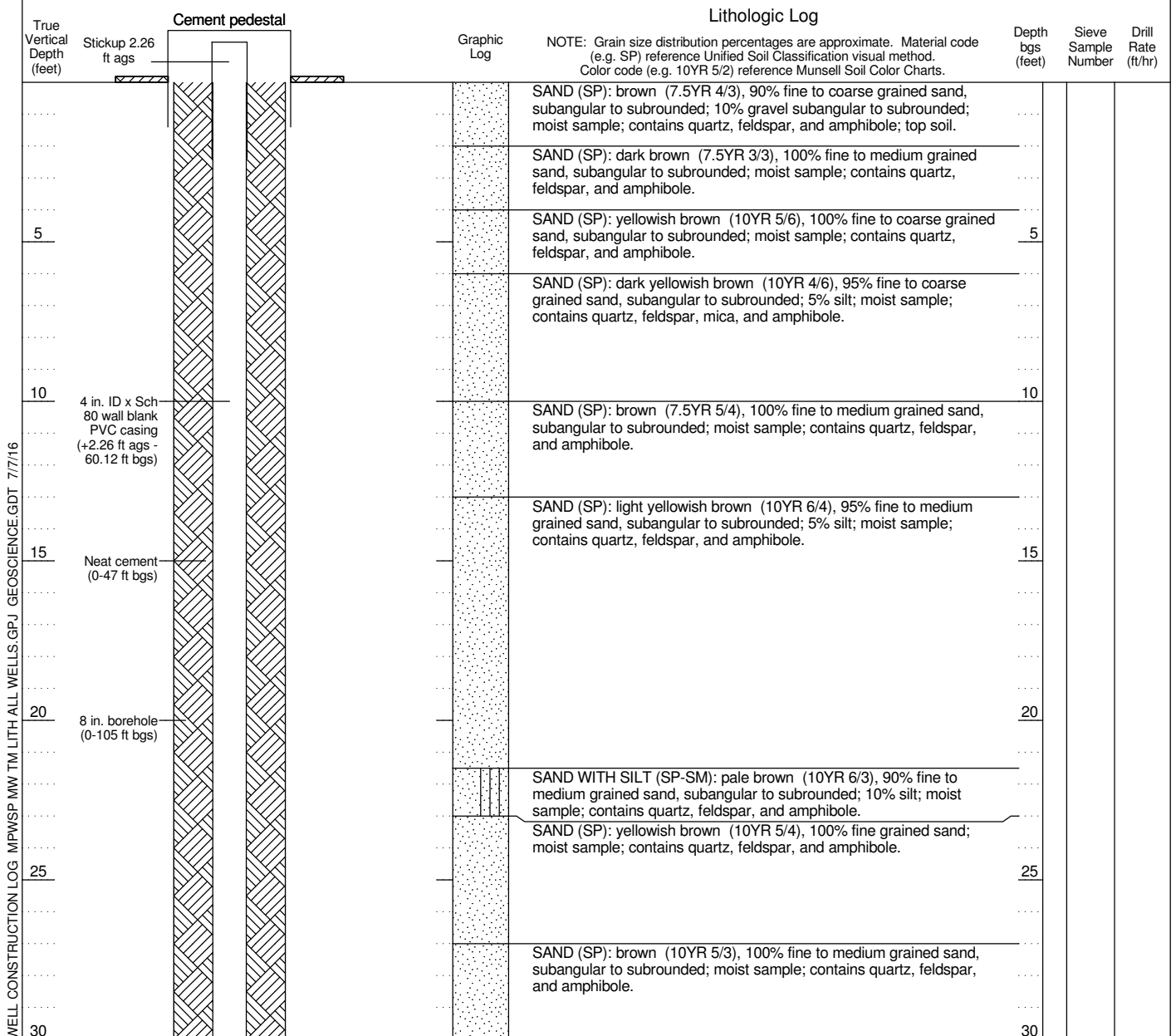
WELL NUMBER MPWSP MW-3D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
315			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/4), 80% fine to coarse grained sand, angular to subangular; 15% fine to coarse gravel up to 15 mm, angular to subangular; 5% clay; medium sorted; contains quartz, feldspar, mica, and amphibole.	
			CLAYEY GRAVEL WITH SAND (GC): light olive brown (2.5Y 5/4), 45% fine to coarse gravel up to 15 mm, subrounded; 30% clay, medium plasticity; 25% fine to coarse grained sand, subrounded; poorly sorted; contains quartz, feldspar, and amphibole.	315
			SAND (SP): light olive brown (2.5Y 5/3), 85% fine to coarse grained sand, subangular to subrounded; 10% fine gravel up to 7 mm, subangular to subrounded; 5% clay, low plasticity; medium sorted; contains quartz, feldspar, mica, and amphibole; gravel up to 45 mm from 315.2 to 315.5 ft.	
320			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 75% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel up to 60 mm; 5% clay; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.	320
			GRAVEL WITH CLAY AND SAND (GP-GC): pale olive (5Y 6/3), 55% fine to coarse gravel up to 29 mm, subangular to subrounded; 35% fine to coarse grained sand; 10% clay, low plasticity; poorly to medium sorted; contains quartz, feldspar, mica, and amphibole.	
325			SAND (SP): pale olive (5Y 6/3), 85% fine to coarse grained sand; 10% fine gravel up to 7 mm; 5% clay; medium to well sorted; contains quartz, feldspar, mica, and amphibole.	325
			SAND (SP): light olive brown (2.5Y 5/3), 95% fine to medium grained sand, subangular to subrounded; 5% clay; well sorted; contains quartz, feldspar, mica, and amphibole.	
330				330
	Blank casing with end cap (330-332.26 ft bgs) TD 332.5 ft bgs			
			Bottom of borehole at 332.5 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-4S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER		Cal Am 14077-15		LOCATION Marina, CA Entrance to CEMEX						
REPORT DATE		Cascade Drilling D. King		LOGGED BY A. Khalighi						
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.26	60.12	62.38	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	60.12	100.12	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	100.12	102.5	2.38	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	39.70 ft NAVD88									
TOC ELEVATION	41.96 ft NAVD88 (RP)									
START DATE	2/10/15									
FINISH DATE	2/11/15									

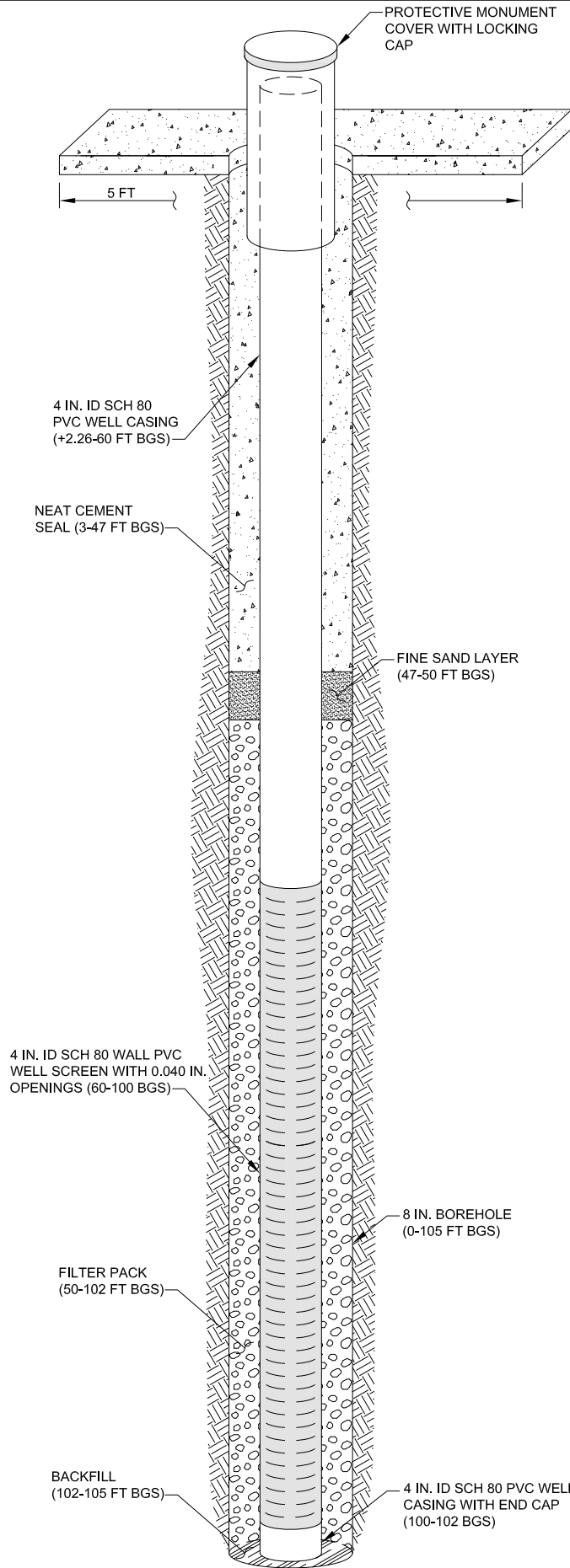


WELL NUMBER MPWSP MW-4S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
35			SAND (SP): light brown (7.5YR 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; moist sample; contains quartz, feldspar, mica, and amphibole.	35
40			SAND (SP): brown (7.5YR 5/4), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; moist sample; contains quartz, feldspar, mica, and amphibole; contains coarse sand layers.	40
45				45
50	CEMEX Monterey Lapis Lustre #60 fine sand seal (47-50 ft bgs)		SAND (SP): yellowish brown (10YR 5/4), 100% fine to coarse grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole.	50
55	CEMEX Monterey Lapis Lustre #3 filter pack (50-105 ft bgs)		SAND (SP): brown (10YR 5/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; moist sample; contains quartz, feldspar, mica, and amphibole.	55
60				60
65	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (60.12-100.12 ft bgs)		SAND (SW): brown (10YR 5/3), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole.	65
70			SAND WITH GRAVEL (SP): brown (10YR 5/3), 75% fine to coarse grained sand, subangular to subrounded, mostly coarse grained; 25% fine gravel subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	70
70			SAND (SP): brown (10YR 5/3), 95% fine grained sand, very fine grained; 5% silt; wet sample; contains quartz, feldspar, mica, and	70

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

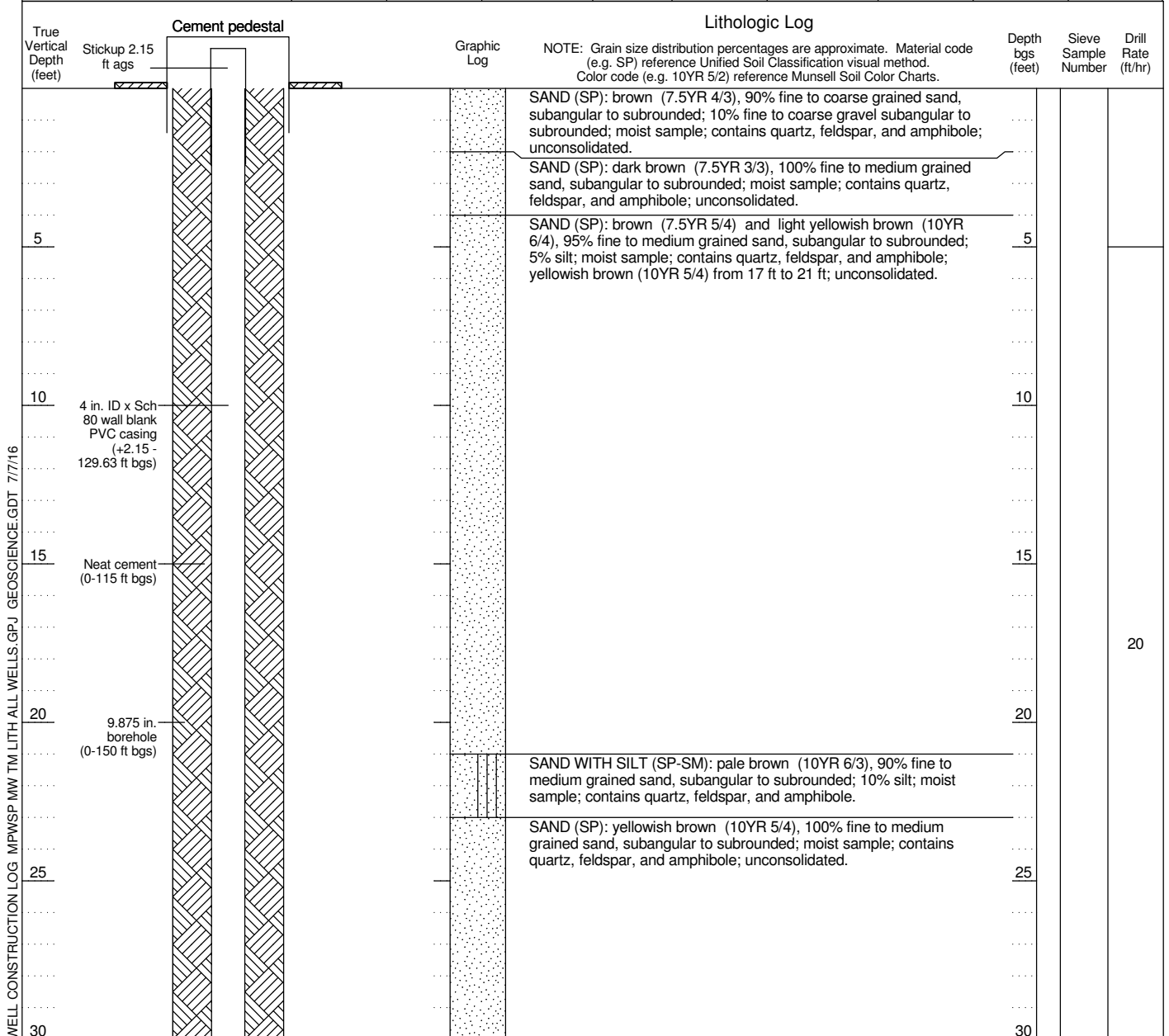
WELL NUMBER MPWSP MW-4S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
			amphibole.	
75				75
80				80
85				85
90			SAND (SP): brown (10YR 5/3), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; trace silt; moist sample; contains quartz, feldspar, and amphibole.	90
			SAND WITH GRAVEL (SP): yellowish brown (10YR 5/4), 75% fine to coarse grained sand, subangular to subrounded; 25% gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole.	
			SAND (SP): yellowish brown (10YR 5/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole.	
95			GRAVEL WITH SAND (GP): light brown (7.5YR 6/4), 60% fine to coarse gravel subangular to subrounded; 40% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole.	95
			GRAVEL WITH SAND (GP): yellowish brown (10YR 5/4), 80% fine to coarse gravel subangular to subrounded; 20% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole.	
100			SAND WITH GRAVEL (SW): brownish yellow (10YR 6/6), 55% fine to coarse grained sand, subangular to subrounded; 40% fine to coarse gravel subangular to subrounded; 5% silt; wet sample; contains quartz, feldspar, mica, and amphibole.	100
	Blank casing with end cap (100.12-102.5 ft bgs)			
105	TD 105 ft bgs		Bottom of borehole at 105 feet.	105

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-4M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Entrance to CEMEX							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.15	129.63	131.78	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	129.63	259.63	130	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	9.875, 8 in	Blank	259.63	262	2.37	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	39.84 ft NAVD88									
TOC ELEVATION	41.99 ft NAVD88 (RP)									
START DATE	2/06/15									
FINISH DATE	2/09/15									



WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
35			SAND (SP): brown (7.5YR 5/3), 100% fine to medium grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, and amphibole.	
40				
45			SAND (SP): light brown (7.5YR 6/3), 100% fine to coarse grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
50			SAND (SP): brown (7.5YR 5/4), 100% fine to coarse grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
55			SAND (SW): yellowish brown (10YR 5/4), 100% fine to coarse grained sand, angular to subangular; moist to wet sample; contains quartz, feldspar, and amphibole; unconsolidated.	
60			SAND (SP): brown (10YR 5/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; moist to wet sample; contains quartz, feldspar, and amphibole; unconsolidated.	
65			SAND (SW): brown (10YR 5/3), 95% fine to coarse grained sand; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	
70			SAND WITH GRAVEL (SP): brown (10YR 5/3), 75% fine to coarse grained sand, subangular to subrounded; 25% fine gravel subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
			SAND (SP): brown (10YR 5/3), 100% sand, subangular to subrounded, very fine to fine grained; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
75				
80				
85				
90			<p>SAND (SP): light yellowish brown (10YR 6/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.</p>	90
			<p>SAND WITH GRAVEL (SP): yellowish brown (10YR 5/4), 80% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; unconsolidated.</p>	
95			<p>SAND (SP): yellowish brown (10YR 5/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.</p>	95
			<p>GRAVEL WITH SAND (GP): light brown (7.5YR 6/4), 60% fine gravel subangular to subrounded; 40% fine to coarse grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; transitions to approximately 80% gravel and 20% sand with increasing depth; unconsolidated.</p>	
100			<p>SAND WITH GRAVEL (SP): brownish yellow (10YR 6/6), 55% fine to coarse grained sand, subangular to subrounded; 40% fine to coarse gravel subangular to subrounded; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.</p>	100
105			<p>SAND (SP): light brown (7.5YR 6/4), 95% fine to medium grained sand, subangular to subrounded; 5% fine to coarse gravel subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.</p>	105
			<p>SAND (SP): light brown (7.5YR 6/4), 100% fine to medium grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole.</p>	
110				110

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-4M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 Marina, CA

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log			
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
115			SAND (SP): brown (7.5YR 5/3), 100% sand, subangular to subrounded, very fine to fine grained; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	115		
120	CEMEX Monterey Lapis Lustre #60 fine sand seal (115-119.5 ft bgs)			120		
125	CEMEX Monterey Lapis Lustre #3 filter pack (119.5-265.5 ft bgs)		CLAY (CL): yellowish brown (10YR 5/6), 90% clay, high plasticity; 5% medium grained sand, subangular to subrounded; 5% silt; moist sample; contains quartz, feldspar, and amphibole.	125		
130			SAND WITH CLAY (SP-SC): pale olive (5Y 6/3), 90% fine to medium grained sand, subangular to subrounded; 5% silt; 5% clay; moist sample; contains quartz, mica, and amphibole; low plasticity.			
135	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (129.63-259.63 ft bgs)		CLAY (CL): brownish yellow (10YR 6/6), 95% clay, medium plasticity; 5% medium grained sand, subangular to subrounded; moist sample; contains quartz, mica, and amphibole.			20
			SAND WITH SILT (SP-SM): pale yellow (5Y 7/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	130		
			SAND (SP): brownish yellow (10YR 6/6), 95% sand, subangular to subrounded, very fine to fine grained; 5% silt, low plasticity; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.			
			SAND WITH CLAY (SP-SC): light brown (7.5YR 6/3), 90% sand, subangular to subrounded, very fine to fine grained; 10% clay, low plasticity; moist sample; oxidation.			
			SAND (SP): light brown (7.5YR 6/3), 90% sand; 5% gravel; 5% silt.	135		
140			SAND WITH SILT (SP-SM): very pale brown (10YR 7/4), 90% fine to coarse grained sand, subangular to subrounded; 10% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	140		
145				145		
150				150		23.7

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth (feet)	Sieve Sample Number
155			SILTY SAND (SM): light yellowish brown (10YR 6/4), 85% fine to medium grained sand, subangular to subrounded; 15% silt, low plasticity; moist to wet sample; contains quartz, mica, and amphibole.	
160			SAND (SP): light brownish gray (2.5Y 6/2), 95% fine to coarse grained sand, subangular to subrounded; 5% clay, low plasticity; moist to wet sample; contains quartz, feldspar, and amphibole.	
165			SAND (SP): light yellowish brown (10YR 6/4), 85% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel subangular to subrounded; 5% clay; moist to wet sample; contains quartz, feldspar, and amphibole.	
170			SAND (SP): reddish yellow (7.5YR 6/6), 90% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
175			GRAVEL WITH SILT AND SAND (GP-GM): pale brown (10YR 6/3), 55% fine to coarse gravel subangular to subrounded, rounded coarse gravel; 35% fine to coarse grained sand, subangular to subrounded; 10% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
180			SAND WITH SILT (SP-SM): dark yellowish brown (10YR 4/4), 90% sand, subangular to subrounded, very fine to fine grained; 10% silt; moist to wet sample.	
185			FAT CLAY (CH): yellowish brown (10YR 5/8), 90% clay, high plasticity; 5% sand, very fine; 5% silt; moist sample.	23.7
190			CLAYEY SAND (SC): brown (7.5YR 5/3), 70% fine to medium grained sand, subrounded to rounded; 25% clay, low to medium plasticity; 5% fine to coarse gravel subrounded to rounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	
			SAND (SP): light brown (7.5YR 6/3), 95% fine to coarse grained sand, angular to subangular; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
			SILTY SAND (SM): brown (10YR 5/3), 85% fine to medium grained sand, subangular to subrounded; 15% silt, low plasticity; moist sample; contains quartz, mica, and amphibole; unconsolidated.	
			SAND (SP): light brownish gray (10YR 6/2), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195			SAND (SP): dark yellowish brown (10YR 4/6) and brown (10YR 4/3), 95% fine to coarse grained sand, subangular to subrounded, higher concentration of coarse sand; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	195			
200				200			
205				205			
210				210		23.7	
215				215			
220			SAND (SP): brown (7.5YR 4/2) and red (2.5YR 4/6), 100% sand, subangular to subrounded, very fine to fine grained; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	220			
225				225			
230			SILT (ML): pale olive (5Y 6/4), 100% silt, very dense, medium plasticity; moist sample; oxidized staining; black ash.	230			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-4M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 Marina, CA

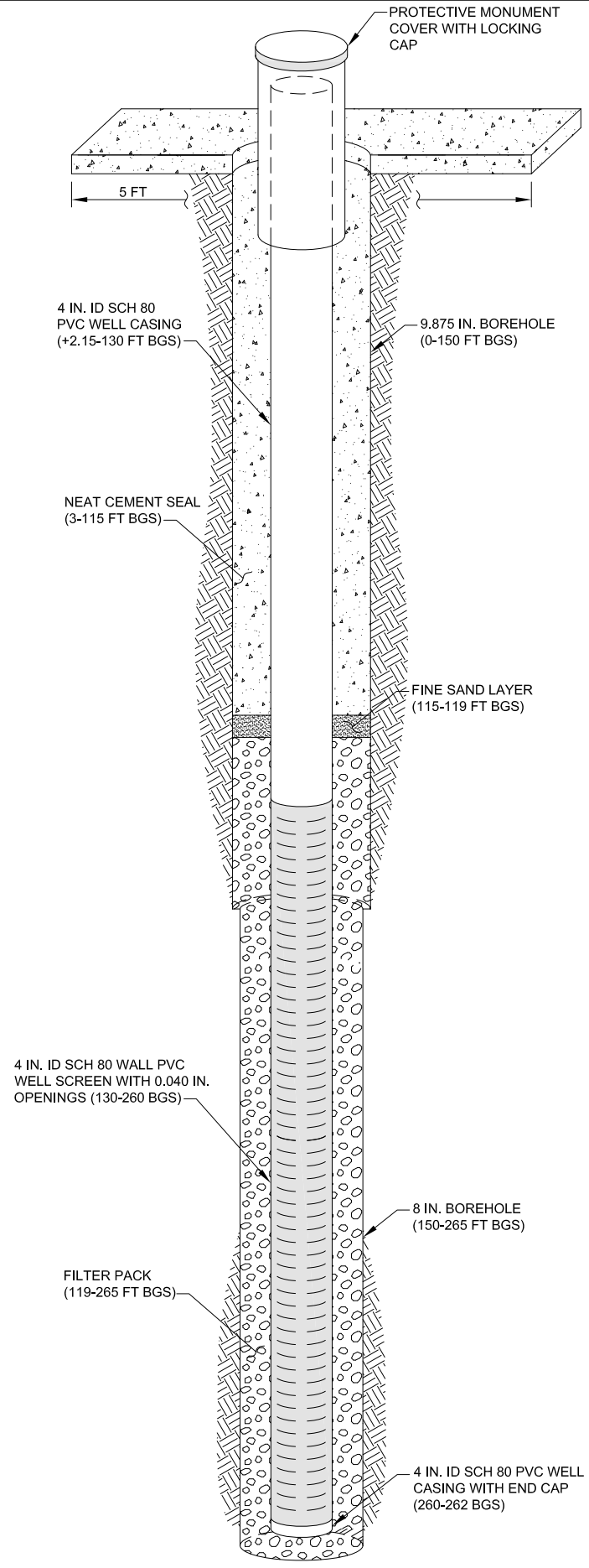
True Vertical Depth (feet)	Graphic Log	Lithologic Log	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
(continued)		NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.			
235		SAND WITH SILT (SP-SM): pale olive (5Y 6/3), 90% fine to medium grained sand, subangular to subrounded; 10% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	235		
		SAND (SP): light olive brown (2.5Y 5/3), 100% fine to coarse grained sand, subangular to subrounded; moist to wet sample; unconsolidated.			
		SAND (SP): brown (7.5YR 5/3), 90% medium to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	240		
240					
		SAND (SP): light yellowish brown (2.5Y 6/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; moist sample; unconsolidated.			
		SAND (SP): pale brown (10YR 6/3), 100% fine to medium grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	245		
245					
250			250		
255		GRAVEL WITH CLAY AND SAND (GP-GC): pale olive (5Y 6/3), 50% fine to coarse gravel subangular to subrounded; 40% fine to coarse grained sand, subangular to subrounded; 10% clay, low plasticity; moist to wet sample; contains quartz, feldspar, mica, and amphibole.	255		
260	Blank casing with end cap (259.63-262 ft bgs)	SILT (ML): olive (5Y 5/3), 85% silt; 15% clay; moist sample; medium to high plasticity.	260		
265			265		

23.7

TD 265.5 ft bgs

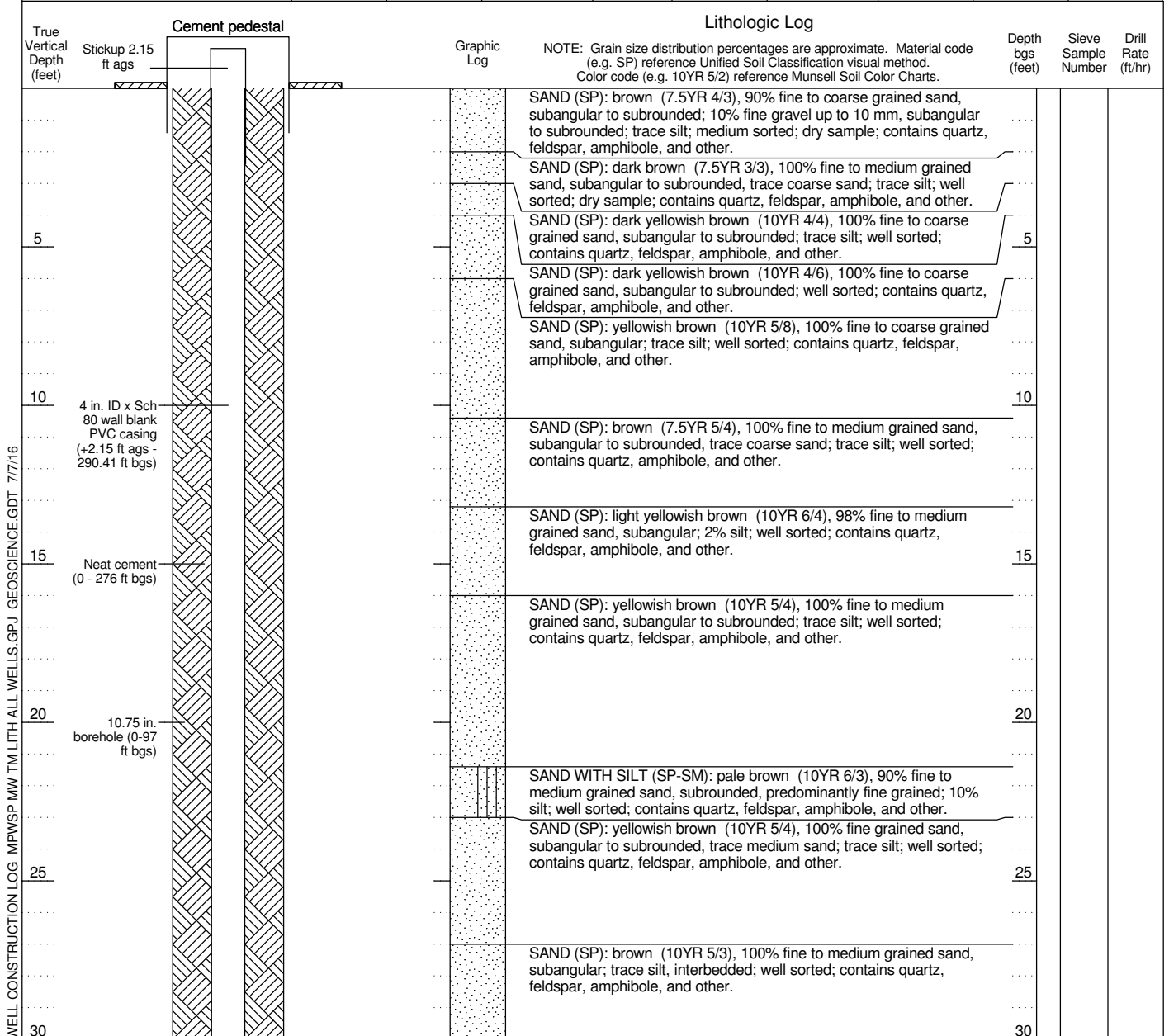
Bottom of borehole at 265.5 feet.

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER		Cal Am 14077-15		LOCATION Marina, CA Entrance to CEMEX						
REPORT DATE		Cascade Drilling A. Patricio		LOGGED BY J. Sobolew						
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.15	290.41	292.56	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	290.41	330.41	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	330.41	332.41	2	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	39.80 ft NAVD88									
TOC ELEVATION	41.95 ft NAVD88 (RP)									
START DATE	12/20/14									
FINISH DATE	1/19/15									



WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lgs (feet)	Sieve Sample Number
35			35	
40			40	1
45			45	
50			50	2
55			55	
60			60	
65			65	3
70			70	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			5% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.				20
75					75		
						4	
80					80		
85					85		
			SAND (SP): light yellowish brown (10YR 6/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 5 mm, subangular to subrounded; trace silt; medium to well sorted; contains quartz, feldspar, amphibole, and other.				
90			SAND WITH GRAVEL (SP): yellowish brown (10YR 5/4), 75% fine to coarse grained sand, subangular to subrounded; 25% fine gravel up to 16 mm, subangular to subrounded; trace silt; medium sorted; contains quartz, amphibole, and other; contains chert.		90		5
			SAND (SP): yellowish brown (10YR 5/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 5 mm, subangular to subrounded; trace silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.				10
95			GRAVEL WITH SAND (GP): light brown (7.5YR 6/4), 60% fine gravel up to 13 mm, subangular to subrounded; 40% fine to coarse grained sand, subangular to subrounded; medium sorted; contains quartz, feldspar, amphibole, and other.		95		
			GRAVEL WITH SAND (GP): yellowish brown (10YR 5/4), 80% fine to coarse gravel up to 56 mm, subangular to rounded; 20% medium to coarse grained sand, subangular to rounded; trace silt; medium sorted; contains quartz, feldspar, amphibole, and other.				6
100			SAND WITH GRAVEL (SW): brownish yellow (10YR 6/6), 55% fine to coarse grained sand, subangular to subrounded; 40% fine to coarse gravel up to 53 mm, subangular to subrounded; 5% silt; poorly to medium sorted; contains quartz, feldspar, amphibole, and other.		100		7
105			SAND (SP): light brown (7.5YR 6/4), 95% fine to medium grained sand, subangular to subrounded, trace coarse sand; 5% fine gravel up to 18 mm, subangular to subrounded; trace silt; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.		105		
110			SAND (SP): light brown (7.5YR 6/4), 100% fine to medium grained sand, subangular to subrounded; trace fine gravel up to 6 mm, subangular to subrounded; trace silt; well sorted; contains quartz,		110		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

9.875 in.
borehole
(97-247 ft bgs)

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			feldspar, mica, amphibole, and other.				
115			SAND (SP): brown (7.5YR 5/3), 100% fine grained sand, subangular to subrounded; trace silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.		115		
						8	
120					120		
			FAT CLAY (CH): pale olive (5Y 6/3), 95% clay, medium plasticity; 5% medium grained sand, subrounded; contains quartz, and other.				
125					125		
			SAND WITH CLAY (SP-SC): yellowish brown (10YR 5/6), 90% fine to medium grained sand, subrounded; 5% silt; 5% clay, low plasticity; well sorted; contains quartz, mica, amphibole, and other.				
			FAT CLAY (CH): pale olive (5Y 6/3), 100% clay, medium plasticity; trace fine grained sand, subrounded; contains quartz, and mica.				
130			SAND WITH SILT (SP-SM): brownish yellow (10YR 6/6), 90% fine to medium grained sand, subangular; 10% silt; medium to well sorted; contains quartz, mica, and other; predominantly quartz.		130		
			SAND (SP): pale yellow (5Y 7/3), 95% fine grained sand, subangular, very fine to fine grains; 5% silt; well sorted; contains quartz, mica, amphibole, and other; high mica content.				
			SAND (SP): brownish yellow (10YR 6/6), 100% fine to medium grained sand, subangular to subrounded; trace silt; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.				
135			SAND WITH CLAY (SP-SC): pale yellow (2.5Y 7/3), 90% fine grained sand, subangular, very fine to fine grains; 10% clay, low plasticity; well sorted; contains quartz, mica, amphibole, and other; oxidation in layers.		135		
			SAND (SP): light brown (7.5YR 6/3), 100% fine to coarse grained sand, angular to subrounded; trace fine gravel up to 6 mm, angular to subrounded; trace silt; trace clay; well sorted; contains quartz, feldspar, amphibole, and other; layer of clay with shells.				
140			SAND WITH SILT (SP-SM): very pale brown (10YR 7/4), 90% fine to medium grained sand, subrounded to rounded; 10% silt; well sorted; contains quartz, amphibole, and other; predominantly rounded quartz.		140		
						20	
145					145		
						9	
150					150		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)			
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA		
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		
			Depth bgs (feet)	Sieve Sample Number	
155			<p>SILTY SAND (SM): light yellowish brown (10YR 6/4), 85% fine to medium grained sand, subangular to subrounded; 15% silt, low plasticity; medium sorted; contains quartz, mica, amphibole, and other.</p> <p>SAND (SP): light brownish gray (2.5Y 6/2), 95% fine to coarse grained sand, subangular to subrounded; 5% clay, low plasticity; well sorted; contains quartz, mica, amphibole, and other; high mica content.</p> <p>SAND (SP): light yellowish brown (10YR 6/4), 85% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel up to 34 mm, subangular to subrounded; 5% clay, no to low plasticity; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other; oxidation apparent.</p> <p>SAND (SP): reddish yellow (7.5YR 6/6), 90% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel up to 29 mm, subangular to subrounded; trace silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other; oxidation apparent.</p>	155	10
160				160	
165			<p>GRAVEL WITH CLAY AND SAND (GP-GC): pale brown (10YR 6/3), 55% fine to coarse gravel up to 55 mm, subangular to subrounded; 35% fine to coarse grained sand, subangular to subrounded; 10% clay, no to low plasticity; medium sorted; contains quartz, feldspar, mica, amphibole, and other; rounded clasts of gravel.</p>	165	20
170			<p>SAND WITH SILT (SP-SM): dark yellowish brown (10YR 4/4), 90% fine grained sand, subrounded; 10% silt; well sorted; contains quartz, mica, amphibole, and other.</p> <p>FAT CLAY (CH): yellowish brown (10YR 5/8), 100% clay, high plasticity; trace fine grained sand, subrounded; trace silt; contains quartz, and mica; transition silt to clay from 168.4 to 177 ft bgs.</p>	170	11 12
175			<p>CLAYEY SAND (SC): brown (7.5YR 5/3), 75% fine to medium grained sand, subangular; 25% clay, low to medium plasticity; trace fine gravel up to 15 mm, subangular; well sorted; contains quartz, mica, amphibole, and other; trace chert.</p>	175	
180			<p>SAND (SP): light brown (7.5YR 6/3), 95% fine to coarse grained sand, angular to subangular; 5% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other; predominantly quartz.</p> <p>SILTY SAND (SM): brown (10YR 5/3), 85% fine to medium grained sand, subangular, predominantly fine grained; 15% silt, low plasticity; medium sorted; contains quartz, mica, amphibole, and other.</p>	180	
185			<p>SAND (SP): light brownish gray (10YR 6/2), 95% fine to coarse grained sand, subangular to subrounded, coarser grained from 187 to 189 ft bgs; 5% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.</p>	185	13 14
190			<p>SAND (SP): dark yellowish brown (10YR 4/6), 95% fine grained sand, subangular to subrounded; 5% silt; well sorted; contains quartz,</p>	190	10

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			feldspar, amphibole, and other; predominantly dark-colored minerals.				
195					195		10
200					200		
205					205		
210					210		
215					215		
220				SAND (SP): brown (7.5YR 4/2), 100% fine grained sand, subrounded; trace silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other; higher quartz content.	220	X	15
225				SAND (SP): strong brown (7.5YR 4/6), 95% fine grained sand, subangular to subrounded; 5% silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other; abundant dark minerals; faint rusty color.	225		
				SAND (SP): olive brown (2.5Y 4/3), 100% fine grained sand, subangular to subrounded; trace silt; well sorted; weak cementation; contains quartz, feldspar, amphibole, and other; abundant dark minerals.			
230				SILT (ML): pale olive (5Y 6/4), 100% silt, dense, low plasticity; horizontal, dark, oxidized laminations 227-227.5 ft bgs.	230		6

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
235			SAND WITH SILT (SP-SM): pale olive (5Y 6/3), 90% fine to medium grained sand, subangular to subrounded, trace coarse grains; 10% silt; medium sorted; contains quartz, mica, amphibole, and other; no to low plasticity.	235			
			SAND (SP): light olive brown (2.5Y 5/3), 100% fine to coarse grained sand, subangular to subrounded, predominantly medium to coarse grains; trace fine gravel up to 6 mm, subangular to subrounded; medium to well sorted; contains quartz, feldspar, mica, amphibole, and other.		16		6
240			SAND (SP): brown (7.5YR 5/3), 90% fine to coarse grained sand, subangular to subrounded, predominantly medium to coarse grains; 10% fine to coarse gravel up to 35 mm, subangular to subrounded; trace silt; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other.	240			
			SAND WITH GRAVEL (SW): light yellowish brown (2.5Y 6/3), 85% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 26 mm, subrounded; trace silt; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.				
245			SAND (SP): light yellowish brown (2.5Y 6/3), 95% fine to medium grained sand, subangular to subrounded; 5% silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.	245			
			SAND (SP): pale brown (10YR 6/3), 100% fine to medium grained sand, subangular, predominantly medium grained; trace silt; well sorted; contains quartz, feldspar, mica, amphibole, and other.		17		
250	8 in. borehole (247-332.8 ft bgs)			250			
			GRAVEL WITH CLAY AND SAND (GP-GC): pale olive (5Y 6/3), 50% fine to coarse gravel up to 38 mm, subangular to subrounded; 40% fine to coarse grained sand, subangular to subrounded; 10% clay, low plasticity; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.	255			18
260			SILT (ML): olive (5Y 5/3), 100% silt, dense, low to medium plasticity.	260			
			SILTY SAND (SM): olive (5Y 5/3), 65% fine grained sand, subrounded; 35% silt, low plasticity; well sorted; contains quartz, mica, and other.				
265			SAND (SP): olive gray (5Y 5/2), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; trace fine gravel up to 6 mm,	265			
							20
270				270			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			subangular to subrounded; medium sorted; contains quartz, feldspar, mica, amphibole, and other; coarser grains subrounded.				
275			SAND WITH GRAVEL (SP): light olive gray (5Y 6/2), 80% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 34 mm, subangular to subrounded, predominantly fine grained; 5% silt; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other.		275		
280	CEMEX Monterey Lapis Lustre #60 fine sand seal (276 - 280 ft bgs)				280	19	20
285	CEMEX Monterey Lapis Lustre #3 filter pack (280 - 332.83 ft bgs)		SAND (SP): light yellowish brown (2.5Y 6/3), 90% fine to coarse grained sand, subangular to subrounded; 5% fine gravel up to 7 mm, subangular to subrounded; 5% clay; medium sorted; contains quartz, feldspar, mica, amphibole, and other.		285		
			SAND WITH CLAY AND GRAVEL (SP-SC): pale olive (5Y 6/3), 50% fine to coarse grained sand, subangular to subrounded; 40% fine to coarse gravel up to 40 mm, subangular to subrounded; 10% clay, no to low plasticity; poorly to medium sorted; contains quartz, feldspar, mica, amphibole, and other.				
290			CLAY (CL): pale olive (5Y 6/3) and olive gray (5Y 4/2), 100% clay, low to medium plasticity; trace fine grained sand, subangular to subrounded; contains quartz, mica, and, olive gray laminations.		290		
295	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (290.41 - 330.41 ft bgs)		CLAYEY SAND (SC): grayish brown (2.5Y 5/2), 70% fine to coarse grained sand, subangular to subrounded; 25% clay, low to medium plasticity; 5% fine to coarse gravel up to 40 mm, subangular to subrounded; contains quartz, feldspar, mica, amphibole, and other.		295		
			SAND WITH CLAY (SP-SC): light yellowish brown (2.5Y 6/3), 85% fine to coarse grained sand, subangular to subrounded; 10% clay, no to low plasticity; 5% fine to coarse gravel up to 55 mm, subangular to subrounded; contains quartz, feldspar, mica, amphibole, and other.			20	
300			SANDY SILT (ML): olive (5Y 4/4), 55% silt, low plasticity; 45% fine grained sand, subangular; contains quartz, mica, amphibole, and other.		300		
			SAND WITH CLAY AND GRAVEL (SP-SC): pale olive (5Y 6/3), 75% fine to coarse grained sand, subangular to subrounded, predominantly medium grains; 15% fine to coarse gravel up to 61 mm, subangular to subrounded; 10% clay, low plasticity; contains quartz, feldspar, mica, amphibole, and other; trace well rounded siltstone cobbles.				10
305			SAND (SP): pale olive (5Y 6/3), 95% fine to medium grained sand, subangular to subrounded; 5% clay; well sorted; contains quartz, feldspar, mica, amphibole, and other.		305		
			SAND (SP): pale olive (5Y 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% clay; trace fine gravel up to 6 mm, subangular to subrounded; well sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other.			21	
310			SAND (SP): light yellowish brown (2.5Y 6/3), 95% fine to coarse grained sand, subangular to subrounded; 5% clay; trace fine gravel up to 6 mm, subangular to subrounded; well sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other.		310		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-4D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet) | Sieve Sample Number | Drill Rate (ft/hr)
315			SAND (SP): dark grayish brown (10YR 4/2), 95% fine to medium grained sand, subangular to subrounded, trace coarse grains; 5% clay; well sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other; high mica content.	22
315			SAND (SP): pale olive (5Y 6/3), 85% fine to coarse grained sand, subangular; 10% fine to coarse gravel up to 75 mm, subangular; 5% clay; trace cobbles; medium sorted; wet sample; contains quartz, feldspar, mica, amphibole, and other; trace cobbles to 90mm; large siltstones and mudstones, subrounded.	
320			SAND WITH GRAVEL (SP): pale olive (5Y 6/3), 85% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel up to 35 mm, subangular to subrounded; trace silt; medium sorted; contains quartz, feldspar, mica, amphibole, and other.	23
325			GRAVELLY CLAY (CL): pale olive (5Y 6/4), 70% clay, medium plasticity; 20% fine gravel up to 17 mm, subangular; 10% fine to medium grained sand, subangular; contains quartz, feldspar, mica, and other.	
325			FAT CLAY (CH): olive (5Y 5/3), 100% clay, medium plasticity; thin rusty laminations; contains trace mica.	
330			SAND (SP): olive gray (5Y 5/2), 95% fine grained sand, subangular to subrounded; 5% clay, no to low plasticity; well sorted; contains quartz, feldspar, mica, amphibole, and other; high mica and dark mineral content.	24
330			FAT CLAY (CH): pale olive (10Y 6/4), 100% clay, medium plasticity.	
			SAND WITH SILT (SP-SM): olive gray (5Y 5/2), 90% fine grained sand, subrounded; 10% silt; well sorted; contains quartz, mica, amphibole, and other; high mica and quartz content.	
	Blank casing with end cap (330.41 - 332.41) TD 332.8 ft bgs			
			Bottom of borehole at 332.8 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19138
 Company CASCADRE DRILLING
 Well MW-4D
 Field MARINA
 County MONTEREY State CA

Location CEMEX PLANT OFF OF LAPIS RD.
 GPS: N36o 42' 42" W121o 47' 55"
 Other Services: DIL/GR

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	0'	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	01-10-2014		
Run Number	ONE		
Depth Driller	332'		
Depth Logger	332.2'		
Bottom Logged Interval	332'		
Top Log Interval	10"		
Open Hole Size	10"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	34'		
Bentonite Seal	N/A		
Time Well Ready	10:30		
Time Logger on Bottom	12:30		
Equipment Number	PS-8		
Location	L.A.		
Recorded By	RIDDER		
Witnessed By	J. SOBOLEW		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	10"	0'	97'
	9"	97'	247'
	8"	247'	332'
Casing Record	Size	Wgt/Ft	Top
Surface String	12"	N/A	0'
Prot. String			
Production String			
Liner			Bottom 17"

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19138.db
 Dataset Pathname temp2
 Dataset Creation Sat Jan 10 14:33:28 2015

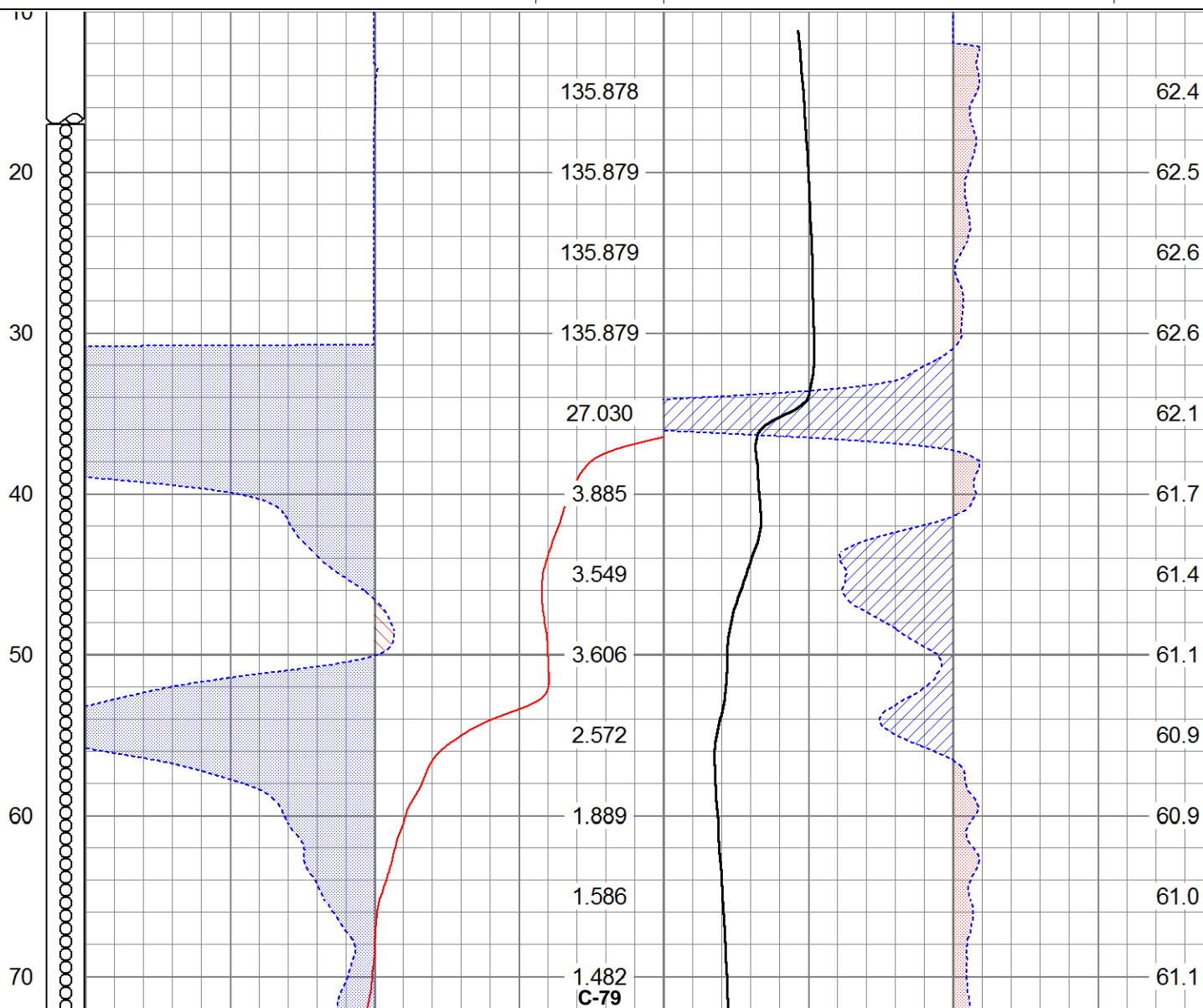
Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Sat Jan 10 12:25:28 2015

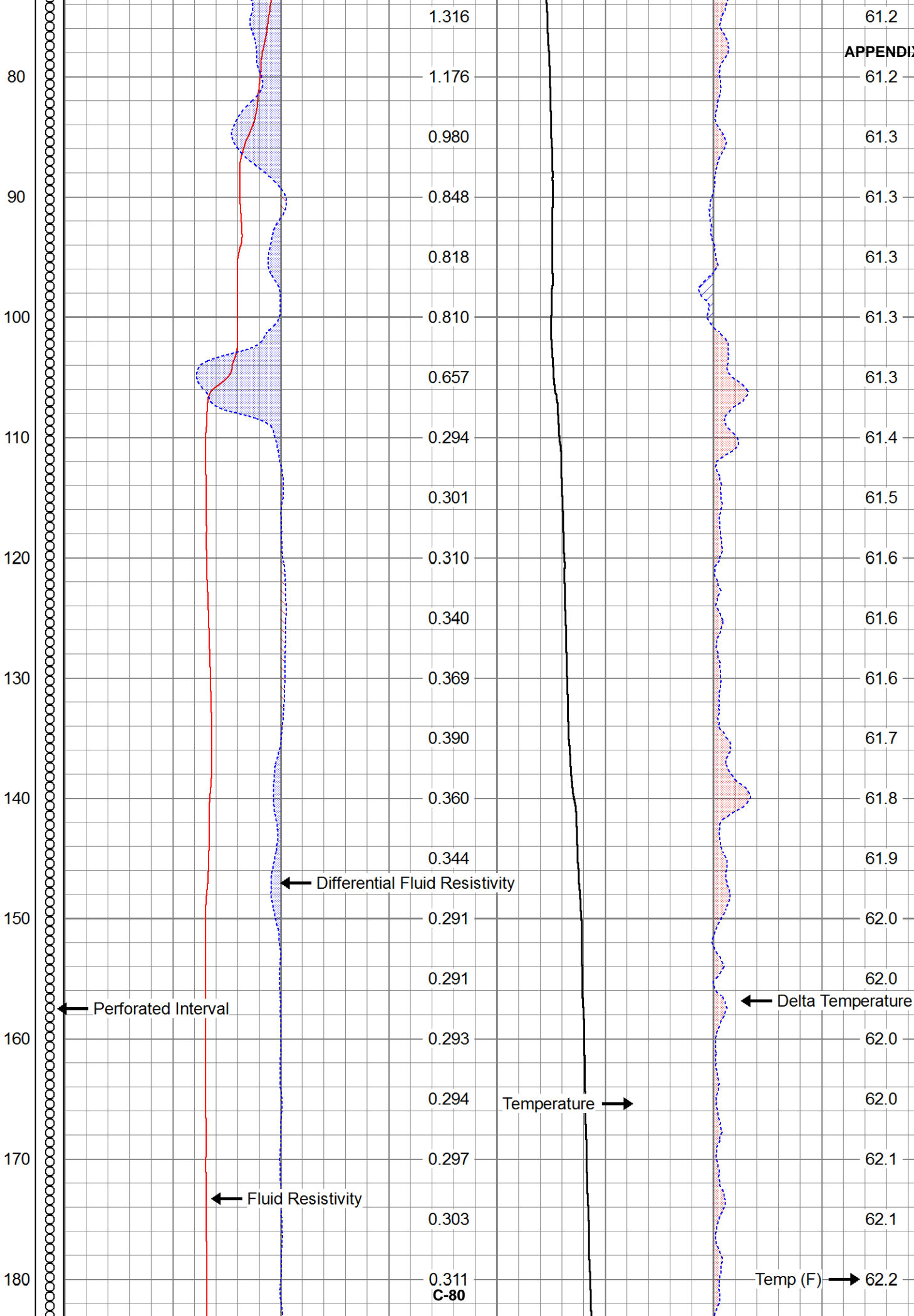
	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

Database File 19138.db
 Dataset Pathname temp2
 Presentation Format frttemp2
 Dataset Creation Sat Jan 10 14:33:28 2015
 Charted by Depth in Feet scaled 1:120

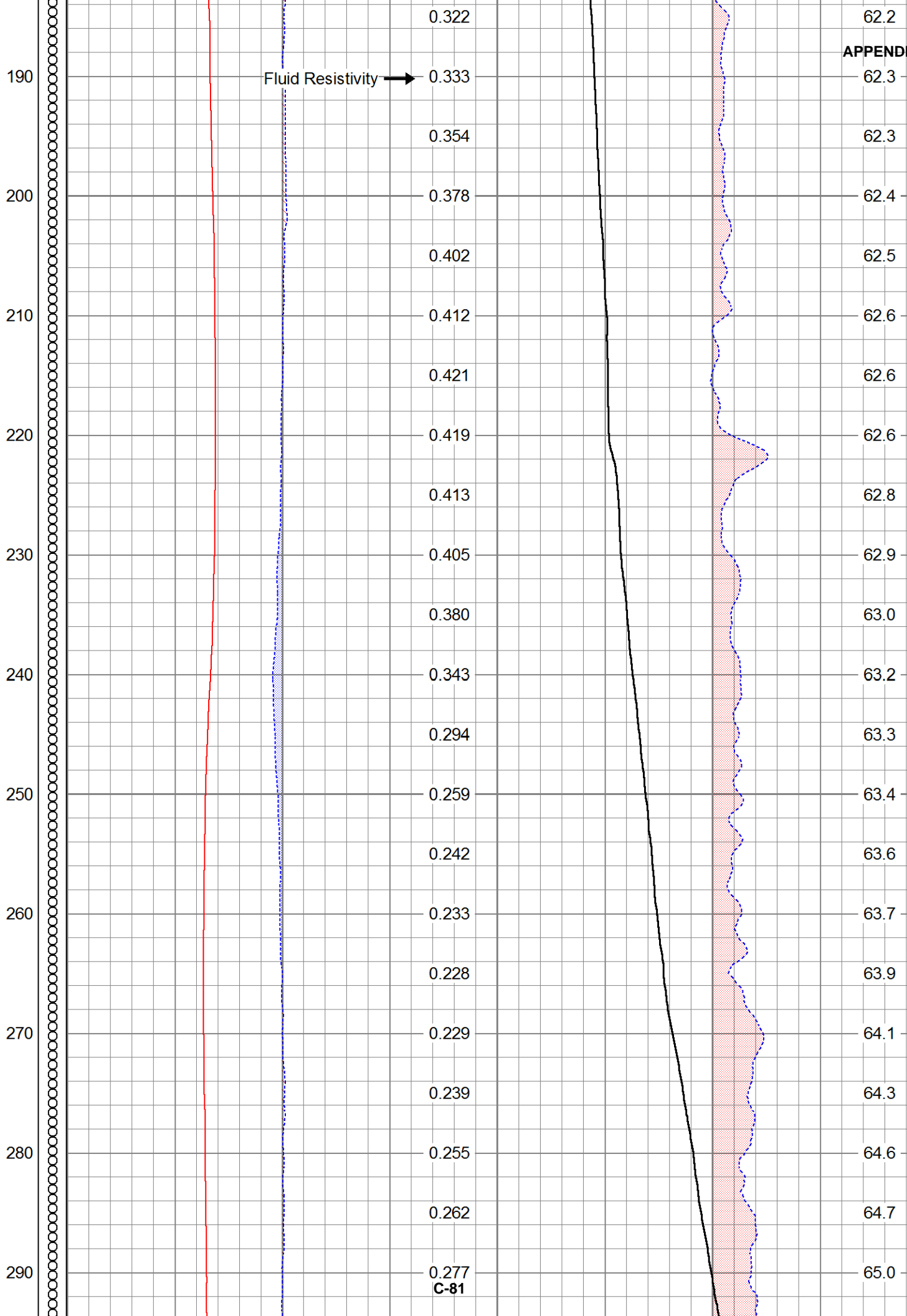
-2	Fluid Resistivity (Ohm-m)	5	60	Temperature (degF)	70
-0.25	Differential Fluid Resistivity (Ohm-m)	0.25	-0.25	Differential Temperature (degF)	0.25
FRES (Ohm-m)			TEMP (degF)		



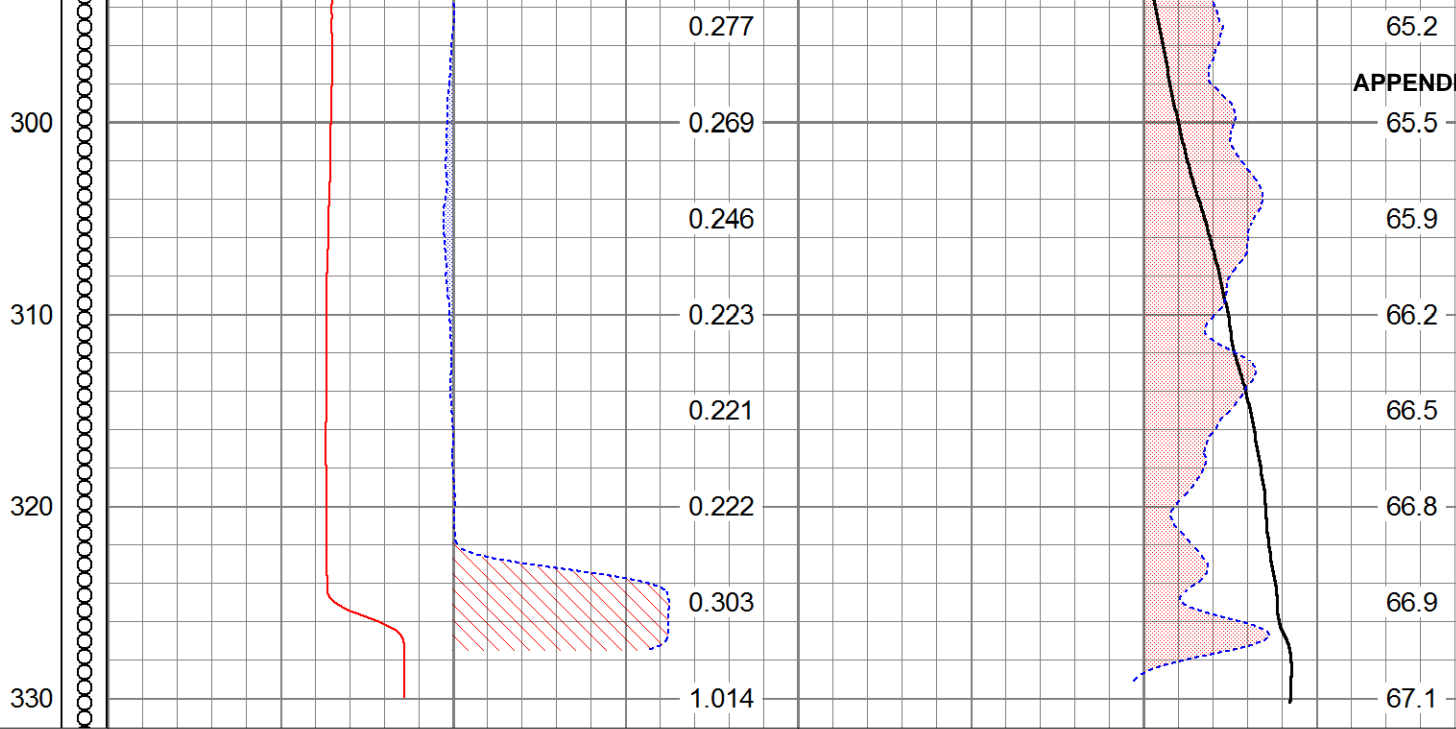
C-79



C-80



C-81



-2	Fluid Resistivity (Ohm-m)	5	60	Temperature (degF)	70
-0.25	Differential Fluid Resistivity (Ohm-m)	0.25	-0.25	Differential Temperature (degF)	0.25
	FRES (Ohm-m)			TEMP (degF)	

PACIFIC SURVEYS

DUAL INDUCTION GAMMA-RAY

Job No. 19138	Company CASCADE DRILLING
Well MW-4D	
Field MARINA	
County MONTEREY	State CA

Location
CEMEX PLANT OFF OF LAPIS RD.
GPS: N36o 42' 42" W121o 47' 55"

Other Services:
TEMP/FR

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	01-10-2014		
Run Number	ONE		
Depth Driller	332'		
Depth Logger	332.2'		
Bottom Logged Interval	332'		
Top Log Interval	10"		
Open Hole Size	10"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	34'		
Bentonite Seal	N/A		
Time Well Ready	10:30		
Time Logger on Bottom	12:30		
Equipment Number	PS-8		
Location	L.A.		
Recorded By	RIDDER		
Witnessed By	J. SOBOLEW		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10"	0'	97'				
	9"	97'	247'				
	8"	247'	332'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	12"	N/A	0'	17"
Prot. String				
Production String				
Liner				

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19138.db
 Dataset Pathname DIL
 Dataset Creation Sat Jan 10 13:34:14 2015

Calibration Report

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1405.080	3665.050	cps	0.000	612.000	mmho/m	0.271	-380.496
Medium	2052.170	14102.500	cps	0.000	1960.000	mmho/m	0.163	-333.788

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Jan 10 13:10:57 2015

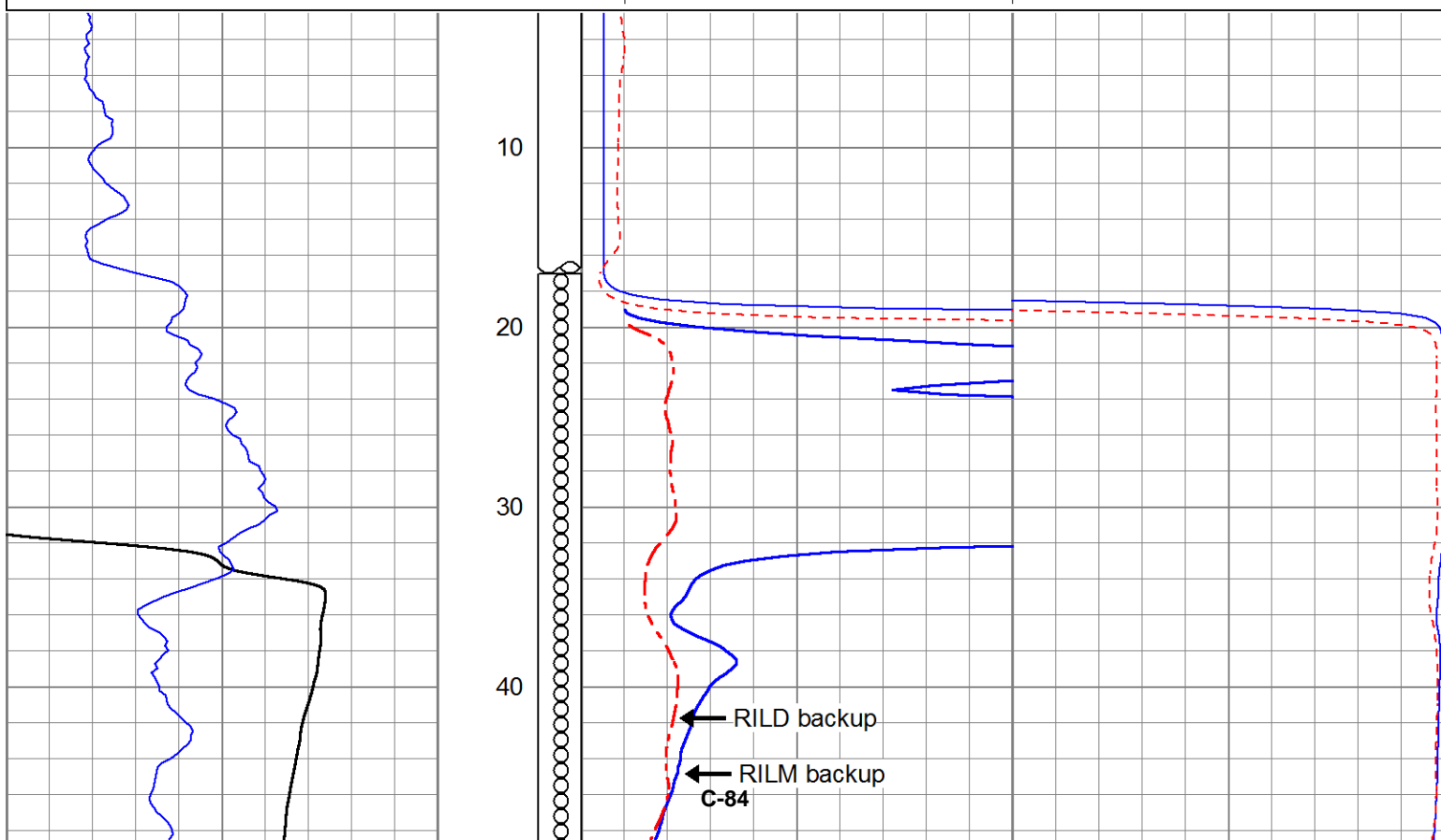
Calibrator Value: 162.0 GAPI

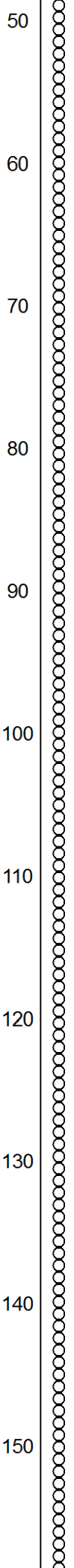
Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

Sensitivity: 1.2020 GAPI/cps

Database File 19138.db
 Dataset Pathname DIL
 Presentation Format dil
 Dataset Creation Sat Jan 10 13:34:14 2015
 Charted by Depth in Feet scaled 1:120

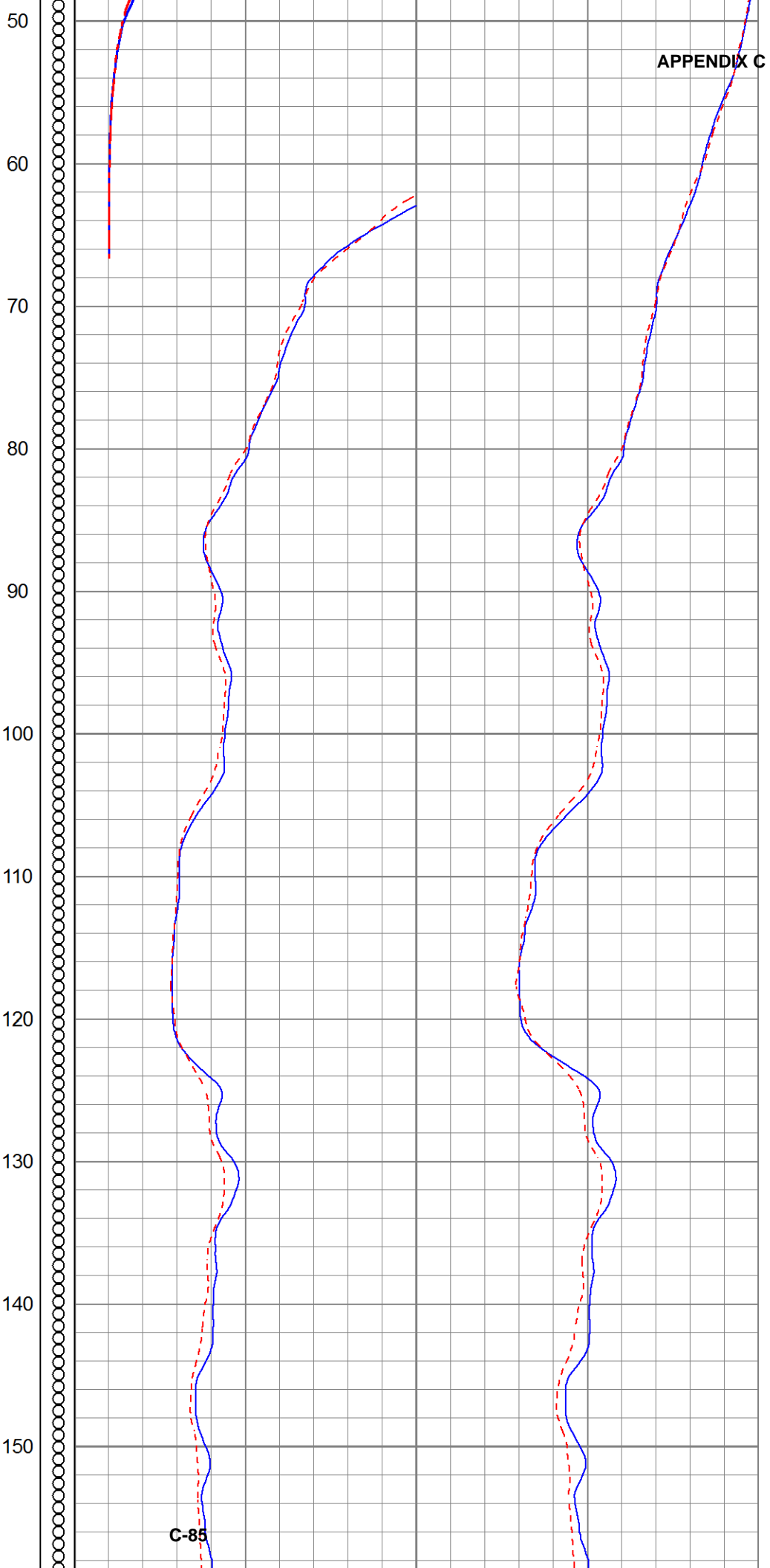
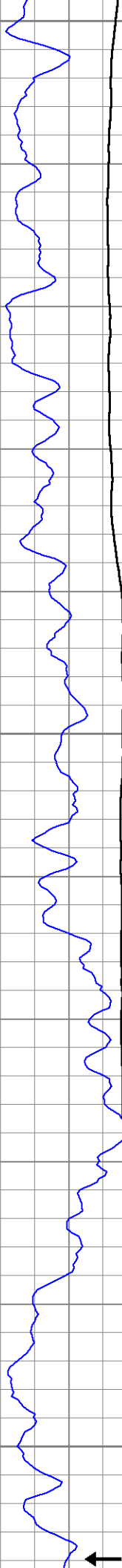
0	SP (mV)	200	0	RILM (Ohm-m)	5	1000	CILM (mmho/m)	0
10	Gamma-Ray (GAPI)	110	0	RILD (Ohm-m)	5	1000	CILD (mmho/m)	0
			5	RILM backup (Ohm-m)	500			
			5	RILD backup (Ohm-m)	500			

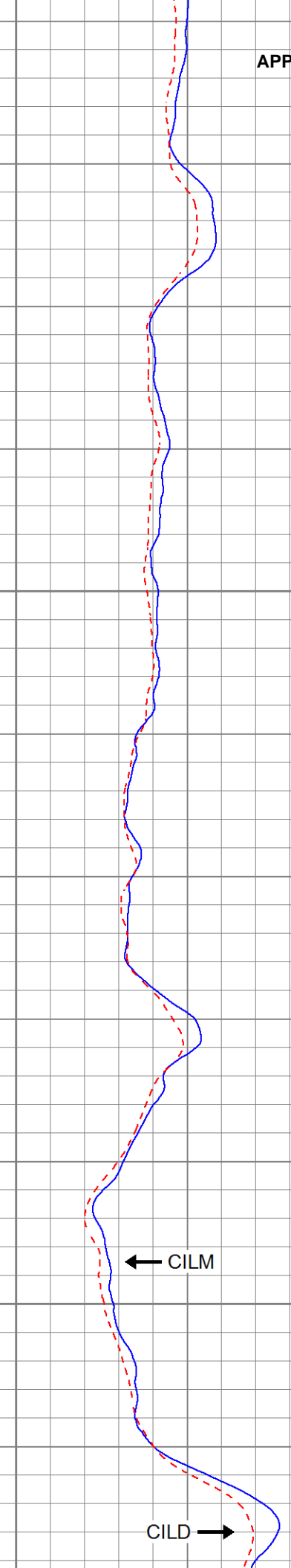
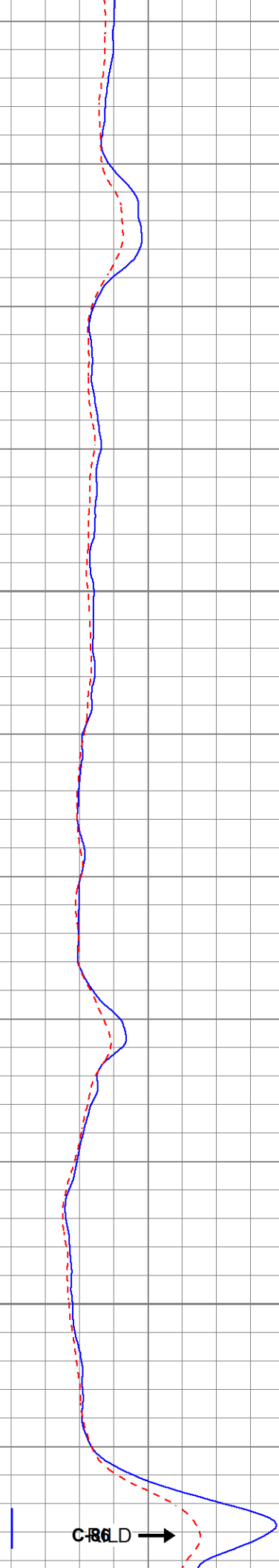
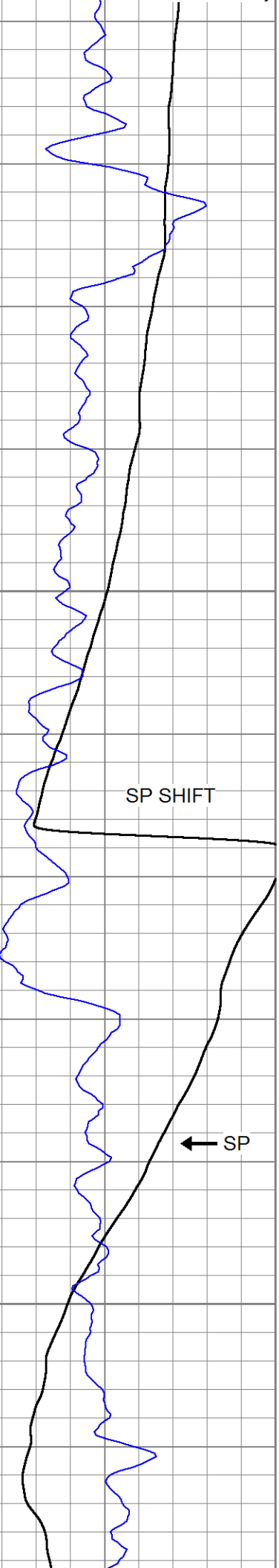
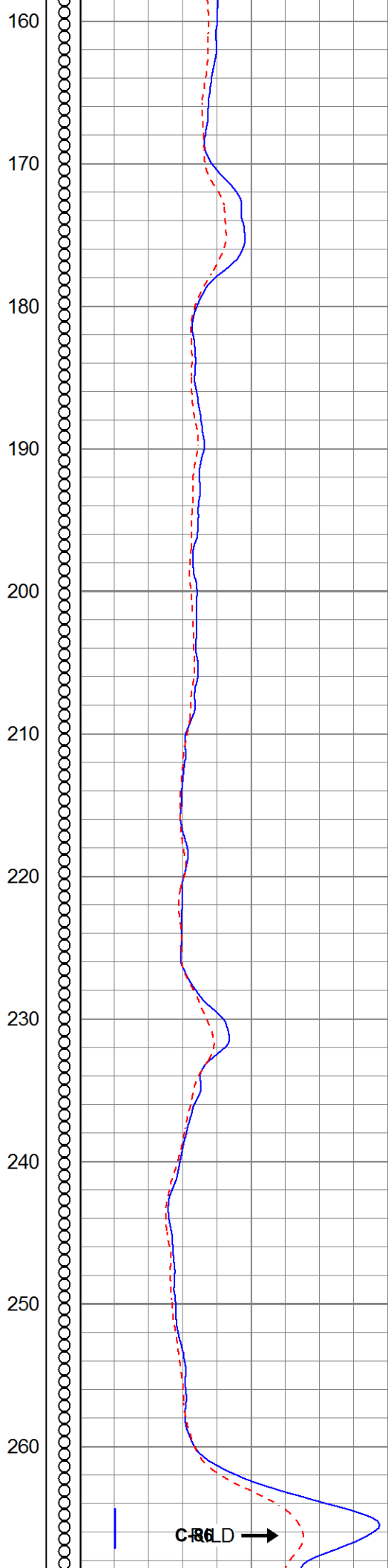


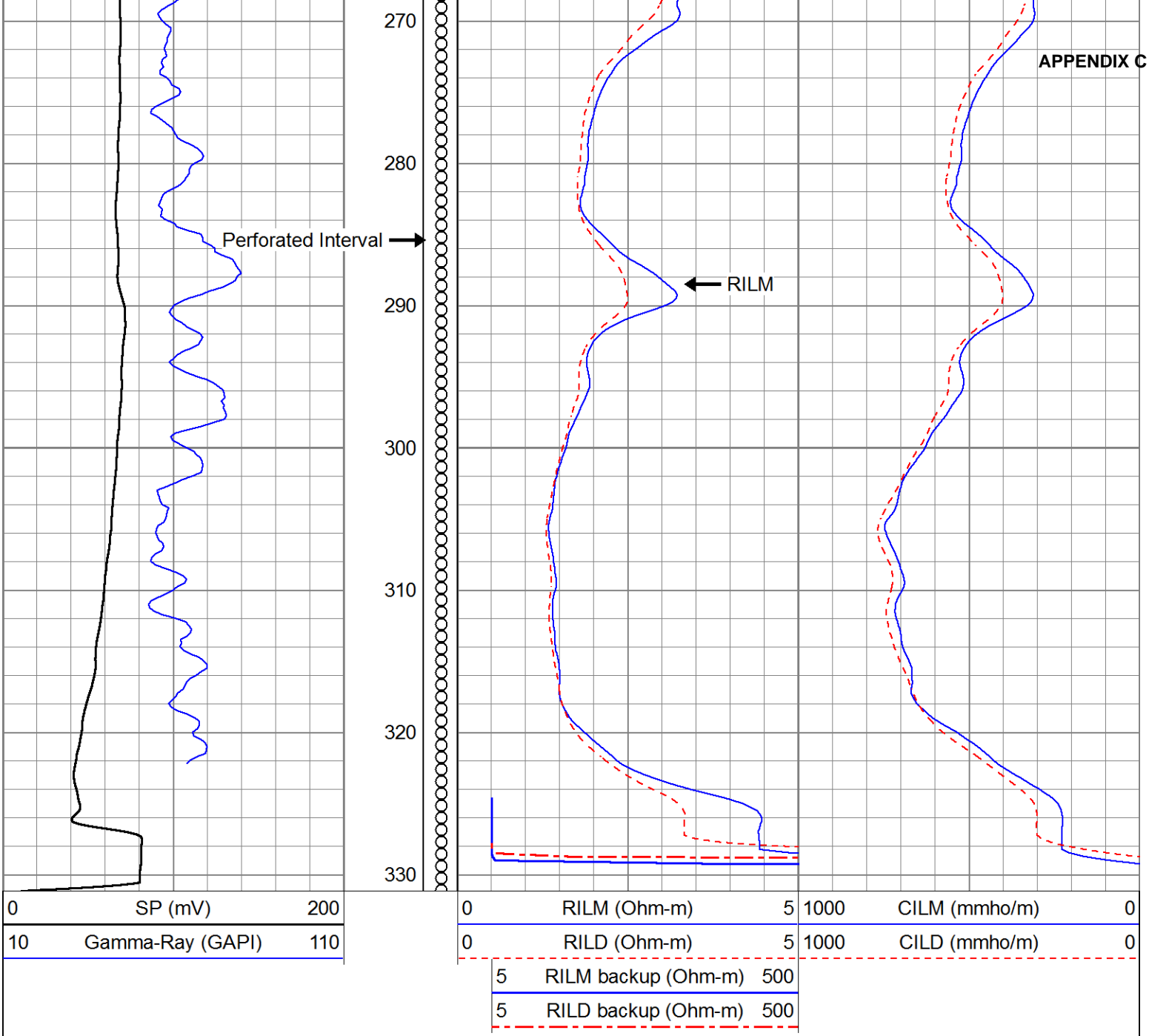


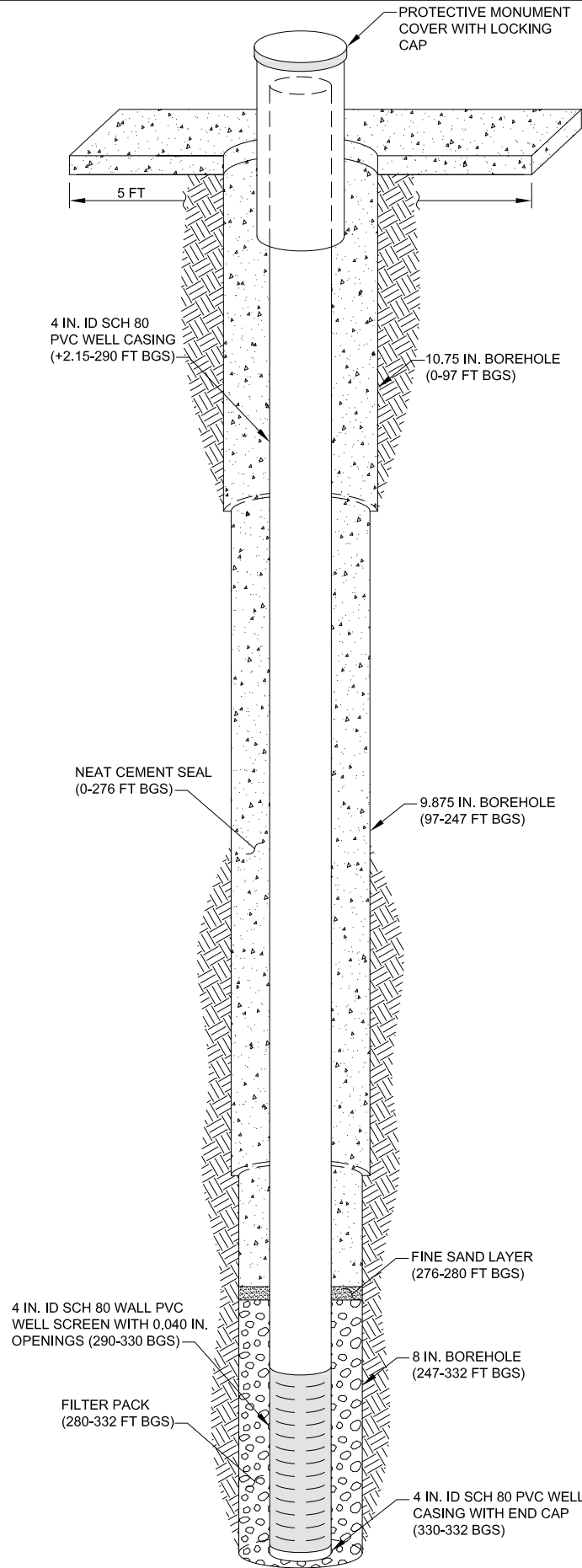
C-85

← Gamma Ray



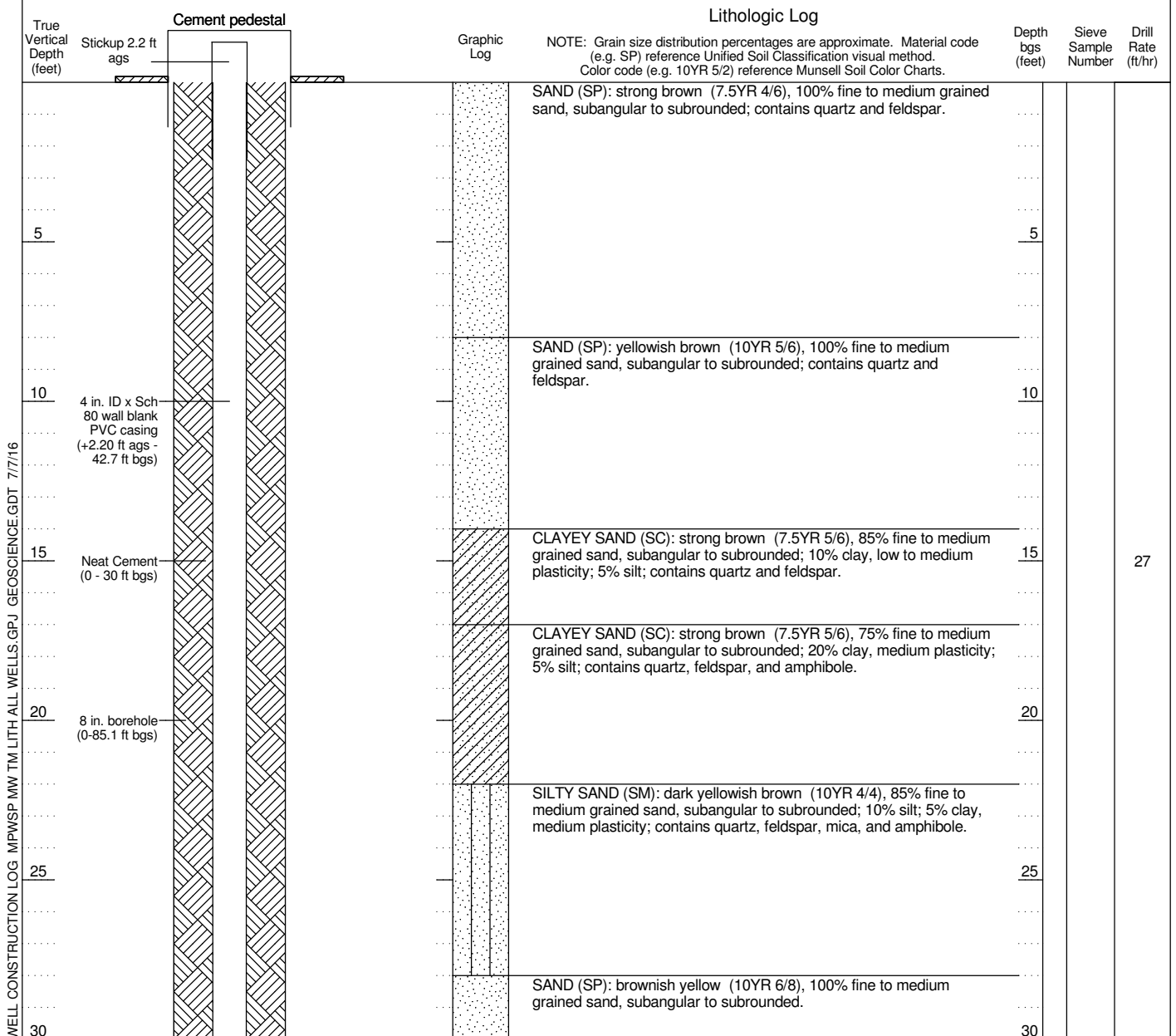






WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-5S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Neponset Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.2	42.7	44.9	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	42.7	82.7	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	82.7	85.1	2.4	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	78.05 ft NAVD88									
TOC ELEVATION	80.25 ft NAVD88 (RP)									
START DATE	1/28/15									
FINISH DATE	2/02/15									

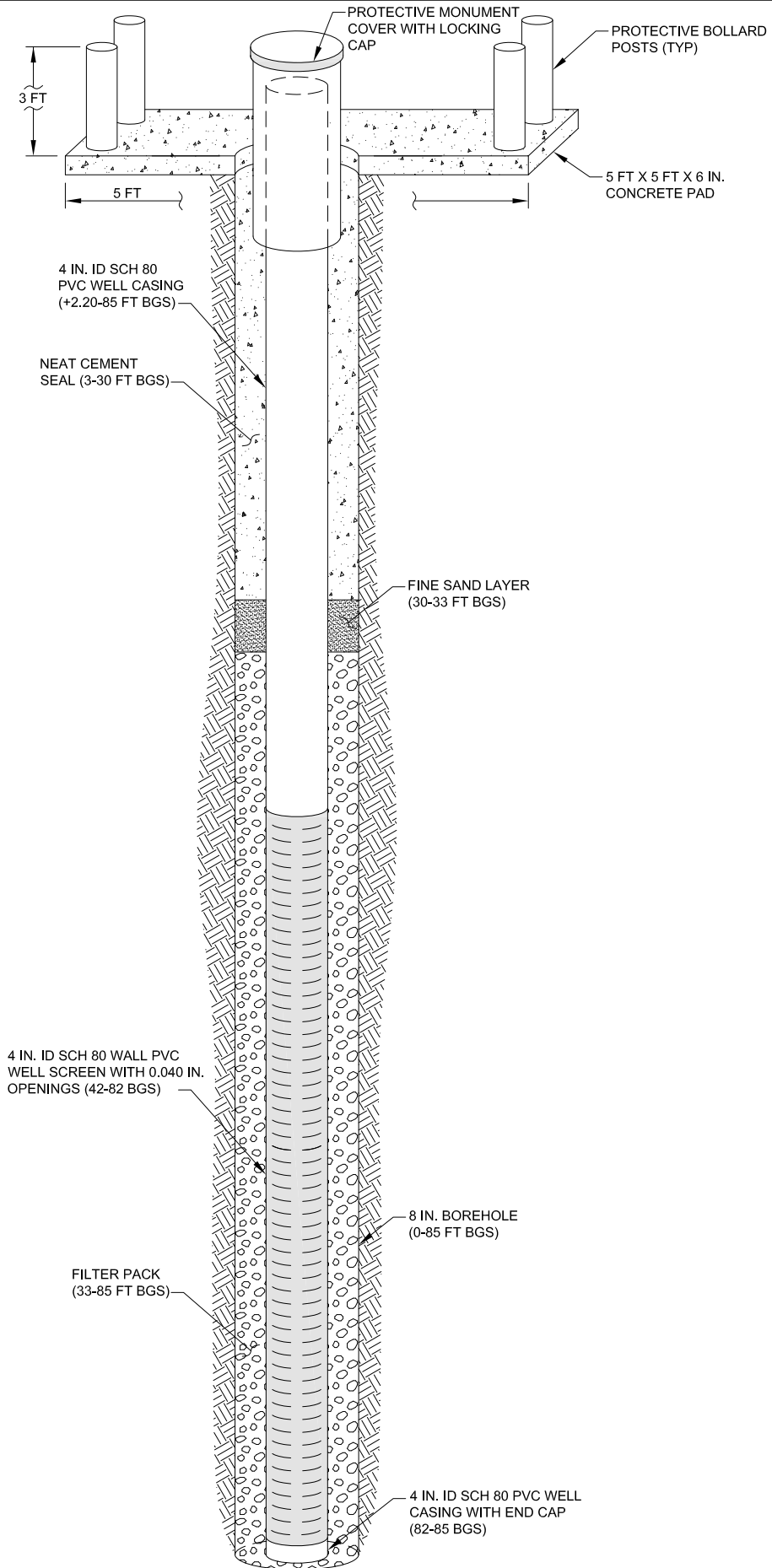


WELL NUMBER MPWSP MW-5S		BOREHOLE LITHOLOGIC LOG (continued)				
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA			
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log <small>NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.</small>	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
35	CEMEX Monterey Lapis Lustre #60 fine sand seal (30 - 33 ft bgs)					
40	CEMEX Monterey Lapis Lustre #3 filter pack (33 - 85.1 ft bgs)		SAND (SP): dark yellowish brown (10YR 4/6), 95% fine grained sand, subangular to subrounded; 5% silt; contains quartz, feldspar, and mica.	40		
45				45		
50	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (42.7 - 82.7 ft bgs)		SILTY SAND (SM): dark gray (10YR 4/1), 80% fine grained sand, subangular to subrounded; 20% silt; contains quartz, feldspar, and mica.	50		
55			SILT (ML): gray (10YR 5/1), 60% silt; 30% clay, medium plasticity; 10% fine grained sand, subangular to subrounded; contains quartz, feldspar, and mica; black ash spots.	55		
60			SILTY SAND (SM): greenish gray (10GY 5/1), 70% fine grained sand, subangular to subrounded; 30% silt; contains quartz, feldspar, and mica.	60		
65			CLAY (CL): greenish gray (10GY 5/1), 90% clay, medium to high plasticity; 5% fine grained sand, subangular to subrounded; 5% silt.	65		
70				70		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

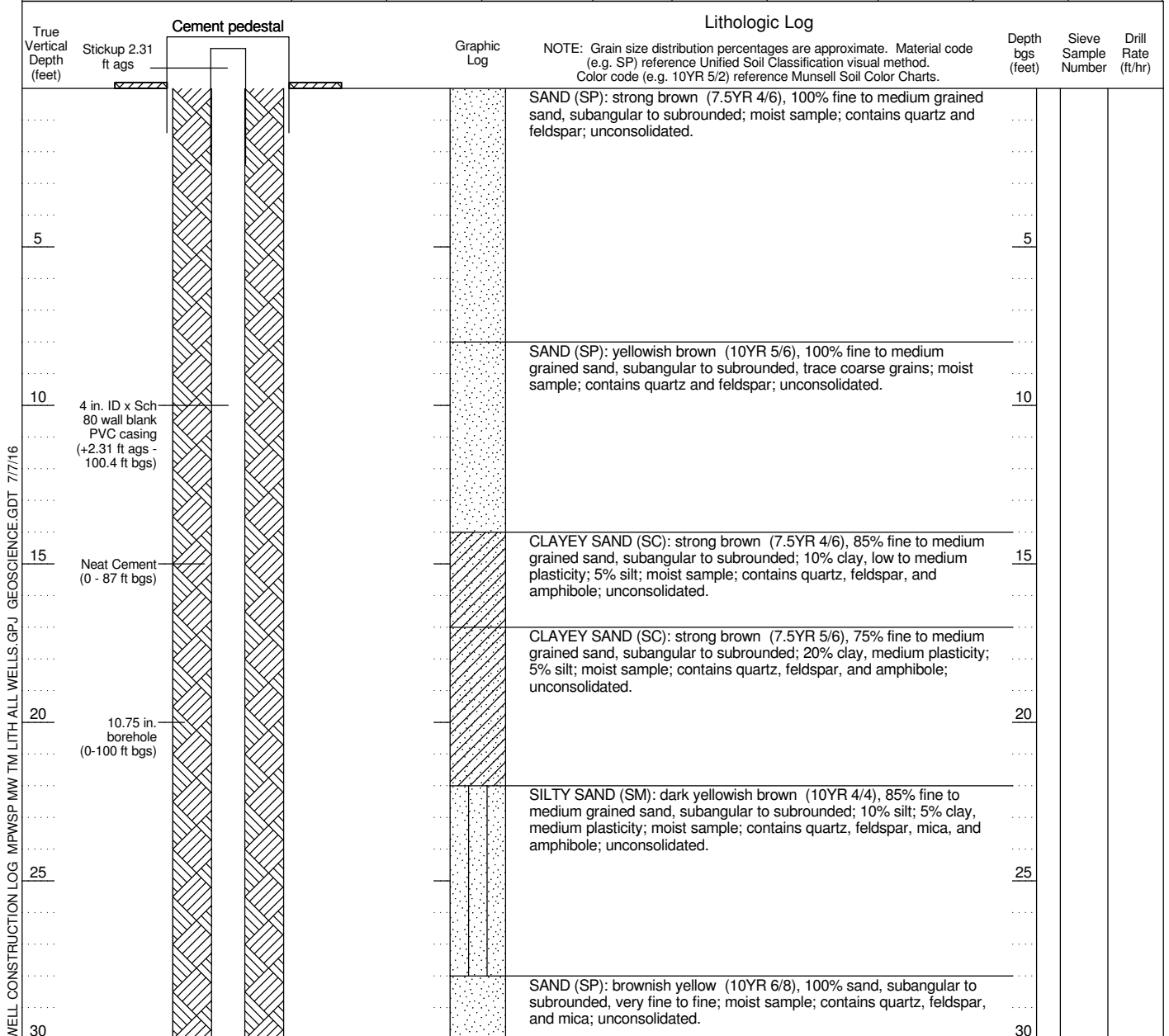
WELL NUMBER MPWSP MW-5S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
75			SILTY SAND (SM): dark bluish gray (5B 4/1), 70% fine grained sand, subangular to subrounded; 30% silt; contains quartz, feldspar, and mica.	75
			CLAY (CL): dark bluish gray (5B 4/1), 70% clay, medium to high plasticity; 30% silt.	
80				80
			SILTY SAND (SM): olive brown (2.5Y 4/3), 80% fine grained sand, subangular to subrounded; 20% silt; contains quartz, feldspar, and amphibole.	
85	Blank casing with end cap (82.7 - 85.1 ft bgs)			85
	TD 85.1 ft bgs		Bottom of borehole at 85.1 feet.	
				27

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Neponset Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.31	100.4	102.71	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	100.4	310.4	210	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	310.4	312.7	2.3	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	78.17 ft NAVD88									
TOC ELEVATION	80.48 ft NAVD88 (RP)									
START DATE	1/21/15									
FINISH DATE	1/27/15									



WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35					35		
40				SAND (SP): dark yellowish brown (10YR 4/6), 95% sand, subangular to subrounded, very fine to fine; 5% silt; moist to wet sample; contains quartz, feldspar, and mica; unconsolidated.	40		
45					45		
50				SILTY SAND (SM): dark gray (10YR 4/1), 80% sand, subangular to subrounded, very fine to fine; 20% silt; moist to wet sample; contains quartz, feldspar, and mica; unconsolidated.	50		
55				SILT (ML): gray (10YR 5/1), 60% silt; 30% clay, medium plasticity; 10% sand, subangular to subrounded, very fine; moist sample; contains quartz, feldspar, and mica.	55		
60				SILTY SAND (SM): very dark gray (10YR 3/1), 70% sand, subangular to subrounded, very fine to fine; 30% silt; moist sample; contains quartz, feldspar, and mica; unconsolidated. SAND (SP): dark yellowish brown (10YR 3/4), 100% sand, subangular to subrounded, very fine to fine; moist to wet sample; contains quartz, feldspar, and mica; unconsolidated. SANDY CLAY (CL): greenish gray (10GY 5/1), 65% clay, medium plasticity; 30% sand, subangular to subrounded, very fine to fine; 5% silt; moist sample; contains quartz, feldspar, and mica.	60		
65				CLAY (CL): greenish gray (10GY 5/1), 90% clay, medium to high plasticity; 5% sand, subangular to subrounded, very fine to fine; 5% silt; moist sample. CLAY (CL): dark bluish gray (5B 4/1), 95% clay, high plasticity; 5% silt; moist sample.	65		
70					70		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Drill Rate (ft/hr)
75			SILTY SAND (SM): dark bluish gray (5B 4/1), 70% sand, subangular to subrounded, very fine to fine; 30% silt; moist sample; contains quartz, feldspar, and mica; unconsolidated.	
80			CLAY (CL): dark bluish gray (5B 4/1), 70% clay, medium to high plasticity; 30% silt; moist sample.	
85			SILTY SAND (SM): olive brown (2.5Y 4/3), 80% sand, subangular to subrounded, very fine to fine; 20% silt; contains quartz, feldspar, and amphibole; unconsolidated.	
90	CEMEX Monterey Lapis Lustre #60 fine sand seal (87 - 90 ft bgs)		CLAY (CL): very dark greenish gray (5GY 3/1), 95% clay, high plasticity; 5% silt; moist sample.	
95	CEMEX Monterey Lapis Lustre #3 filter pack (90 - 315 ft bgs)		SAND (SP): light olive brown (2.5Y 5/6), 100% fine to medium grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
100			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to medium grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, and amphibole; unconsolidated.	
105	9.875 in. borehole (100-250 ft bgs)		SAND (SP): light olive brown (2.5Y 5/3), 100% fine to medium grained sand, subangular to subrounded; moist to wet sample; contains quartz, feldspar, and amphibole; unconsolidated.	
110				

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
115	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (100.4 - 310.4 ft bgs)		115	15
120			SAND (SP): light olive brown (2.5Y 5/4), 100% medium grained sand, subangular to subrounded, trace fine and coarse grains; moist to wet sample; contains quartz, feldspar, and amphibole; unconsolidated.	120
125				125
130			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 70% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel subangular to subrounded; 5% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	130
135			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 75% medium to coarse grained sand; 20% fine to coarse gravel; 5% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	135	12.6
140			140	
145			145	
150			150	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-5M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT PROJECT NUMBER **Cal Am 14077-15** LOCATION **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lbs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
155					155		
160			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/4), 80% medium to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel subangular to subrounded; 5% cobbles; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		160		
165			SAND WITH GRAVEL (SP): yellowish brown (10YR 5/4), 50% coarse grained sand, subangular to subrounded; 40% fine to coarse gravel subangular to subrounded; 10% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		165		12.6
170			SAND (SP): light yellowish brown (2.5Y 6/4), 100% fine to medium grained sand, subangular to subrounded; contains quartz and feldspar; unconsolidated.		170		
175					175		
180			FAT CLAY (CH): light olive brown (2.5Y 5/3), 80% clay, medium to high plasticity; 20% silt; moist sample; contains reddish iron staining.		180		
185			SILT (ML): grayish brown (2.5Y 5/2), 80% silt; 20% clay, low to medium plasticity; moist sample; contains red and black staining.		185		
190			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 80% medium to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel subangular to subrounded; 5% cobbles; contains quartz and feldspar; unconsolidated.		190		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
195			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts. CLAYEY SAND WITH GRAVEL (SC): strong brown (7.5YR 5/6), 55% fine to coarse grained sand, subangular to rounded; 25% clay, no to low plasticity; 15% fine gravel subangular to rounded; 5% silt; moist sample; contains quartz, feldspar, and amphibole; moderate to high cementation.	195
200			SAND (SP): 95% fine grained sand, subangular to subrounded, some medium to coarse grains; 5% fine gravel subangular to subrounded; moist to wet sample; contains quartz and feldspar; unconsolidated.	195
205			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 70% coarse grained sand, subangular to subrounded; 25% fine to coarse gravel subangular to subrounded; 5% cobbles; moist to wet sample; moderate cementation; contains quartz, feldspar, and amphibole.	200
210				205
215				210
220			FAT CLAY (CH): grayish brown (2.5Y 5/2), 60% clay, medium to high plasticity; 30% silt; 10% sand, very fine with trace coarse grains; moist sample.	215
225			SILT (ML): light olive brown (2.5Y 5/3), 60% silt; 30% clay, medium to high plasticity; 10% fine to coarse grained sand, subrounded; trace fine gravel subrounded; moist sample.	220
230			SAND (SP): strong brown (7.5YR 4/6), 95% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; wet sample; contains quartz, feldspar, and amphibole; unconsolidated.	225
			SAND (SP): dark brown (10YR 3/3), 100% fine grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	230

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-5M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
235					235		
240					240		4.6
245					245		
250					250		
255					255		
260					260		18.5
265					265		
270					270		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

8 in. borehole (250-315 ft bgs)

SAND (SP): dark brown (10YR 3/3), 100% fine grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.

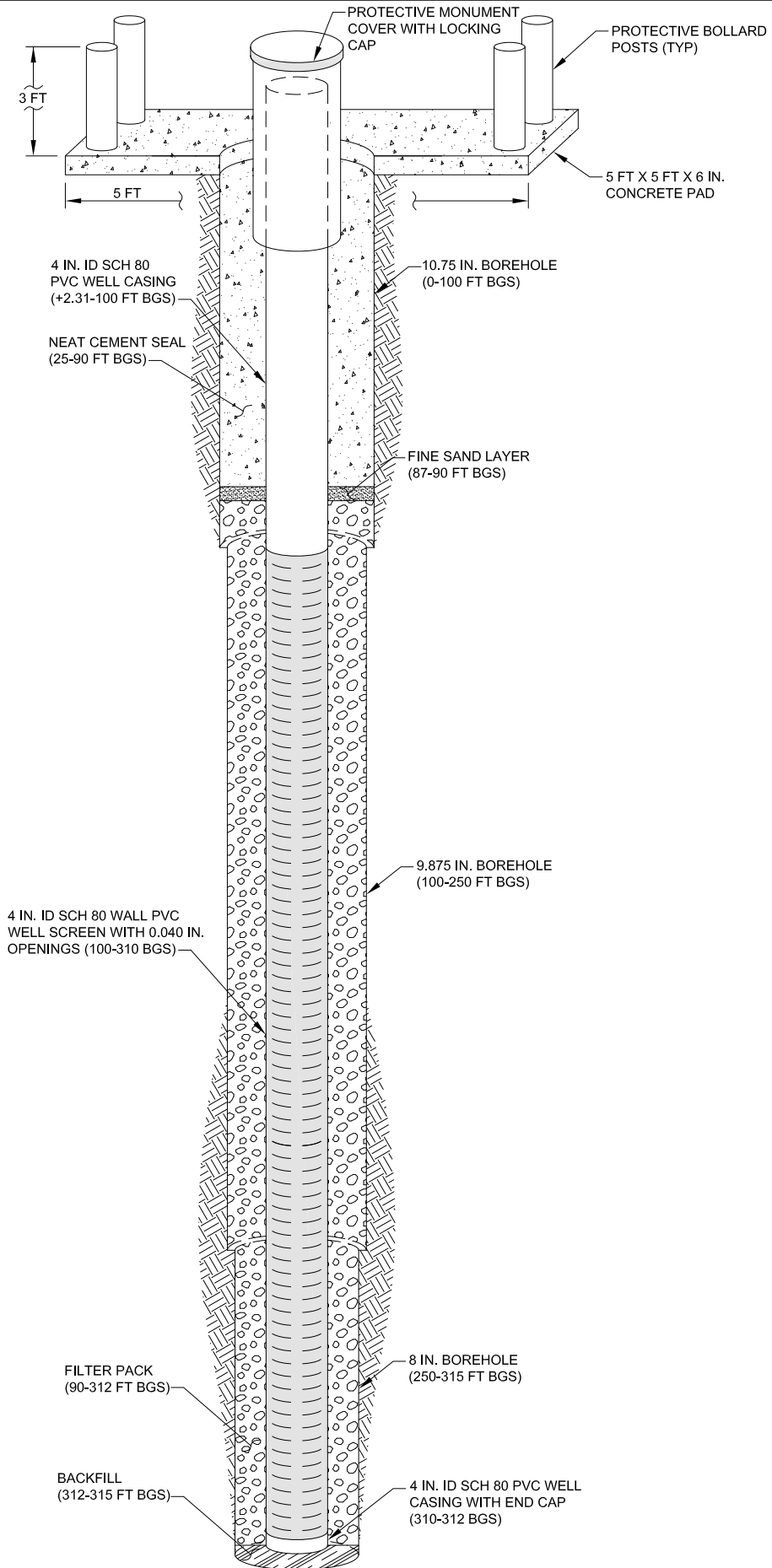
SILTY SAND (SM): dark brown (7.5YR 3/3), 80% fine grained sand, subangular to subrounded; 20% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.

WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
275			SAND (SP): dark brown (7.5YR 3/2), 95% sand, subangular to subrounded, very fine to fine grained; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	275			
280				280			
285			SILTY SAND (SM): dark brown (7.5YR 3/4), 85% sand, subangular to subrounded, very fine to fine grained; 15% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	285			
290			SAND (SP): dark brown (7.5YR 3/3), 95% sand, subangular to subrounded, very fine to fine grained; 5% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	290		18.5	
295				295			
300				300			
305				305			
310			CLAYEY SAND (SC): olive (5Y 5/4), 60% sand, subangular to subrounded, very fine to fine grained; 30% clay, low plasticity; 10%	310			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

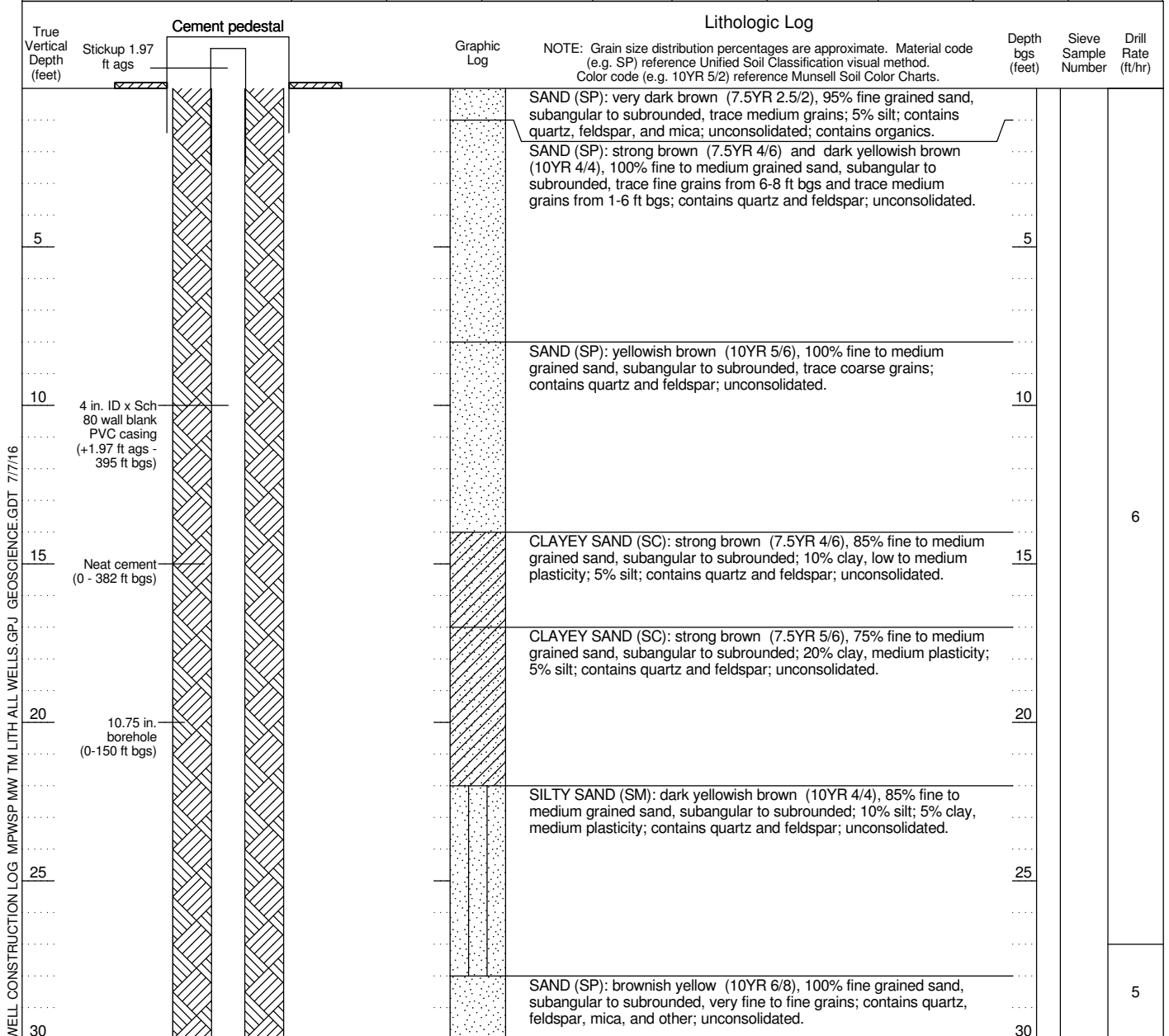
WELL NUMBER MPWSP MW-5M		BOREHOLE LITHOLOGIC LOG (continued)			
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA		
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)		Sieve Sample Number
.....	<p>Blank casing with end cap (310.4 - 312.7 ft bgs)</p> <p>TD 315 ft bgs</p>		silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	..... ..... ..... ..... .....	..... ..... ..... ..... .....
.....					
.....					
.....					
315					
Bottom of borehole at 315 feet.			315		18.5

WELL CONSTRUCTION LOG, MPWSP MW TM LITH ALL WELLS.GPJ, GEOSCIENCE.GDT, 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Neponset Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-1.97	395	383.97	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	395	435	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in		Blank	435	437.3	2.3	PVC	Sch 80	4 / ID	
SURFACE ELEVATION	78.09 ft NAVD88									
TOC ELEVATION	80.06 ft NAVD88 (RP)									
START DATE	12/16/14									
FINISH DATE	1/21/15									



WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
						1	
35					35		
40					40		5
45					45		
50				SAND (SP): dark yellowish brown (10YR 4/6), 95% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt; contains quartz, feldspar, and mica; unconsolidated.	50		
55				SILTY SAND (SM): dark gray (10YR 4/1), 80% fine grained sand, subangular to subrounded, very fine to fine grains; 20% silt; contains quartz, feldspar, and mica; unconsolidated.	55	2	
				SILT (ML): gray (10YR 5/1), 60% silt; 30% clay, medium plasticity; 10% fine grained sand, subangular to subrounded, very fine grains; contains quartz, feldspar, and mica; black ash-like spots.			
				SILTY SAND (SM): very dark gray (10YR 3/1), 70% fine grained sand, subangular to subrounded, very fine to fine grains; 30% silt; contains quartz, feldspar, and mica; unconsolidated.			
60				SAND (SP): dark yellowish brown (10YR 3/4), 100% fine grained sand, subangular to subrounded, very fine to fine grains; contains quartz, feldspar, and mica; unconsolidated.	60		8.5
				SANDY CLAY (CL): greenish gray (10GY 5/1), 65% clay, medium plasticity; 30% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt.			
				CLAY (CL): greenish gray (10GY 5/1), 90% clay, medium to high plasticity; 5% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt.			
				CLAY (CL): dark greenish gray (10Y 4/1), 75% clay, medium to high plasticity; 25% silt.			
				CLAY (CL): dark bluish gray (5B 4/1), 95% clay, high plasticity; 5% silt.			
65					65		
70					70		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75			SAND (SP): olive brown (2.5Y 4/3), 100% fine grained sand, subangular to subrounded, very fine to fine grains; contains quartz, feldspar, and mica.		75		8.5
			SILTY SAND (SM): dark bluish gray (5B 4/1), 70% fine grained sand, subangular to subrounded, very fine to fine grains; 30% silt; contains quartz, feldspar, and mica.				
			CLAY (CL): dark bluish gray (5B 4/1), 70% clay, medium to high plasticity; 30% silt; clay content increases with depth.				
80			SILTY SAND (SM): olive brown (2.5Y 4/3), 80% fine grained sand, subangular to subrounded, very fine to fine grains; 20% silt; contains quartz, feldspar, and mica; with visible alteration; iron oxide staining; 20% clay and 30% silt from 84-85 ft bgs.		80		10
85			CLAY (CL): very dark greenish gray (5GY 3/1), 95% clay, high plasticity; 5% silt; black ash-like spots.		85		
			SAND (SP): light olive brown (2.5Y 5/6), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole; shell fragments to 2mm.				
90			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole; trace shell fragments to 2mm.		90		3
95			SAND (SP): light olive brown (2.5Y 5/3), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole; shell fragments to 0.43mm.		95	X	
100					100		
105					105	X	4
110					110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115					115	5	
120				SAND (SP): light olive brown (2.5Y 5/4), 100% fine to coarse grained sand, subangular to subrounded, predominantly medium grained; contains quartz, feldspar, and amphibole; shell fragments to 4.8mm.	120	6	
125					125		
130				SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 70% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel up to 75 mm, subangular to subrounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole; shell fragments to 4.8mm.	130	7	
135				SILTY SAND (SM): light olive brown (2.5Y 5/6), 80% fine to coarse grained sand, subangular to subrounded; 15% silt; 5% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; shell fragments to 2mm. SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 75% medium to coarse grained sand, subrounded to rounded; 20% fine to coarse gravel subrounded to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole; shell fragments to 4.8mm.	135	8	
140				SAND (SP): light olive brown (2.5Y 5/4), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; shell fragments to 4.8mm. SAND (SP): olive brown (2.5Y 4/4), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	140	9	
145					145	10	
150					150		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
155			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
155			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/4), 80% medium to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; trace cobbles; shell fragments to 2mm.	11
160			SAND WITH GRAVEL (SP): yellowish brown (10YR 5/4), 55% fine to coarse grained sand, angular to rounded; 45% fine to coarse gravel angular to rounded; contains quartz, feldspar, mica, and amphibole; trace cobbles.	12
165				
170			SAND (SP): light reddish brown (2.5YR 6/4), 100% fine to medium grained sand, subangular to subrounded; contains quartz and feldspar.	13
175				
180			FAT CLAY (CH): light olive brown (2.5Y 5/3), 80% clay, medium to high plasticity; 20% silt; with visible alteration; iron oxide staining.	
180			SAND (SP): light olive brown (2.5Y 5/4), 100% medium to coarse grained sand, subangular to subrounded; contains quartz, feldspar, and mica; shell fragments to 2mm.	
180			SILT (ML): grayish brown (2.5Y 5/2), 80% silt; 20% clay; red and black staining; low to medium plasticity.	9
185			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 80% medium to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; contains quartz and feldspar; trace cobbles; clay lens from 190-190.5; chert; gravel content increases with depth.	14
190				

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195			CLAYEY SAND WITH GRAVEL (SC): strong brown (7.5YR 4/6), 55% fine to coarse grained sand, subrounded to rounded, medium to coarse grained from 197-198 ft bgs; 25% clay, no to low plasticity; 15% fine gravel subrounded to rounded; 5% silt; moderate cementation; contains quartz, feldspar, and amphibole.	195			
			SAND (SP): gray (7.5YR 5/1), 95% fine to coarse grained sand, subrounded to rounded, predominantly fine; 5% fine gravel subrounded to rounded; contains quartz and feldspar.				
200			SAND WITH GRAVEL (SP): grayish brown (10YR 5/2), 65% fine to coarse grained sand, subrounded to rounded, predominantly medium to coarse; 35% fine to coarse gravel subrounded to rounded; weak cementation; contains quartz, feldspar, and amphibole; trace cobbles; trace clay; iron oxide staining.	200			
			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 70% coarse grained sand, subangular to rounded; 30% fine to coarse gravel subangular to rounded; moderate cementation; contains quartz, feldspar, and amphibole; trace cobbles.			15	
205			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 70% coarse grained sand, subangular to rounded; 30% fine to coarse gravel subangular to rounded; moderate cementation; contains quartz, feldspar, and amphibole; trace cobbles.	205		16	
			SAND (SP): grayish brown (10YR 5/2), 88% fine to coarse grained sand, subrounded to rounded, trace fine grained; 12% fine to coarse gravel subrounded to rounded; contains quartz, feldspar, and amphibole; trace cobbles; trace shell fragments to 2mm.				
210			SAND (SP): grayish brown (10YR 5/2), 85% fine to coarse grained sand, subrounded to rounded, trace fine grained; 15% fine to coarse gravel subrounded to rounded; moderate cementation; contains quartz, feldspar, and amphibole; trace cobbles.	210		9	
			SAND (SP): dark grayish brown (10YR 4/2), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.				
			SAND WITH GRAVEL (SP): grayish brown (2.5Y 5/2), 70% medium to coarse grained sand, subrounded to rounded; 30% fine to coarse gravel subrounded to rounded; contains quartz, and feldspar; trace cobbles; trace clay from 217-217.5 ft bgs.				
215			SAND WITH GRAVEL (SP): grayish brown (2.5Y 5/2), 70% medium to coarse grained sand, subrounded to rounded; 30% fine to coarse gravel subrounded to rounded; contains quartz, and feldspar; trace cobbles; trace clay from 217-217.5 ft bgs.	215		17	
			FAT CLAY (CH): brown (10YR 5/3), 95% clay, high plasticity; 5% silt.				
220			FAT CLAY (CH): brown (10YR 4/3), 60% clay, medium to high plasticity; 30% silt; 10% fine grained sand, trace coarse grains.	220			
			SILT (ML): light olive brown (2.5Y 5/3), 60% silt; 30% clay, medium to high plasticity; 10% sand, subrounded, fine and coarse; trace fine gravel subrounded.				
225			SILT (ML): light olive brown (2.5Y 5/3), 60% silt; 30% clay, medium to high plasticity; 10% sand, subrounded, fine and coarse; trace fine gravel subrounded.	225			
			SAND WITH GRAVEL (SP): strong brown (7.5YR 4/6), 85% fine to coarse grained sand, subrounded to rounded, predominantly fine grained; 15% fine gravel subrounded to rounded; weak cementation; contains quartz, feldspar, and amphibole; trace shell fragments to 2mm; red iron oxide staining.				
			SAND (SP): dark brown (10YR 3/3), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole; trace silt at 240 ft bgs; friable sandstone to 75mm.				
230			SAND (SP): dark brown (10YR 3/3), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole; trace silt at 240 ft bgs; friable sandstone to 75mm.	230			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER
MPWSP MW-5D

BOREHOLE LITHOLOGIC LOG (continued)

CLIENT PROJECT NUMBER Cal Am 14077-15 LOCATION Marina, CA

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
235					235	18	
240					240	19	
245					245		9
250					250		
255					255	20	
260					260		
265				SILTY SAND (SM): dark brown (7.5YR 3/3), 80% fine grained sand, subangular to subrounded; 20% silt; contains quartz, feldspar, mica, and amphibole.	265		16
270					270		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
275			SAND (SP): dark brown (7.5YR 3/2), 95% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt; contains quartz, feldspar, mica, and amphibole.	275		21	
280				280			
285			SILTY SAND (SM): dark brown (7.5YR 3/4), 85% fine grained sand, subangular to subrounded, very fine to fine grains; 15% silt; contains quartz, feldspar, mica, and amphibole.	285			16
290				290			
295			SAND (SP): dark brown (7.5YR 3/3), 95% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt; contains quartz, feldspar, mica, and amphibole.	295		22	
300				300			
305				305		23	3.6
310			CLAY WITH SAND (CL): olive (5Y 5/4), 80% clay, medium to high plasticity; 15% fine grained sand, subangular to subrounded, very fine to fine grains; 5% silt; contains quartz, feldspar, mica, and amphibole.	310			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

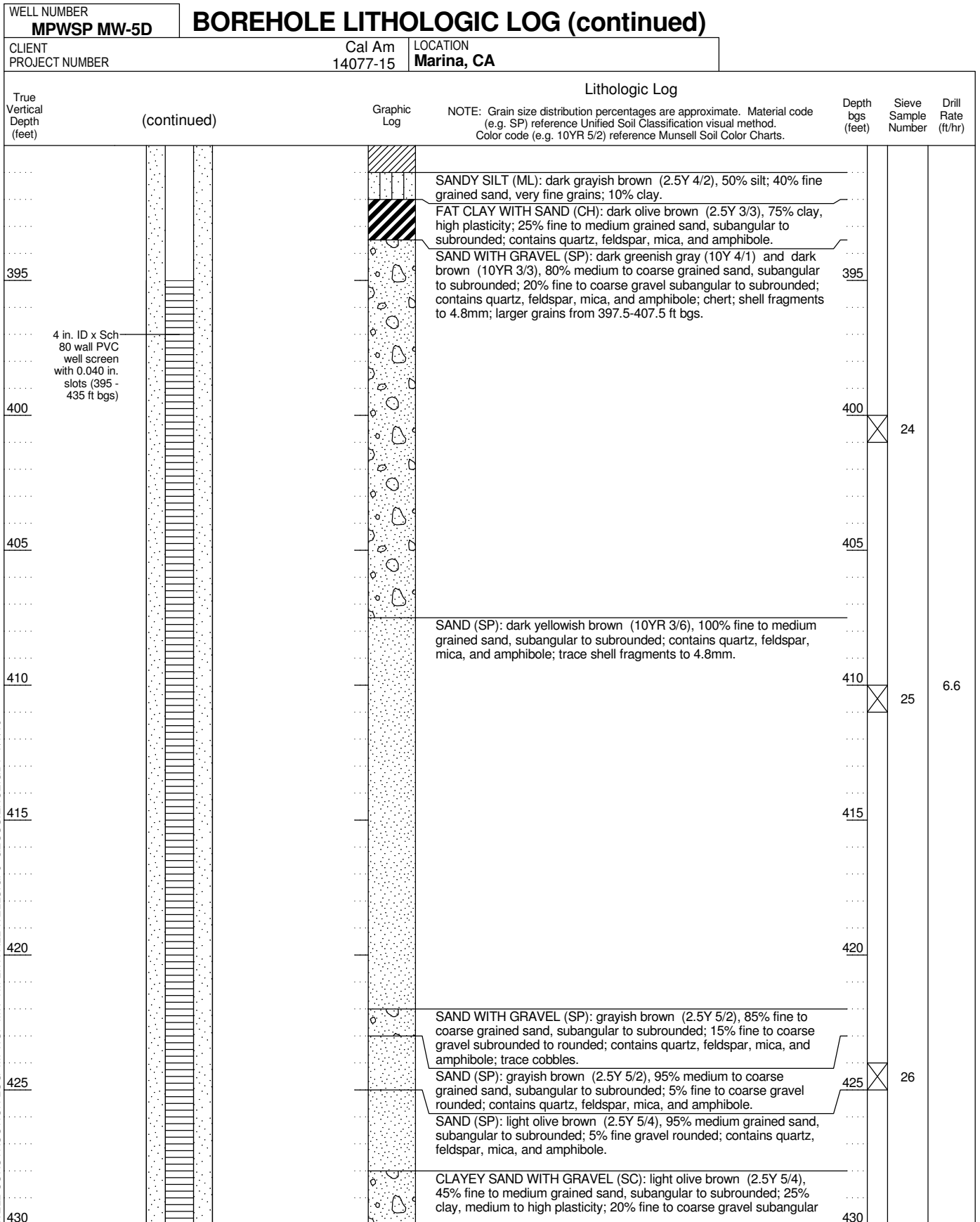
8 in. borehole
(300-440 ft bgs)

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Drill Rate (ft/hr)
315			CLAYEY SAND (SC): olive (5Y 4/4), 60% fine grained sand, subangular to subrounded, very fine to fine grains; 30% clay, low plasticity; 10% silt; contains quartz, feldspar, mica, and amphibole.	315
			SAND (SP): dark brown (7.5YR 3/3), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
320			SILTY SAND (SM): olive brown (2.5Y 4/3), 80% fine to medium grained sand, subangular to subrounded; 15% silt; 5% clay; contains quartz, feldspar, mica, and amphibole.	320
			SAND WITH GRAVEL (SP): very dark grayish brown (2.5Y 3/2), 80% fine to medium grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; trace cobbles; chert; trace shell fragments to 4.8mm.	
325			CLAYEY SAND (SC): light olive brown (2.5Y 5/3), 75% fine grained sand, subangular to subrounded; 20% clay, low plasticity; 5% silt; contains quartz, feldspar, mica, and amphibole.	325
			CLAY (CL): dark greenish gray (10Y 4/1), 90% clay, medium plasticity; 10% silt; gray and black ash-like spots.	
330			SILTY SAND (SM): dark yellowish brown (10YR 4/4), 65% fine grained sand, subangular to subrounded, very fine to fine grains; 35% silt.	330
			SILT WITH SAND (ML): greenish gray (10Y 5/1), 60% silt; 25% clay, low plasticity; 15% fine grained sand, very fine grains.	
335			SANDY CLAY (CL): greenish black (10GY 2.5/1), 60% clay, medium plasticity; 40% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	335
			CLAYEY SAND (SC): olive (5Y 4/4), 60% fine to coarse grained sand, subangular to subrounded; 30% clay, low plasticity; 10% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; chert.	
340			SILT (ML): dark greenish gray (10Y 4/1), 60% silt; 30% clay, low plasticity; 10% fine grained sand, subangular to subrounded, very fine grains.	340
			CLAY (CL): dark grayish brown (2.5Y 4/2), 90% clay, medium to high plasticity; 5% fine grained sand, very fine grains; 5% silt.	
345				345
350				350

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)				
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA			
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log <small>NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.</small>	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
355			SANDY CLAY (CL): dark greenish gray (10Y 4/1), 50% clay, low to medium plasticity; 35% fine grained sand, subangular to subrounded, very fine to fine grains; 15% silt.	355		
360				360		6
365			SANDY CLAY (CL): dark yellowish brown (10YR 4/4), 50% clay, low plasticity; 45% fine grained sand, subangular to subrounded; 5% silt.	365		
370			CLAY (CL): dark yellowish brown (10YR 4/4), 85% clay, medium to high plasticity; 15% silt; gray spots to 3mm.	370		
375				375		
380			CLAY WITH SAND (CL): dark yellowish brown (10YR 4/6), 60% clay, medium plasticity; 25% fine grained sand, very fine grains; 15% silt.	380		
385	CEMEX Monterey Lapis Lustre #60 fine sand seal (382 - 385 ft bgs)		SILT WITH SAND (ML): dark yellowish brown (10YR 3/6), 50% silt; 25% fine grained sand, very fine grains; 25% clay, medium to high plasticity.	385		
390	CEMEX Monterey Lapis Lustre #3 filter pack (385 - 440 ft bgs)		CLAY (CL): light olive brown (2.5Y 5/3), 100% clay, medium to high plasticity.	390		6.6

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-5D		BOREHOLE LITHOLOGIC LOG (continued)			
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA		
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	
			to rounded; 10% cobbles; contains quartz, feldspar, mica, and amphibole.		
			SAND (SP): greenish black (5GY 2.5/1), 90% medium to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel subrounded; contains quartz, feldspar, mica, and amphibole.		
435			SAND (SP): very dark greenish gray (10Y 3/1), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	435	
	Blank casing with end cap (435 - 437.3 ft bgs)		SAND WITH GRAVEL (SP): dark grayish brown (2.5Y 4/2), 80% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel subangular to rounded; 10% cobbles; contains quartz, feldspar, mica, and amphibole; trace cobbles.		27
440	TD 440 ft bgs			440	
Bottom of borehole at 440 feet.					

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19106	Company CASCAD DRILLING
Well MW-5 DEEP	
Field SALINAS	
County MONTEREY	State CA

Location
OFF OF NEPONSET RD.
GPS: N 36o 43.075' W 121o 46.472'

Other Services:
DUAL INDUCTION
GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	01-08-2015		
Run Number	ONE		
Depth Driller	432'		
Depth Logger	430'		
Bottom Logged Interval	430'		
Top Log Interval	0'		
Open Hole Size	12" (0'-20')	10.75" (20"-100')	9.875" (100"-300')
Type Fluid	WATER		8" (300'-432')
Density / Viscosity	N/A		
Fluid Level	73'		
Bentonite Seal	N/A		
Time Well Ready	1500		
Time Logger on Bottom	1515		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12"	0'	20'				
TWO	10.75"	20'	100'				
THREE	9.875"	100'	300'				
FOUR	8"	300'	432'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4" PVC		SCH 80	0'
Liner				432'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

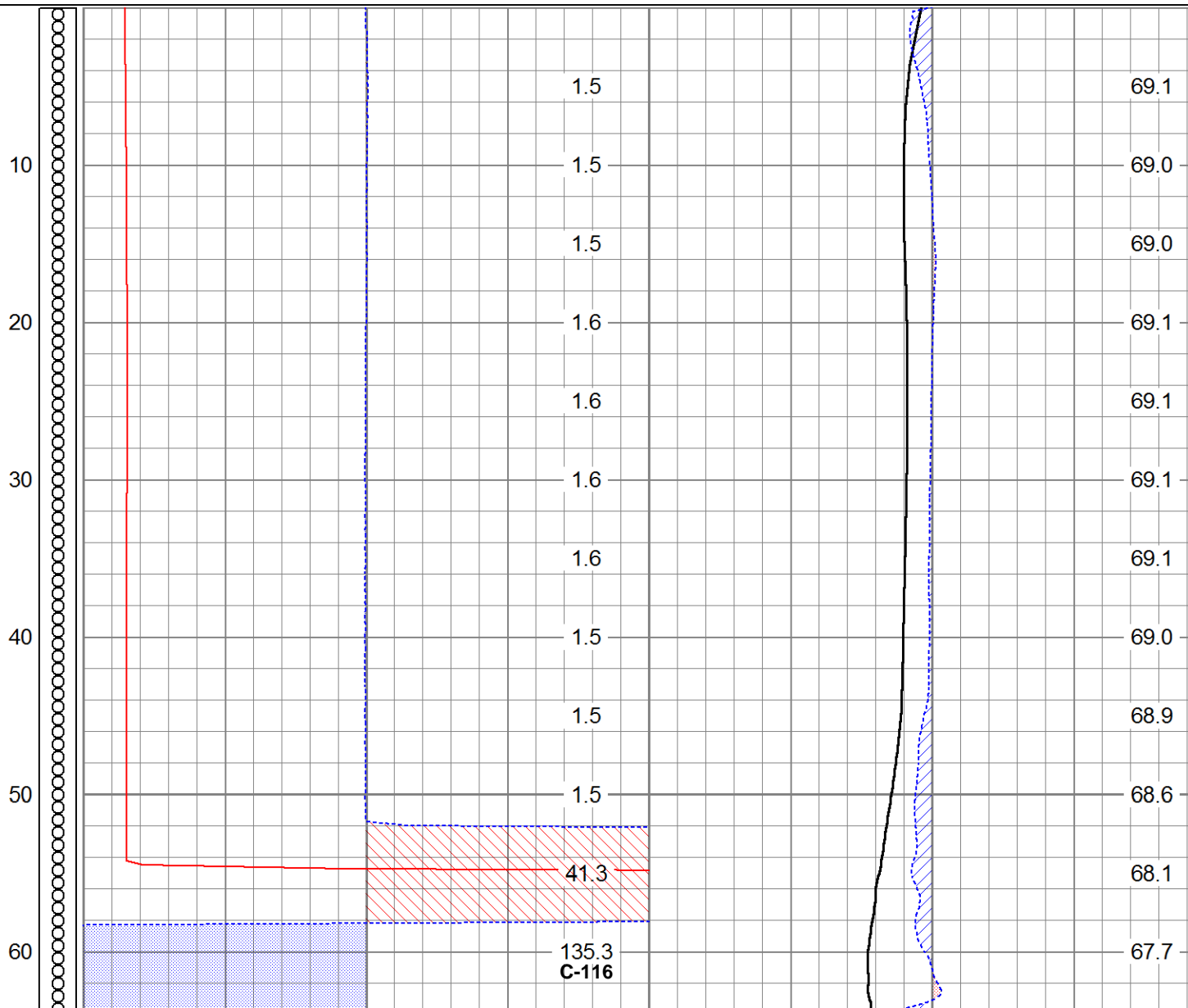
Database File 19106.db
 Dataset Pathname tmp
 Dataset Creation Thu Jan 08 15:02:34 2015

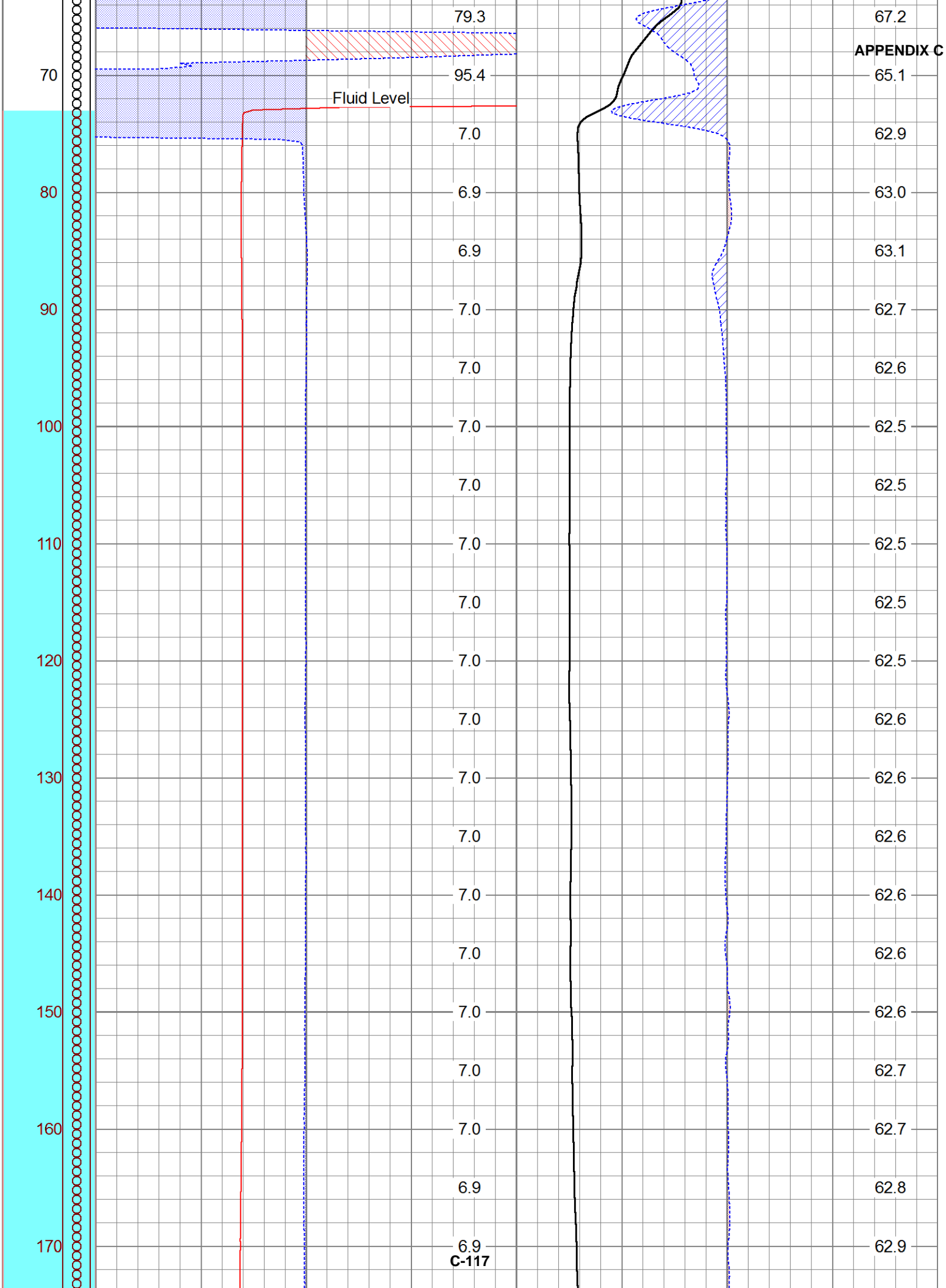
Serial Number: 3553
 Tool Model: MLS
 Performed: Wed Aug 29 07:13:35 2012

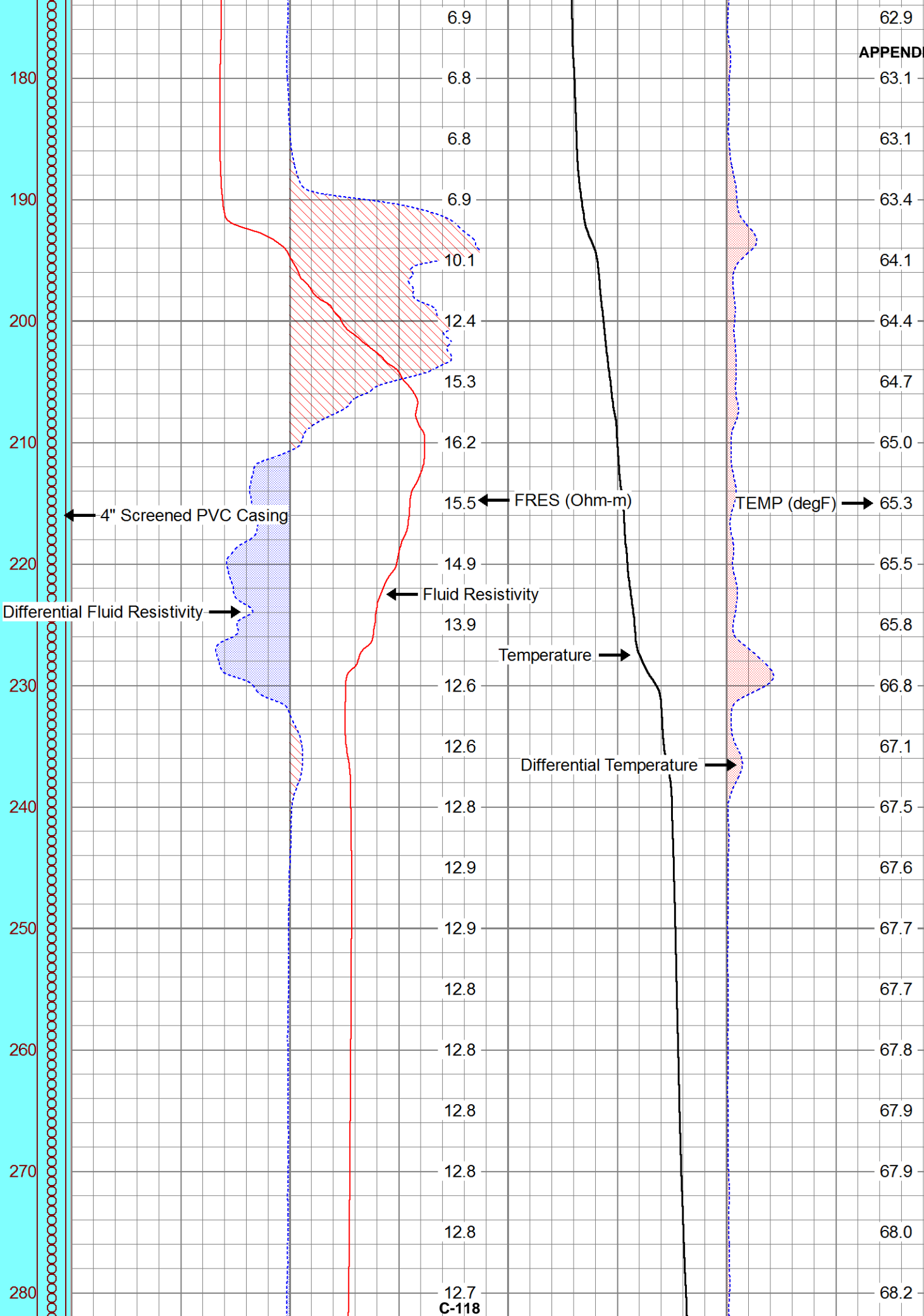
	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-5.71	
Delta Spacing	2	

Database File 19106.db
 Dataset Pathname tmp
 Presentation Format frttemp2
 Dataset Creation Thu Jan 08 15:02:34 2015
 Charted by Depth in Feet scaled 1:120

0	Fluid Resistivity (Ohm-m)	20	60	Temperature (degF)	80
-0.8	Differential Fluid Resistivity (Ohm-m)	0.8	-1.5	Differential Temperature (degF)	1.5
FRES (Ohm-m)			TEMP (degF)		





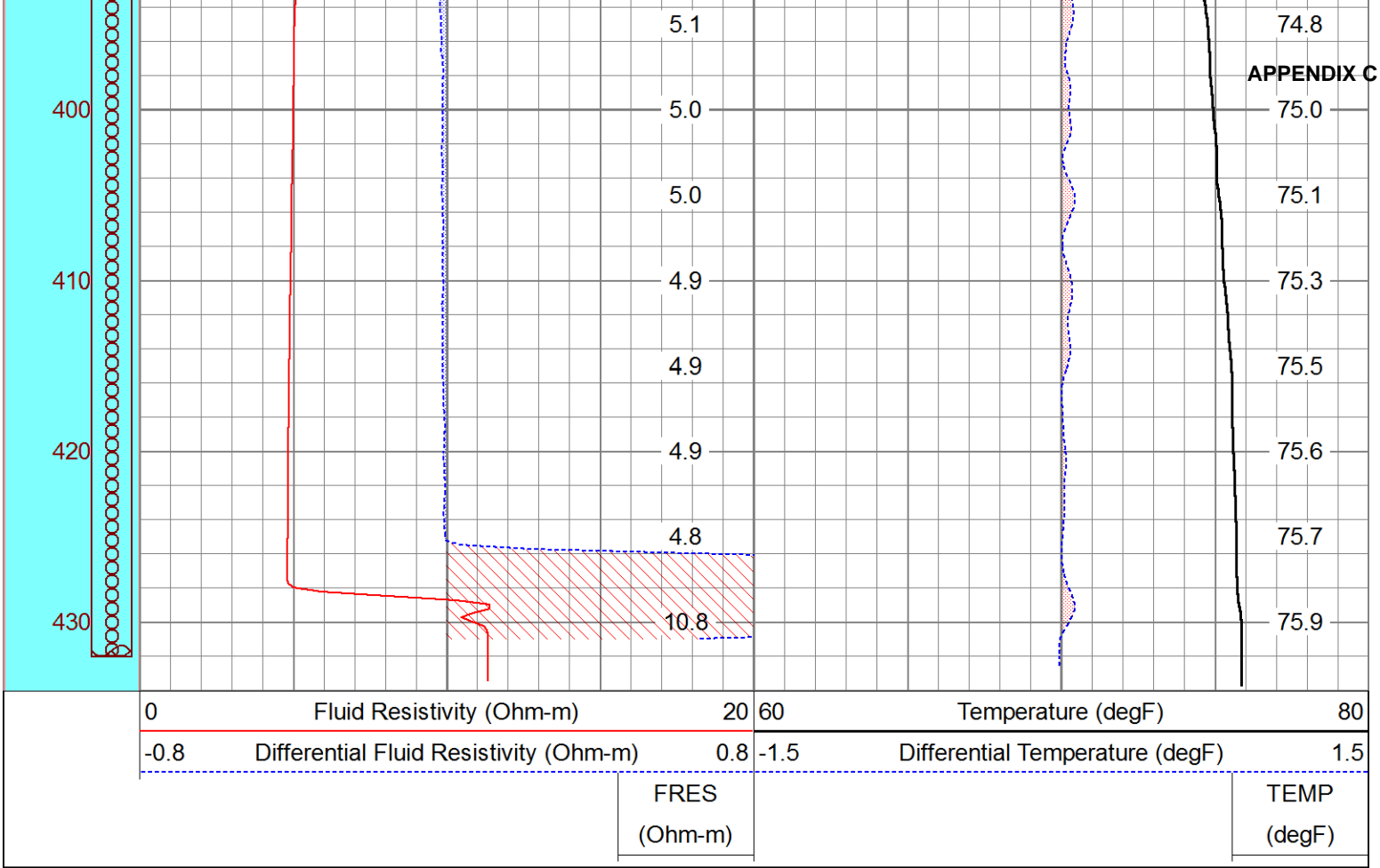


290
300
310
320
330
340
350
360
370
380
390

12.7
12.6
12.5
12.4
12.2
12.0
11.8
11.7
11.5
10.1
9.9
9.7
9.6
9.5
9.4
9.3
9.2
9.1
9.0
8.9
5.3
5.2

68.3
68.4
68.5
68.7
68.8
69.0
69.1
69.2
69.3
69.7
69.9
70.0
70.1
70.3
70.4
70.6
70.7
70.9
71.0
71.2
74.2
74.5





PACIFIC SURVEYS

DUAL INDUCTION GAMMA-RAY

Job No. 19106
 Company CASCADe DRILLING
 Well MW-5 DEEP
 Field SALINAS
 County MONTEREY State CA

Location OFF OF NEPONSET RD.
 GPS: N 36o 43.075' W 121o 46.472'

Other Services:
 TEMPERATURE
 FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	01-08-2015		
Run Number	ONE		
Depth Driller	432'		
Depth Logger	430'		
Bottom Logged Interval	430'		
Top Log Interval	0'		
Open Hole Size	12" (0'-20')	10.75" (20"-100')	9.875" (100"-300')
Type Fluid	WATER		8" (300'-432')
Density / Viscosity	N/A		
Fluid Level	26'		
Bentonite Seal	N/A		
Time Well Ready	1500		
Time Logger on Bottom	1515		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	N. REYNOLDS		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	12"	0'	20'
TWO	10.75"	20'	100'
THREE	9.875"	100'	300'
FOUR	8"	300'	432'
Casing Record	Size	Wgt/Ft	Top
Surface String			Bottom
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			432'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19106.db
 Dataset Pathname DIL.1
 Dataset Creation Thu Jan 08 17:02:19 2015

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1405.080	3665.050	cps	0.000	612.000	mmho/m	0.271	-380.495
Medium	2052.170	14102.500	cps	0.000	1960.000	mmho/m	0.163	-333.788

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Dec 13 17:32:47 2014

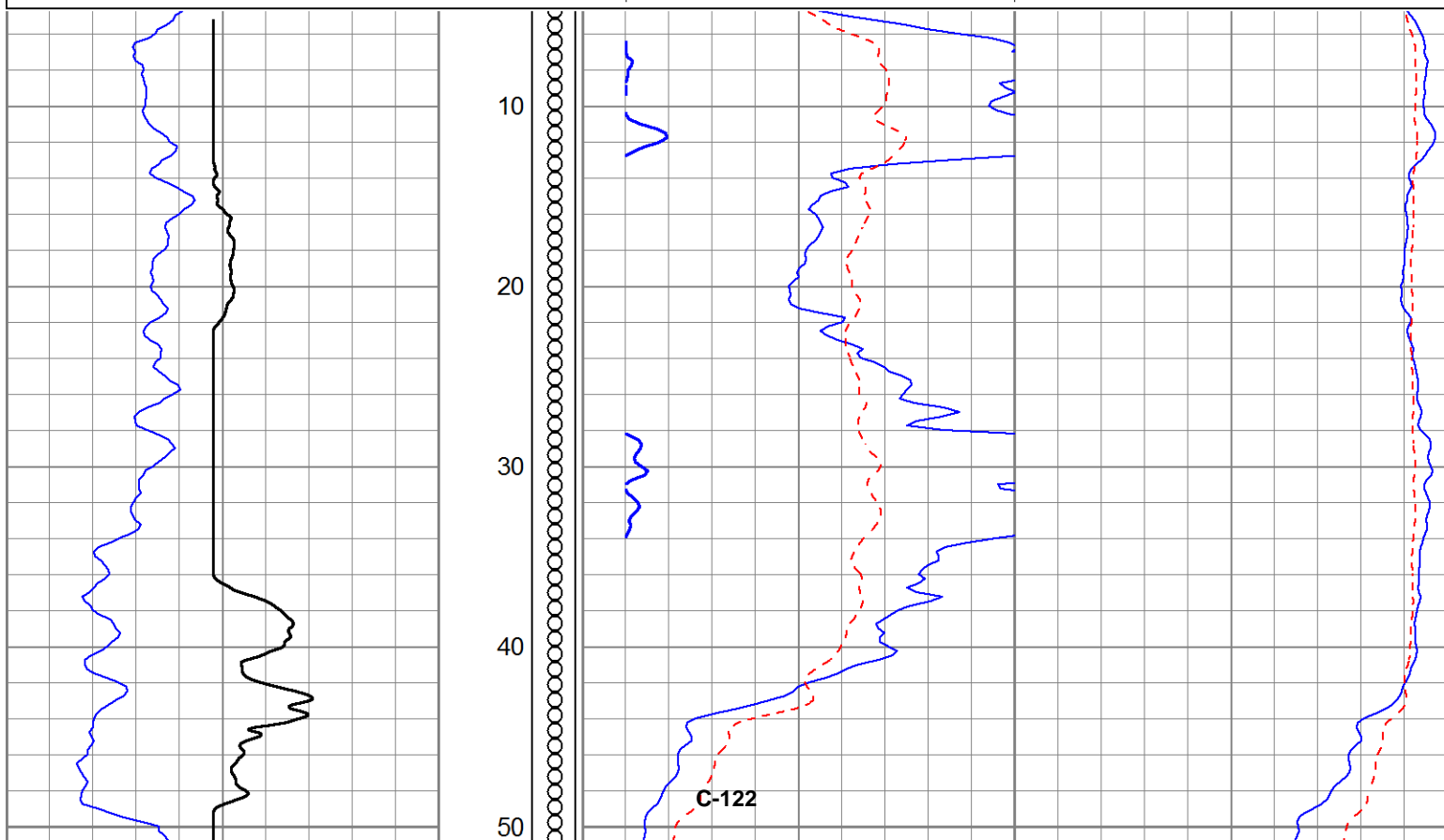
Calibrator Value: 162.0 GAPI

Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

Sensitivity: 1.2020 GAPI/cps

Database File 19106.db
 Dataset Pathname DIL.1
 Presentation Format dil_ps
 Dataset Creation Thu Jan 08 17:02:19 2015
 Charted by Depth in Feet scaled 1:120

-100	SP (mV)	100	0	RILM (Ohm-m)	100	200	CILM (mmho/m)	0
20	Gamma Ray (GAPI)	120	0	RILD (Ohm-m)	100	200	CILD (mmho/m)	0
			100	RILM backup (Ohm-m)	1000	2000	CILM backup (mmho/m)	200
			100	RILD backup (Ohm-m)	1000	2000	CILD backup (mmho/m)	200



Fluid Level

60

70

80

90

100

110

120

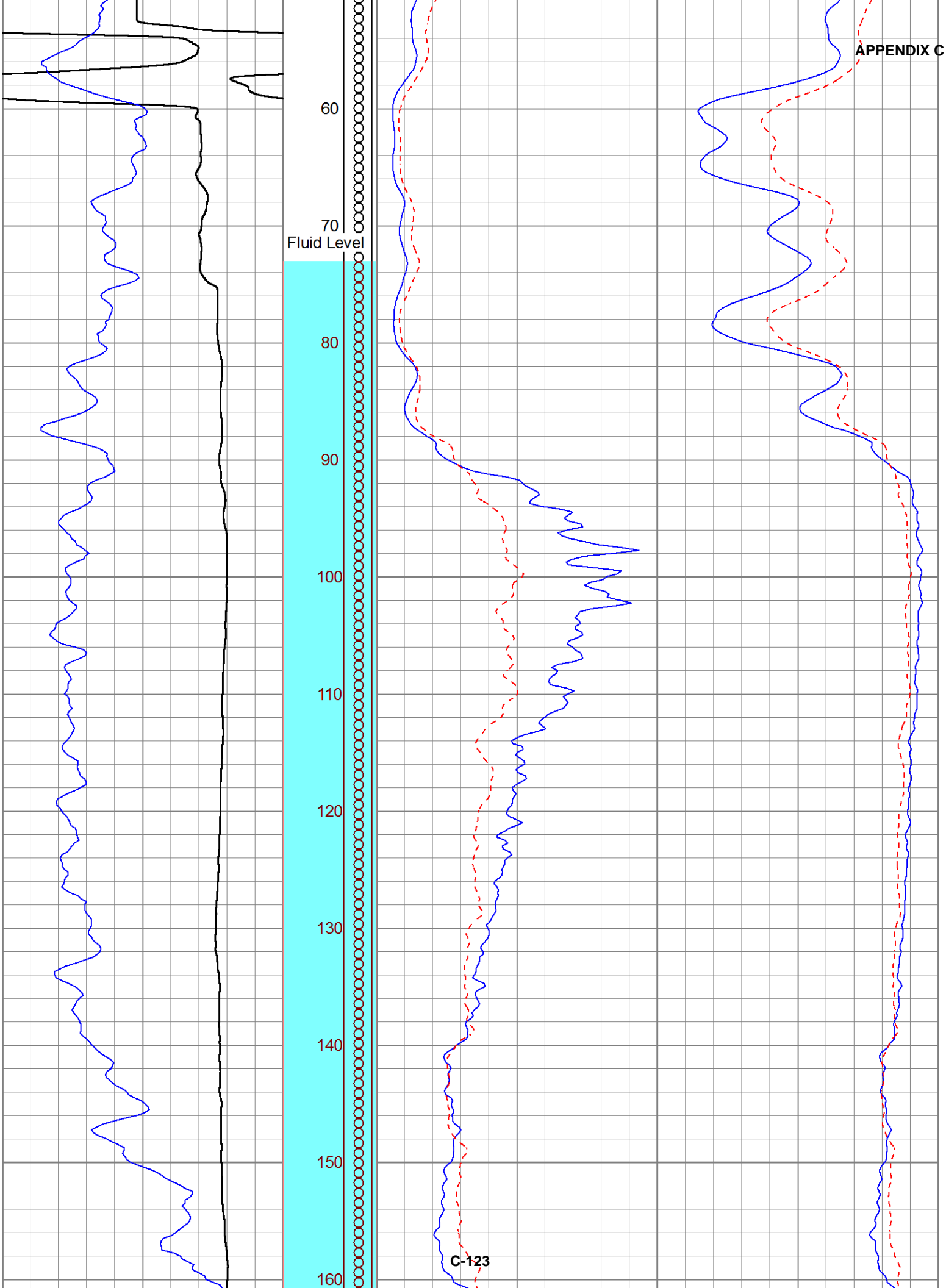
130

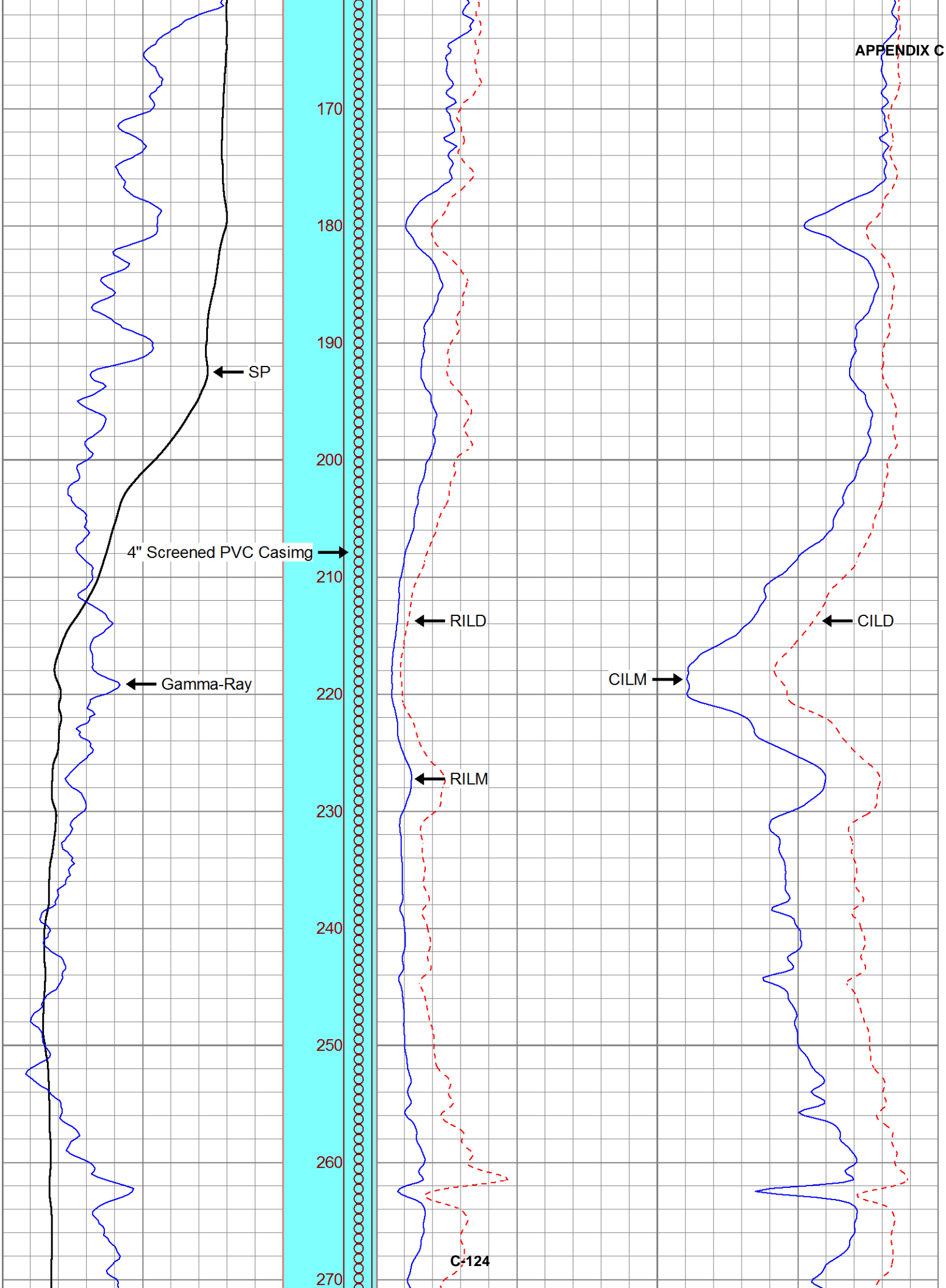
140

150

160

C-123





← SP

4" Screened PVC Casing →

← Gamma-Ray

← RILD

← RILM

CILM →

← CILD

C-124

170

180

190

200

210

220

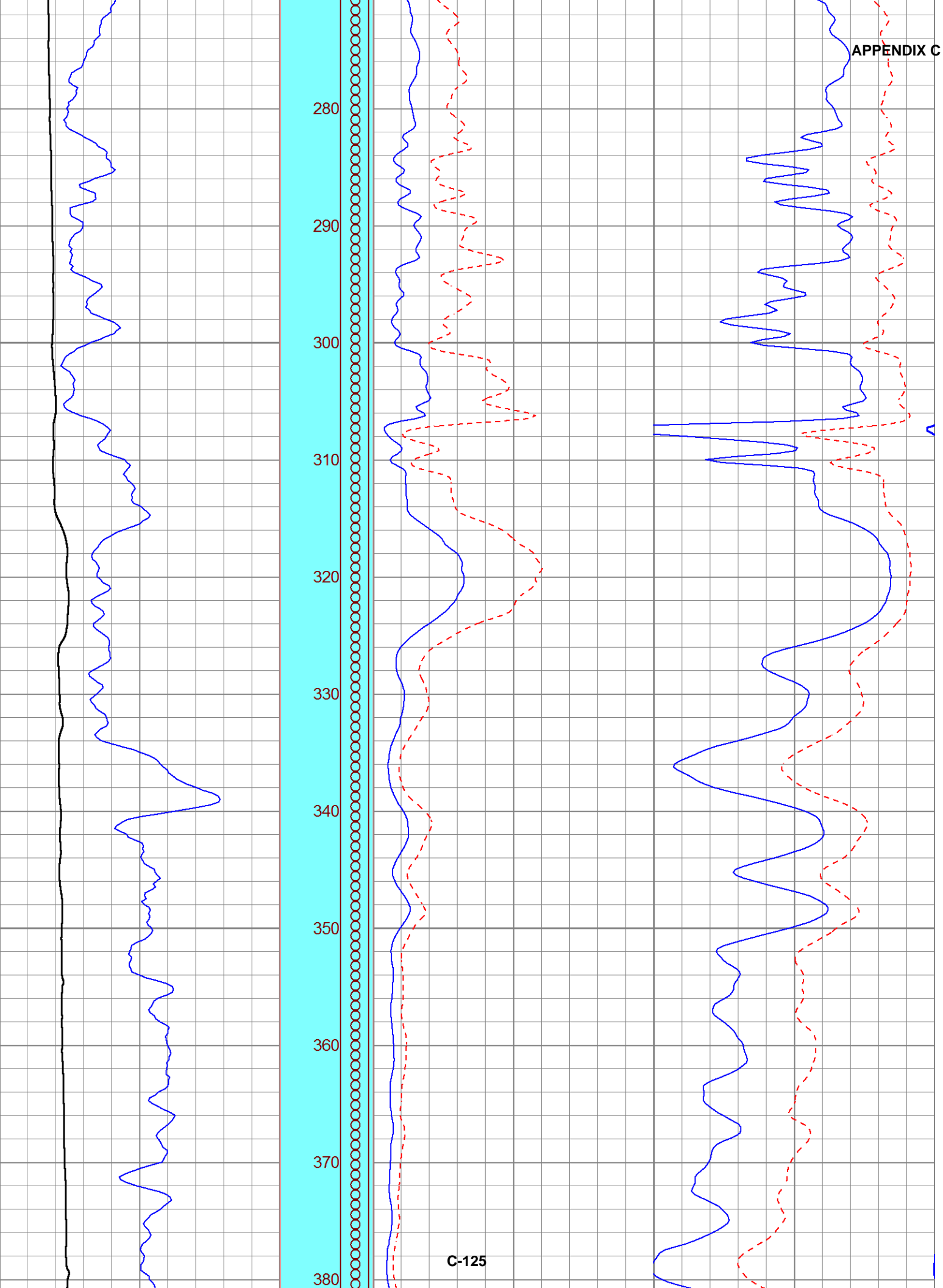
230

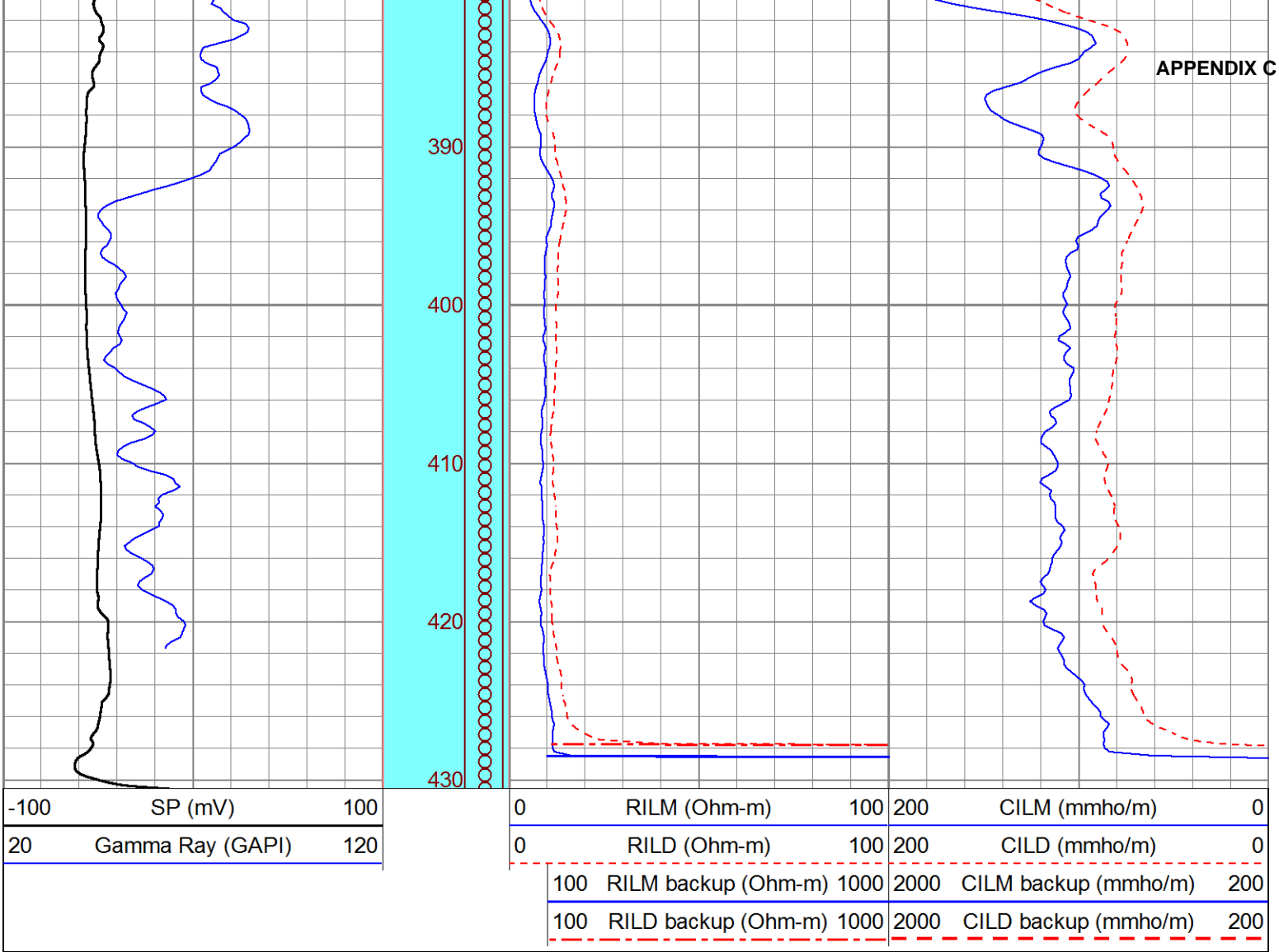
240

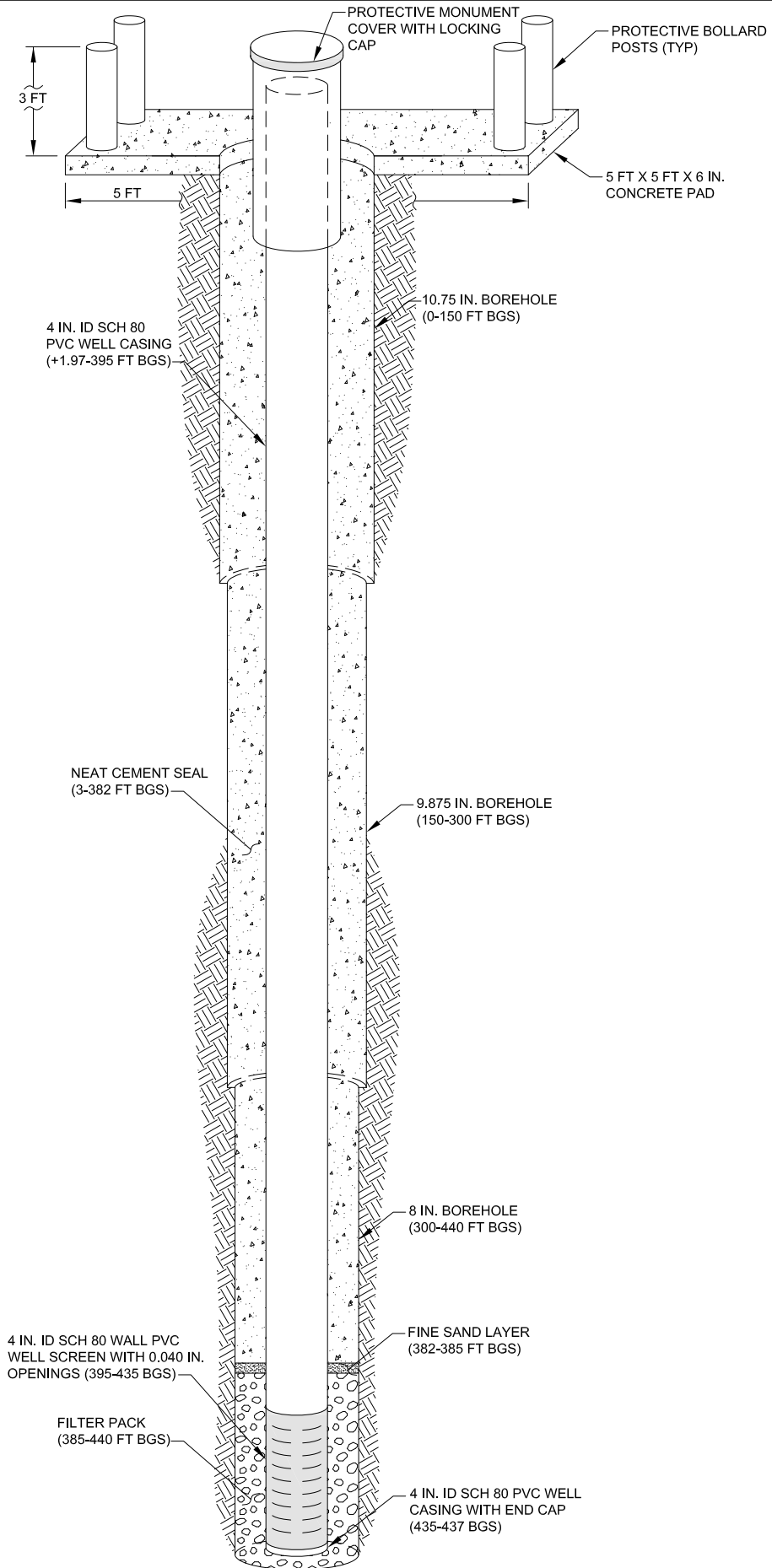
250

260

270

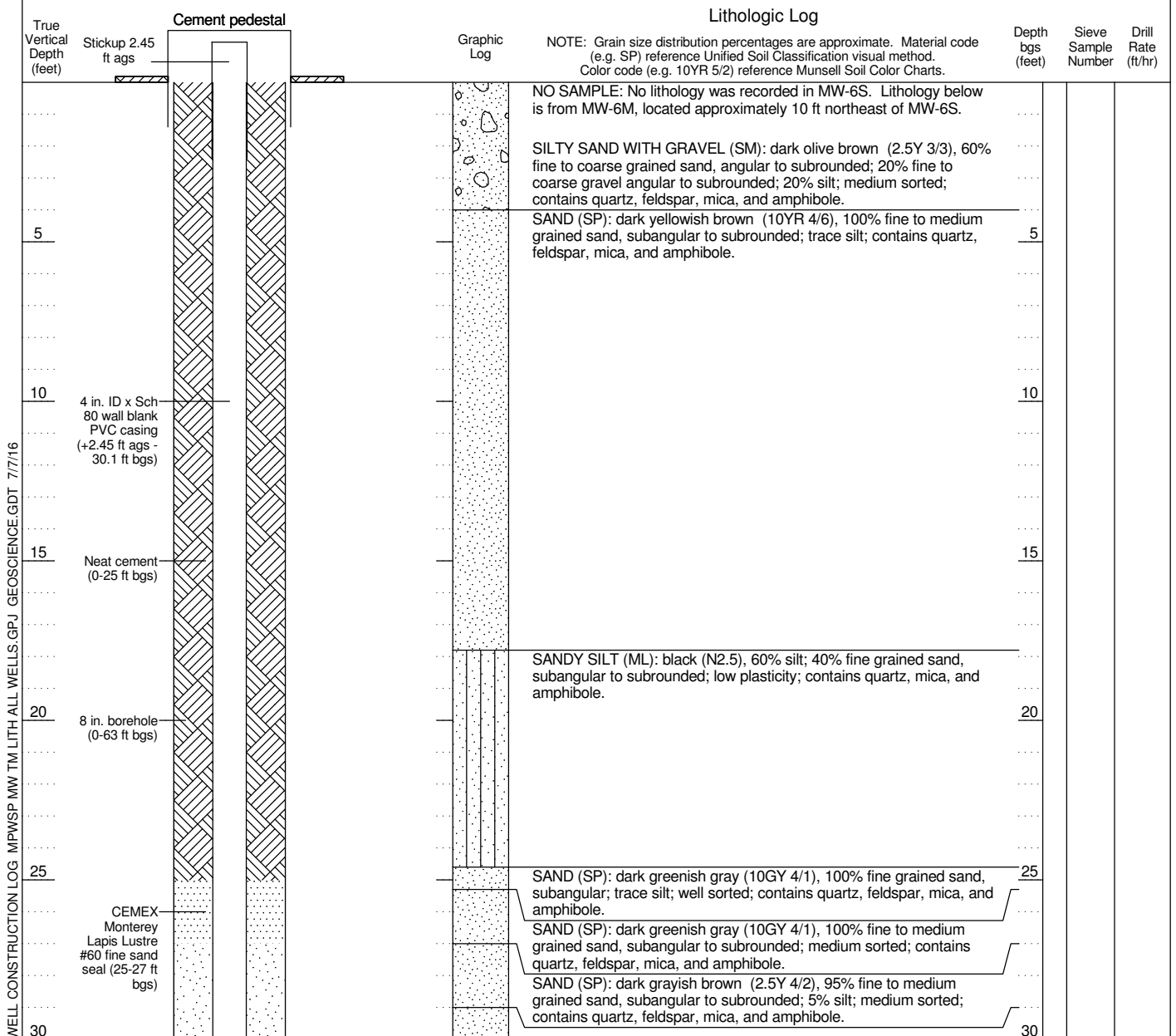






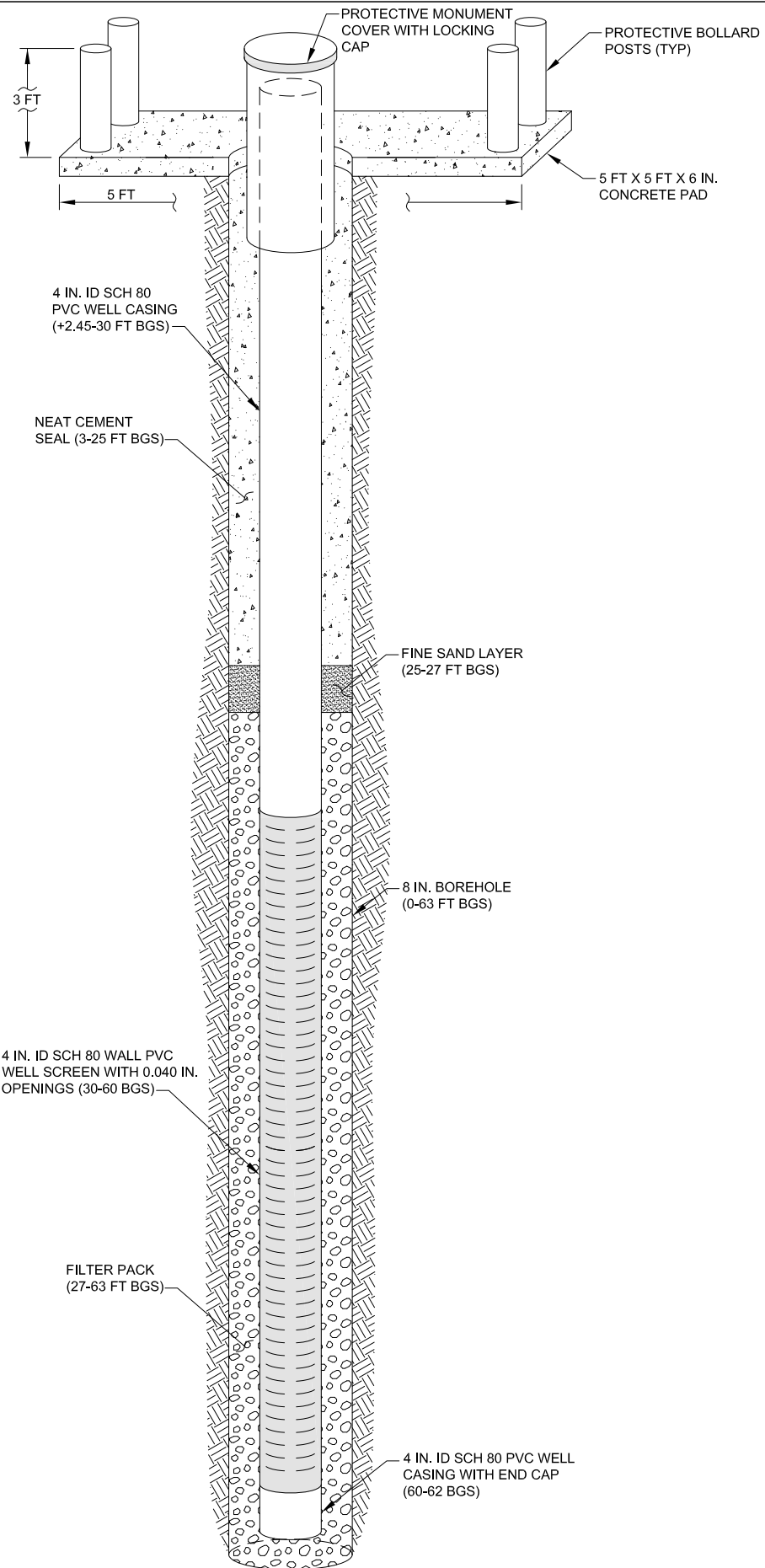
WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-6S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Blanco Rd							
REPORT DATE			LOGGED BY NOT LOGGED							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.45	30.1	32.55	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	30.1	60.1	30	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	60.1	62.5	2.4	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	33.44 ft NAVD88									
TOC ELEVATION	35.89 ft NAVD88 (RP)									
START DATE	3/20/15									
FINISH DATE	3/21/15									



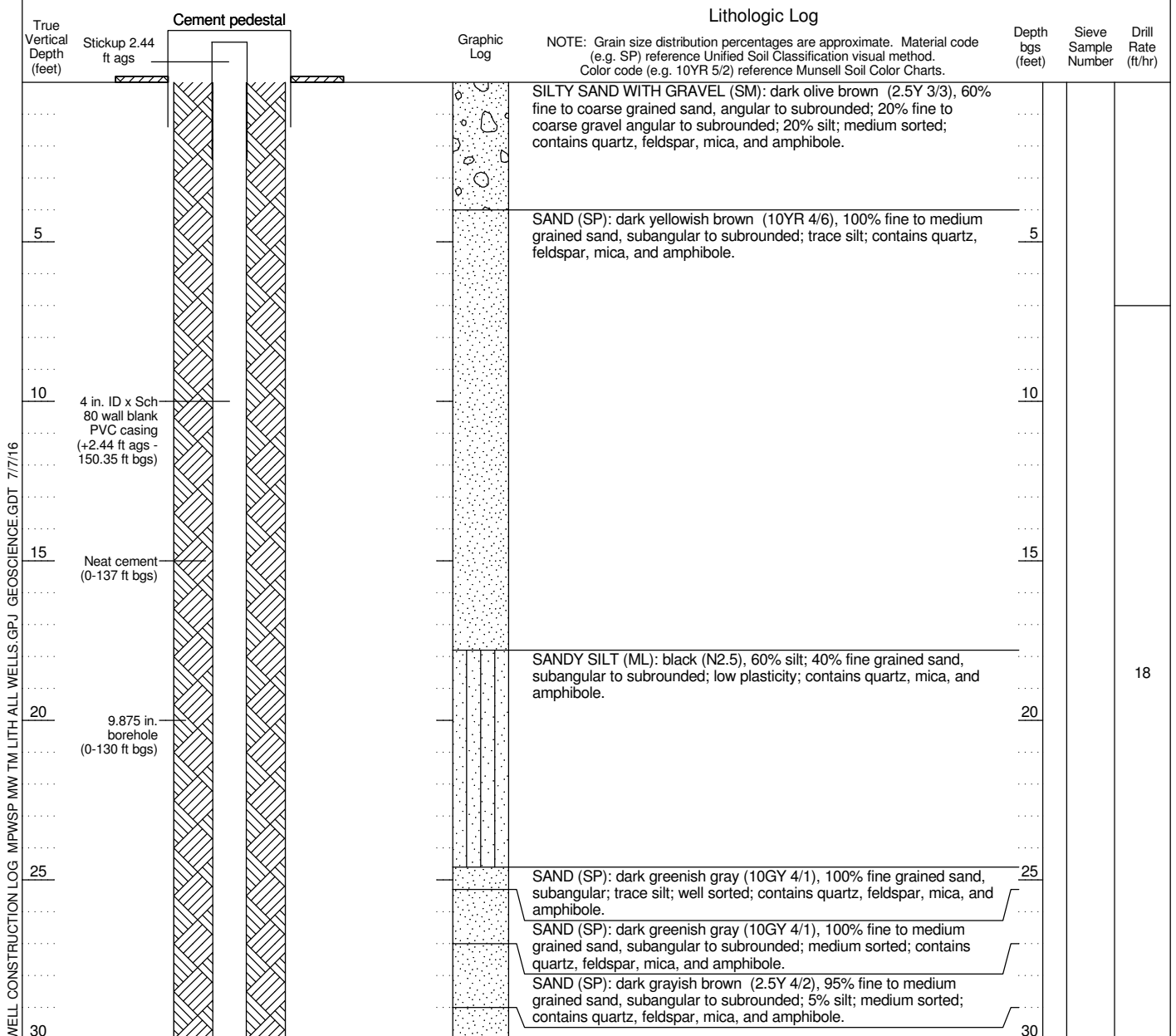
WELL NUMBER MPWSP MW-6S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
	CEMEX Monterey Lapis Lustre #3 filter pack (27-63 ft bgs)		SAND (SP): grayish brown (2.5Y 5/2), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
35				35
			SAND (SP): dark gray (2.5Y 4/1), 100% fine to medium grained sand, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	
			CLAYEY SAND (SC): black (N2.5), 50% medium grained sand, subangular to subrounded; 20% silt; 20% clay, low plasticity; 10% fine gravel subangular to subrounded.	
40			SAND (SP): dark greenish gray (10GY 4/1), 100% fine to medium grained sand, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	40
			SAND (SP): very dark greenish gray (10G 3/1), 95% fine to coarse grained sand, angular to subrounded; 5% clay; trace fine gravel angular to subrounded; trace silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
45	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (30.1-60.1 ft bgs)			45
			FAT CLAY WITH SAND (CH): very dark greenish gray (5GY 3/1), 50% clay, medium to high plasticity; 30% silt; 20% fine grained sand, subangular to subrounded.	
50				50
			SAND (SP): greenish black (5G 2.5/1), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
55				55
			SAND (SP): greenish black (5G 2.5/1), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
60				60
	Blank casing with end cap (60.1-62.5 ft bgs)		CLAY (CL): very dark greenish gray (5GY 3/1), 80% clay, low plasticity; 20% silt.	
	TD 63 ft bgs			
			Bottom of borehole at 63 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-6M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Blanco Rd							
REPORT DATE			LOGGED BY J. Sobolew and A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.44	150.35	152.79	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	150.35	210.35	60	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	9.875, 8 in	Blank	210.35	212.7	2.35	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	33.24 ft NAVD88									
TOC ELEVATION	35.68 ft NAVD88 (RP)									
START DATE	3/10/15									
FINISH DATE	3/20/15									



WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			SAND (SP): grayish brown (2.5Y 5/2), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
35				35
			SAND (SP): dark gray (2.5Y 4/1), 100% fine to medium grained sand, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	
			CLAYEY SAND (SC): black (N2.5), 50% medium grained sand, subangular to subrounded; 20% silt; 20% clay, low plasticity; 10% fine gravel subangular to subrounded.	
40			SAND (SP): dark greenish gray (10GY 4/1), 100% fine to medium grained sand, subangular to subrounded; medium sorted; contains quartz, feldspar, mica, and amphibole.	40
			SAND (SP): very dark greenish gray (10G 3/1), 95% fine to coarse grained sand, angular to subrounded; 5% clay; trace fine gravel angular to subrounded; trace silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
45				45
			FAT CLAY WITH SAND (CH): very dark greenish gray (5GY 3/1), 50% clay, medium to high plasticity; 30% silt; 20% fine grained sand, subangular to subrounded.	
50				50
			SAND (SP): greenish black (5G 2.5/1), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
60				60
			CLAY (CL): very dark greenish gray (5GY 3/1), 80% clay, low plasticity; 20% silt.	
65				65
70				70

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75				SILT WITH SAND (MH): black (N2.5), 60% silt; 20% fine grained sand, subangular to subrounded; 15% clay, high plasticity; 5% fine gravel subangular to subrounded.	75		
				FAT CLAY (CH): greenish black (10GY 2.5/1), 80% clay, high plasticity; 20% silt.			
80					80		
85					85		
				FAT CLAY (CH): greenish black (10GY 2.5/1), 100% clay, high plasticity.			
90					90		
95					95		
100					100		
105					105		
110					110		21

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
115				
120				21
125				
130				
135				
140	CEMEX Monterey Lapis Lustre #60 fine sand seal (137-140 ft bgs)		FAT CLAY (CH): greenish black (5GY 2.5/1), 70% clay, medium plasticity; 30% silt.	
145	CEMEX Monterey Lapis Lustre #3 filter pack (140-230 ft bgs)		SAND (SP): brown (10YR 5/3), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; contains quartz, feldspar, and mica.	11
150			SAND WITH GRAVEL (SW): brown (10YR 5/3), 80% fine to coarse grained sand, subangular to subrounded; 5% cobbles; contains quartz, feldspar, and mica. FAT CLAY (CH): black (N2.5), 75% clay, medium to high plasticity; 20% silt; 5% fine grained sand.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-6M** **BOREHOLE LITHOLOGIC LOG (continued)**

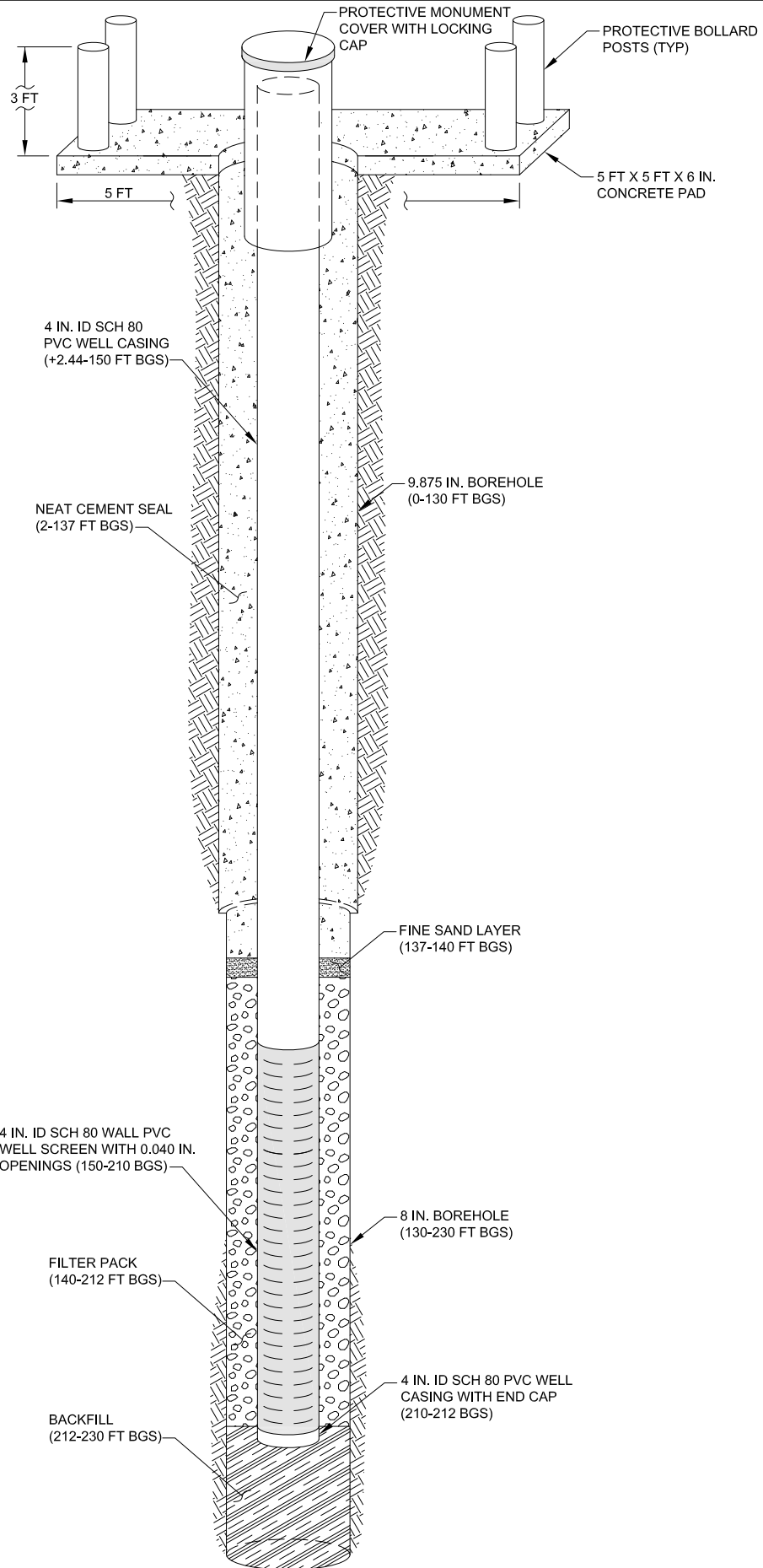
CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
155	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (150.35-210.35 ft bgs)		SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 70% medium to coarse grained sand, subangular to subrounded; 30% fine gravel subangular to subrounded; contains quartz, feldspar, and amphibole.	155		
160			FAT CLAY (CH): black (N2.5), 80% clay; 10% silt; 5% fine to coarse gravel; 5% fine to coarse grained sand; contains quartz, feldspar, mica, and amphibole.	160		
165			SAND WITH GRAVEL (SP): olive gray (5Y 4/2), 60% fine to coarse grained sand, subangular to subrounded; 30% fine gravel subangular to subrounded; 10% cobbles; contains quartz, feldspar, and amphibole.	165		
170			SAND (SP): gray (2.5Y 5/1), 95% fine to coarse grained sand, angular to subrounded; 5% fine gravel angular to subrounded; contains quartz, feldspar, and amphibole.	170		
175			SAND (SP): gray (2.5Y 5/1), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	175		
180			GRAVEL (GP): dark grayish brown (2.5Y 4/2), 80% fine gravel subangular to subrounded; 10% fine to coarse grained sand, subangular to subrounded; 5% silt; 5% cobbles; contains quartz, feldspar, mica, and amphibole.	180		
185			CLAY (CL): light olive brown (2.5Y 5/4), 85% clay, medium to high plasticity; 10% silt; 5% fine grained sand.	185		
190			SILTY SAND (SM): light olive brown (2.5Y 5/4), 60% fine grained sand; 25% silt; 15% clay, low plasticity; contains quartz, feldspar, and mica.	190		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

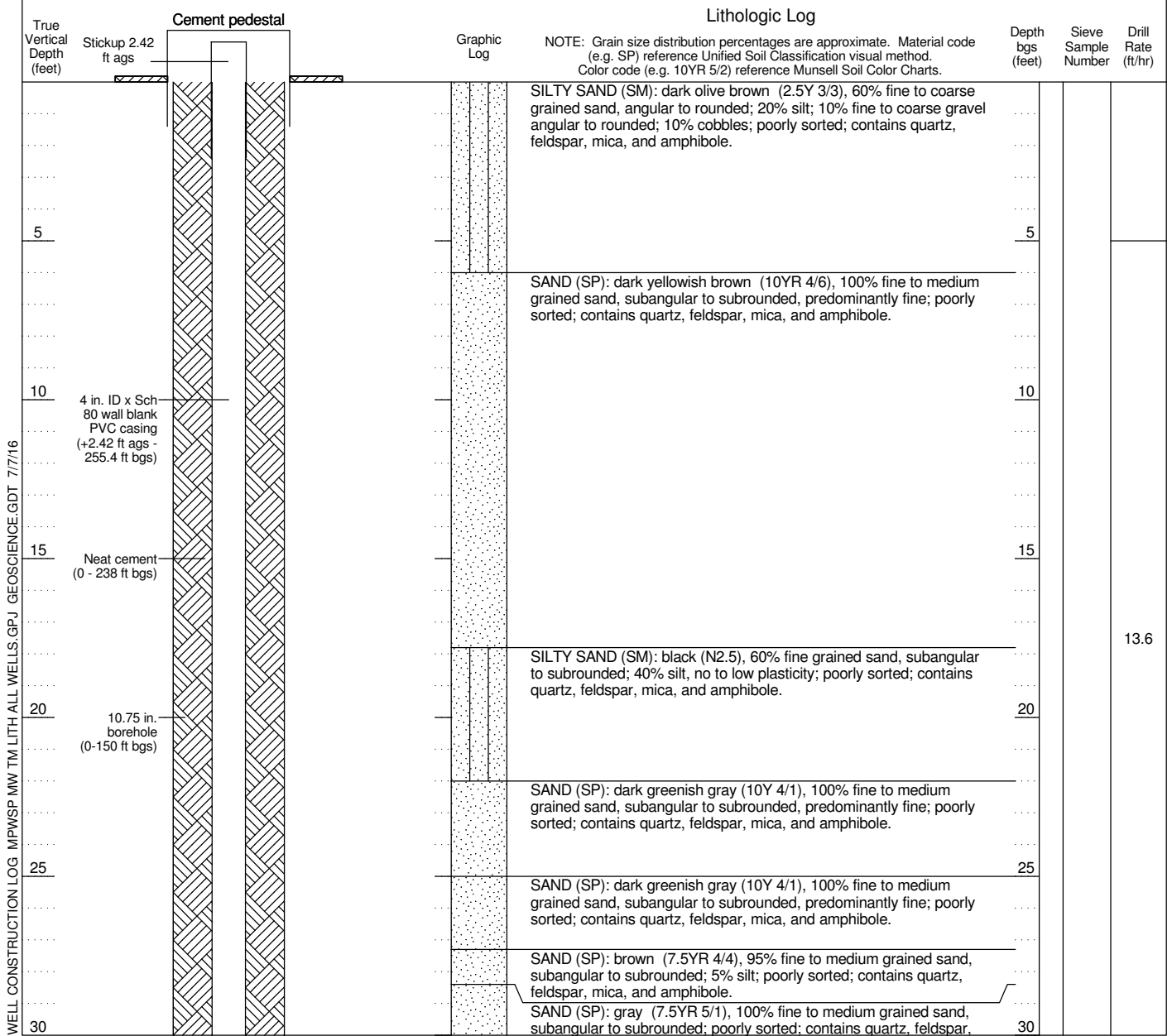
WELL NUMBER MPWSP MW-6M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
195			SAND (SP): brown (10YR 5/3), 95% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; contains quartz, feldspar, mica, and amphibole.	
200			GRAVEL WITH SAND (GP): light olive brown (2.5Y 5/3), 75% fine to coarse gravel subangular to subrounded; 25% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
200			FAT CLAY (CH): dark gray (5Y 4/1), 85% clay; 10% silt; 5% sand.	
205			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 60% medium to coarse grained sand, subangular to rounded; 35% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole.	
210			SANDY SILT (ML): light yellowish brown (2.5Y 6/4), 60% silt; 40% fine grained sand; low to medium plasticity.	
215			SILTY SAND (SM): light olive brown (2.5Y 5/3), 70% fine grained sand; 30% silt.	
220			CLAYEY SAND WITH GRAVEL (SC): grayish brown (2.5Y 5/2), 55% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; 15% silt; 15% clay, medium plasticity; shale.	
225			CLAYEY SAND (SC): light olive brown (2.5Y 5/3), 60% fine grained sand, subangular to subrounded; 30% clay, medium plasticity; 10% silt; contains quartz, feldspar, mica, and amphibole.	
225			FAT CLAY (CH): olive brown (2.5Y 4/3), 95% clay, medium to high plasticity; 5% silt.	
230	Blank casing with end cap (210.35-212.7 ft bgs)			
230	TD 230 ft bgs			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA Blanco Rd								
REPORT DATE		LOGGED BY A. Khalighi								
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.42	255.4	257.82	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	255.4	325.4	70	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	325.4	327.75	2.35	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	33.40 ft NAVD88									
TOC ELEVATION	35.82 ft NAVD88 (RP)									
START DATE	2/19/15									
FINISH DATE	3/10/15									



WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			mica, and amphibole.	
35				35
40			CLAYEY SAND (SC): black (N2.5), 50% medium grained sand, subangular to subrounded; 20% silt; 20% clay, medium to high plasticity; 10% fine gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	40
			SAND (SP): very dark greenish gray (5GY 3/1), 100% fine to medium grained sand, subangular to subrounded; trace fine gravel subangular to subrounded; trace silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
45				45
50				50
55			FAT CLAY WITH SAND (CH): very dark greenish gray (5GY 3/1), 50% clay, high plasticity; 30% silt; 20% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	55
60			SAND (SP): greenish black (5GY 2.5/1), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	60
65			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 80% clay, high plasticity; 20% silt.	65
70				70
				13.6

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lbs (feet)	Sieve Sample Number
75				
80				
85				
90				
95				
100				
105				
110				

NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.

SILT WITH SAND (MH): black (N2.5), 60% silt, high plasticity; 20% fine grained sand, subangular to subrounded; 15% clay; 5% fine gravel subangular to subrounded.

FAT CLAY (CH): greenish black (10GY 2.5/1), 80% clay, high plasticity; 20% silt.

FAT CLAY (CH): greenish black (10GY 2.5/1), 100% clay, high plasticity.

13.6

9

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lbs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115					115		
120					120		
125					125		
130					130		
135					135		
140				FAT CLAY (CH): greenish black (5GY 2.5/1), 70% clay, medium plasticity; 30% silt.	140		
145				SAND (SP): brown (10YR 5/3), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; poorly sorted; contains quartz, feldspar, and mica.	145		
				SAND WITH GRAVEL (SW): brown (10YR 5/3), 70% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.			
150				FAT CLAY (CH): black (N2.5), 75% clay, medium to high plasticity; 20% silt; 5% fine grained sand.	150		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER		BOREHOLE LITHOLOGIC LOG (continued)					
MPWSP MW-6D		CLIENT	Cal Am	LOCATION			
PROJECT NUMBER		14077-15		Marina, CA			
True Vertical Depth (feet) 9.88 in. borehole (150-300 ft bgs) 155 160 165 170 175 180 185 190 WELL CONSTRUCTION LOG. MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16	(continued)	Lithologic Log		Depth (feet)	Sieve Sample Number	Drill Rate (ft/hr)	
		Graphic Log	NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
				SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 70% medium to coarse grained sand, subangular to rounded; 30% fine gravel subangular to rounded; poorly sorted; contains quartz, feldspar, amphibole, and other.	155		
				SAND (SP): olive brown (2.5Y 4/3), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole. FAT CLAY (CH): black (N2.5), 80% clay, high plasticity; 10% silt; 5% fine gravel subangular to subrounded; 5% fine to medium grained sand, subangular to subrounded.	160		
				GRAVEL WITH SAND (GP): olive gray (5Y 4/2), 50% fine to coarse gravel subangular to rounded, predominantly coarse; 40% fine to coarse grained sand, subangular to rounded; 10% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other.	160		
				SAND (SP): olive gray (5Y 4/2), 95% fine to coarse grained sand, subangular to subrounded; 5% fine to coarse gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	165		
				SAND WITH GRAVEL (SP): olive gray (5Y 4/2), 60% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel subangular to subrounded; 10% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and evaporites; shale.	165		
				GRAVEL WITH SAND (GP): dark yellowish brown (10YR 4/4), 50% fine to coarse gravel subangular to rounded; 35% fine to coarse grained sand, subangular to rounded; 5% silt; 10% cobbles; poorly sorted; contains quartz, feldspar, and amphibole.	170		
				SAND (SP): gray (2.5Y 5/1), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	175		
				GRAVEL WITH SAND (GP): dark grayish brown (2.5Y 4/2), 80% fine gravel subangular to subrounded; 15% fine to coarse grained sand, subangular to subrounded; 5% silt; poorly sorted; contains quartz, feldspar, amphibole, and other.	185		
				GRAVEL (GP): dark gray (2.5Y 4/1), 85% fine to coarse gravel subangular to rounded; 5% fine to coarse grained sand, subangular to rounded; 5% silt; 5% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other.	185		
				GRAVEL WITH SAND (GP): brown (10YR 5/3), 65% fine to coarse gravel subangular to rounded; 30% fine to coarse grained sand, subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other.			9
				CLAY (CL): light olive brown (2.5Y 5/4), 85% clay, low to medium plasticity; 10% silt; 5% fine grained sand; red iron-oxide staining at	190		7

Geoscience Support Services, Inc.

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			188.7 ft contact.	
			SILTY SAND (SM): light olive brown (2.5Y 5/4), 60% fine grained sand, subangular to subrounded; 25% silt; 15% clay, low plasticity; poorly sorted; contains quartz, feldspar, and mica.	
			SAND (SP): olive brown (2.5Y 4/4), 95% fine to medium grained sand, subangular to subrounded; 5% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
195			SAND (SP): brown (10YR 5/3), 95% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; poorly sorted; contains quartz, feldspar, mica, and amphibole; shale.	195
			SILTY SAND WITH GRAVEL (SM): light olive brown (2.5Y 5/3), 40% fine to coarse gravel subangular to rounded; 40% fine to coarse grained sand, subangular to rounded; 15% silt; 5% clay, low plasticity; poorly sorted; contains quartz, feldspar, and amphibole.	
200			FAT CLAY (CH): dark gray (5Y 4/1), 85% clay, high plasticity; 10% silt; 5% medium grained sand, subangular to subrounded.	200
			SAND (SW): dark grayish brown (2.5Y 4/2), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; well sorted; contains quartz, feldspar, amphibole, and other; trace shale.	
205			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 60% medium to coarse grained sand, subangular to rounded; 35% fine to coarse gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, and amphibole; trace shale.	205
210				210
			SANDY SILT (ML): light yellowish brown (2.5Y 6/4), 60% silt, low to medium plasticity; 40% fine grained sand.	
			SILTY SAND (SM): light olive brown (2.5Y 5/3), 70% fine grained sand; 30% silt; poorly sorted.	
215				215
			CLAYEY SAND WITH GRAVEL (SC): grayish brown (2.5Y 5/2), 55% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; 15% silt; 15% clay, medium plasticity; poorly sorted; trace shale.	
220				220
			CLAYEY SAND (SC): grayish brown (2.5Y 5/2), 60% fine grained sand, subangular to subrounded; 30% clay, medium plasticity; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
			FAT CLAY (CH): light olive brown (2.5Y 5/3), 70% clay, medium plasticity; 20% silt; 10% fine grained sand.	
			FAT CLAY (CH): olive brown (2.5Y 4/3), 95% clay, medium to high plasticity; 5% silt.	
225				225
230				230

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
235				
240	CEMEX Monterey Lapis Lustre #60 fine sand seal (238 - 242 ft bgs)		SAND WITH SILT (SP-SM): dark yellowish brown (10YR 3/6), 90% fine grained sand; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole; large boulder at 239 ft bgs.	7
245	CEMEX Monterey Lapis Lustre #3 filter pack (242 - 340 ft bgs)		SILT WITH SAND (ML): dark yellowish brown (10YR 3/6), 70% silt, no to low plasticity; 25% fine grained sand; 5% clay.	
250			FAT CLAY (CH): olive gray (5Y 4/2), 85% clay, medium to high plasticity; 10% silt; 5% fine to medium grained sand, subangular to subrounded.	
255			SAND (SW): dark grayish brown (2.5Y 4/2), 90% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; 5% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole; shale.	
260	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (255.4 - 325.4 ft bgs)		GRAVEL WITH SAND (GP): black (2.5Y 2.5/1), 55% fine to coarse gravel subangular to rounded; 40% fine to coarse grained sand, subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, amphibole, and other; shale.	10
265			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/4), 80% fine to coarse grained sand, subangular to rounded; 15% fine gravel subangular to rounded; 5% silt; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.	
			SAND WITH GRAVEL (SP): dark brown (10YR 3/3), 65% fine to coarse grained sand, subangular to rounded; 30% fine to coarse gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, amphibole, and other.	
			SILTY GRAVEL WITH SAND (GM): dark yellowish brown (10YR 4/6), 40% fine to coarse gravel subangular to rounded; 30% fine to coarse grained sand, subangular to rounded; 20% silt; 5% clay, low plasticity; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, amphibole, and other; shale.	
270			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 60% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel subangular to subrounded; 10% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole; shale.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
275			CLAY WITH GRAVEL (CL): light olive brown (2.5Y 5/3), 65% clay, medium to high plasticity; 20% fine to coarse gravel rounded; 5% medium grained sand, rounded; 5% silt; 5% cobbles; contains quartz, feldspar, mica, amphibole, evaporites, and other; shale.	275
280			SAND WITH GRAVEL (SW): dark yellowish brown (10YR 3/4), 80% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other.	280
285			GRAVELLY FAT CLAY (CH): olive (5Y 4/4), 45% clay; 35% fine to coarse gravel subangular to rounded; 10% coarse grained sand, subangular to rounded; 5% silt; 5% cobbles; contains quartz, feldspar, amphibole, and other; trace shale.	285
290			SAND WITH SILT AND GRAVEL (SP-SM): dark olive gray (5Y 3/2), 65% fine to coarse grained sand, subangular to rounded; 20% fine to coarse gravel subangular to rounded; 10% silt; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and other; shale.	290
295			SAND WITH SILT AND GRAVEL (SP-SM): olive gray (5Y 4/2), 60% fine to coarse grained sand, subangular to rounded, predominantly coarse; 20% fine to coarse gravel subangular to rounded, predominantly fine; 10% silt; 10% cobbles; poorly sorted; shale.	295
300			SILTY SAND (SM): light olive brown (2.5Y 5/4), 60% fine grained sand; 40% silt; poorly sorted.	300
305			FAT CLAY (CH): olive (5Y 5/3), 90% clay, medium to high; 10% silt.	305
310			SAND (SP): olive brown (2.5Y 4/3), 90% fine to medium grained sand, subangular to rounded; 5% fine gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other.	310
			SAND WITH GRAVEL (SP): pale brown (10YR 6/3), 75% fine to coarse grained sand, subangular to rounded, grades coarser towards 312 ft bgs; 20% fine to coarse gravel subangular to rounded; 5%	310

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

8 in. borehole
(300-340 ft
bgs)

WELL NUMBER MPWSP MW-6D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			cobbles; poorly sorted; contains quartz, feldspar, amphibole, and other; shale.	
315			315	
320			320	
325			325	10
	Blank casing with end cap (325.4-327.75 ft bgs)			
330			330	
335			335	
340	TD 340 ft bgs		340	
			Bottom of borehole at 340 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19184	Company CASCADIE DRILLING
Well MW-6D	
Field SALINAS	
County MONTEREY	State CA

Location
799 W. BLANCO RD.
GPS: N 36o 40' 37" W 121o 44' 49"

Other Services:
DUAL INDUCTION
GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	02-24-2015		
Run Number	ONE		
Depth Driller	340'		
Depth Logger	335'		
Bottom Logged Interval	324'		
Top Log Interval	0'		
Open Hole Size	10.75" (0'-100')	9.875" (100'-250')	8" (250'-340')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	38'		
Bentonite Seal	N/A		
Time Well Ready	1000		
Time Logger on Bottom	1100		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10.75"	0'	100'				
TWO	9.875"	100'	250'				
THREE	8"	250'	340'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4" PVC		SCH 80	0'
Liner				340'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19184.db
 Dataset Pathname tmp3
 Dataset Creation Tue Feb 24 12:10:17 2015

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:18 2015

	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

FRT Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:15 2015

Resistivity Calibration:

System Reading	Calibration Reference
32145.000 cps	1.800 Ohm-m
11466.000 cps	86.960 Ohm-m

Gain: -0.004
 Offset: 135.338

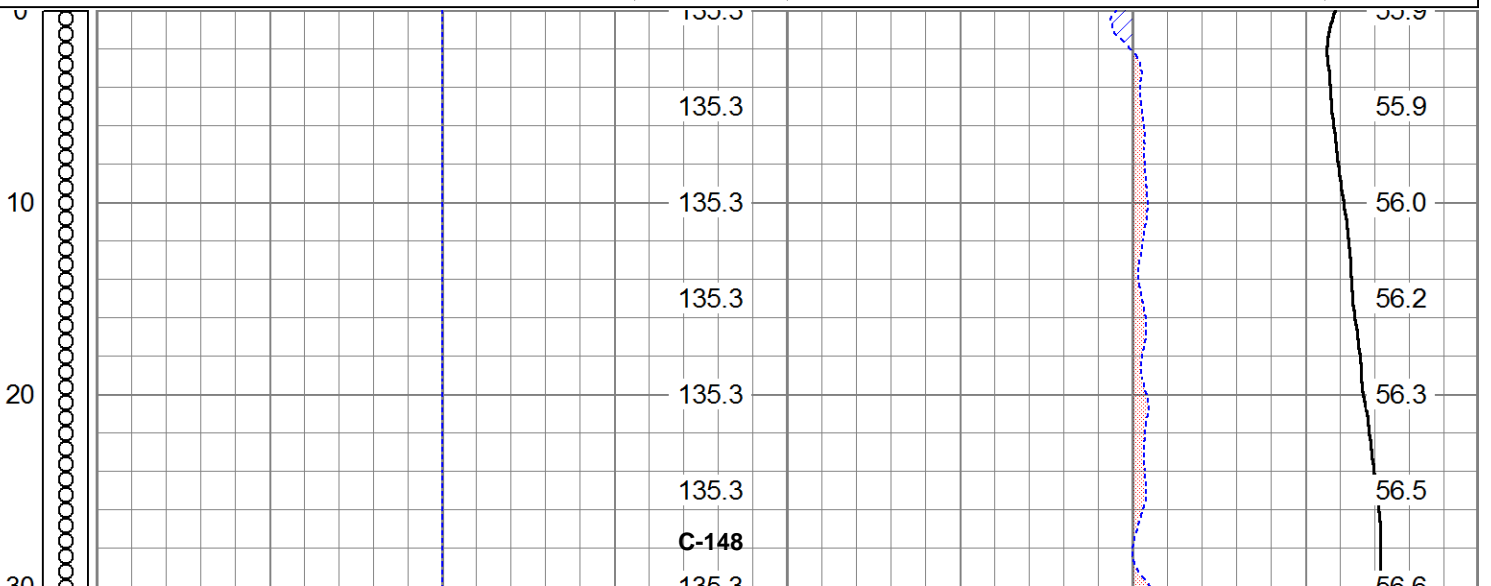
Conductivity Calibration:

System Reading	Calibration Reference
0.000 cps	0.000
1.000 cps	1.000

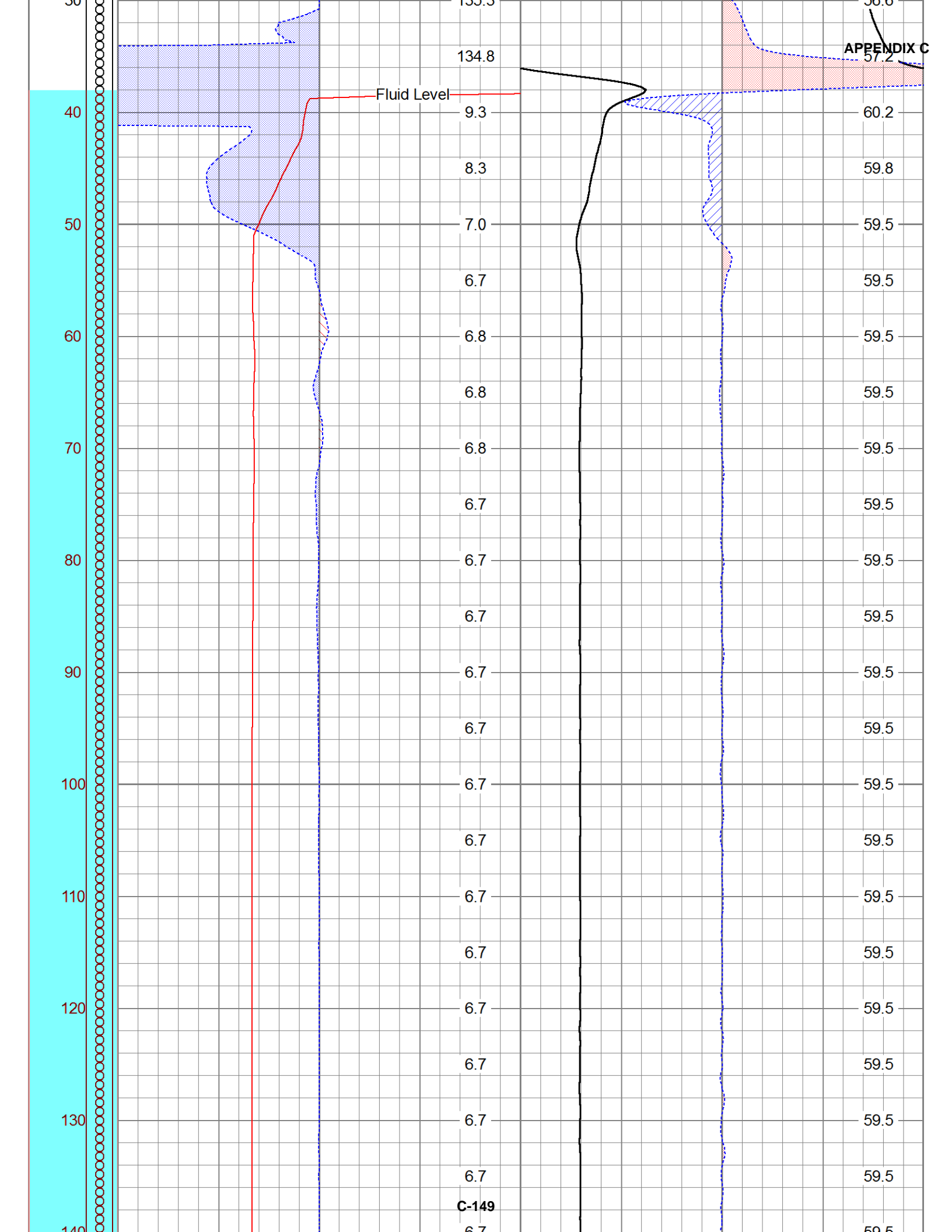
Gain: 1.000
 Offset: 0.000

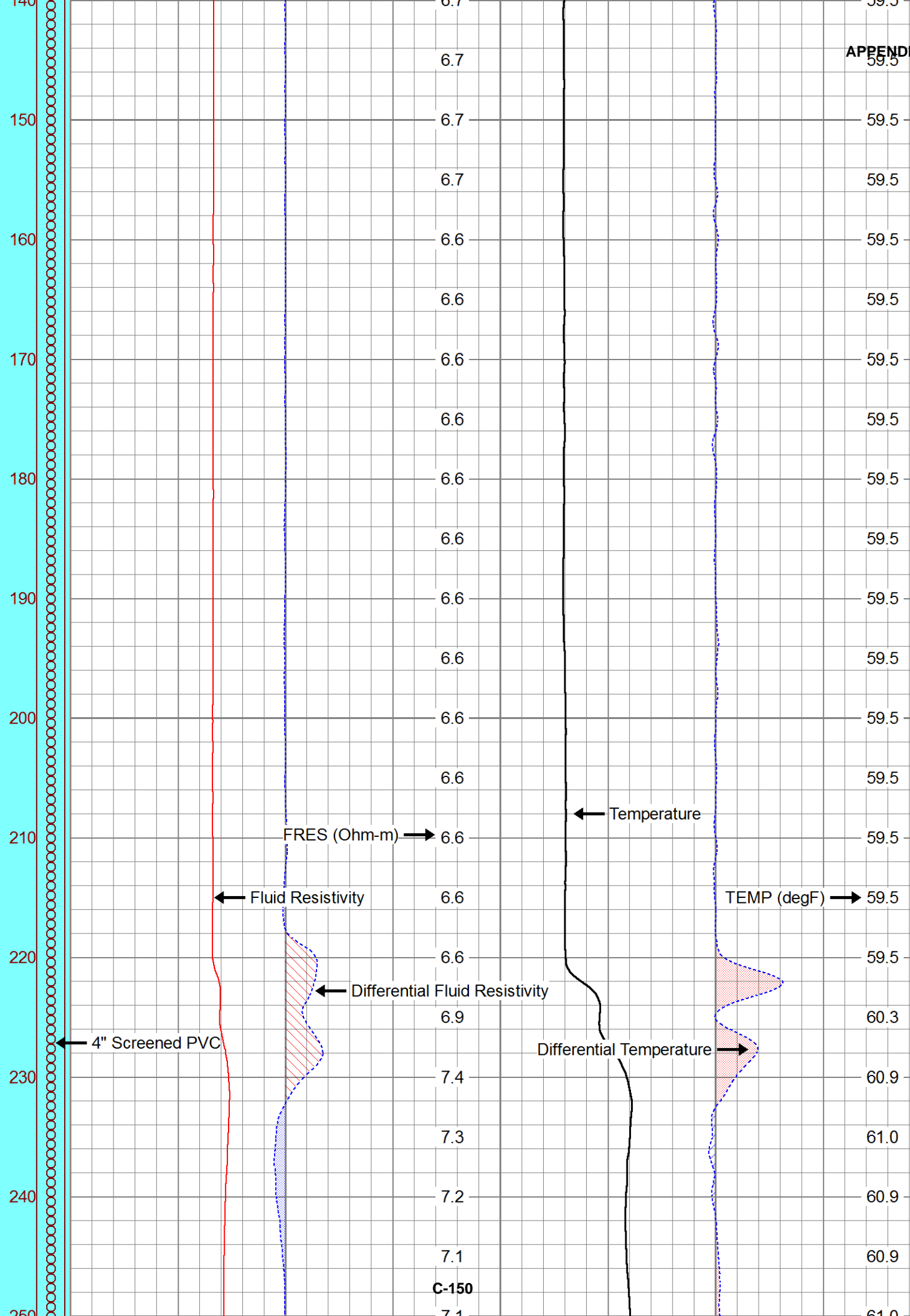
Database File 19184.db
 Dataset Pathname tmp3
 Presentation Format frttemp2
 Dataset Creation Tue Feb 24 12:10:17 2015
 Charted by Depth in Feet scaled 1:120

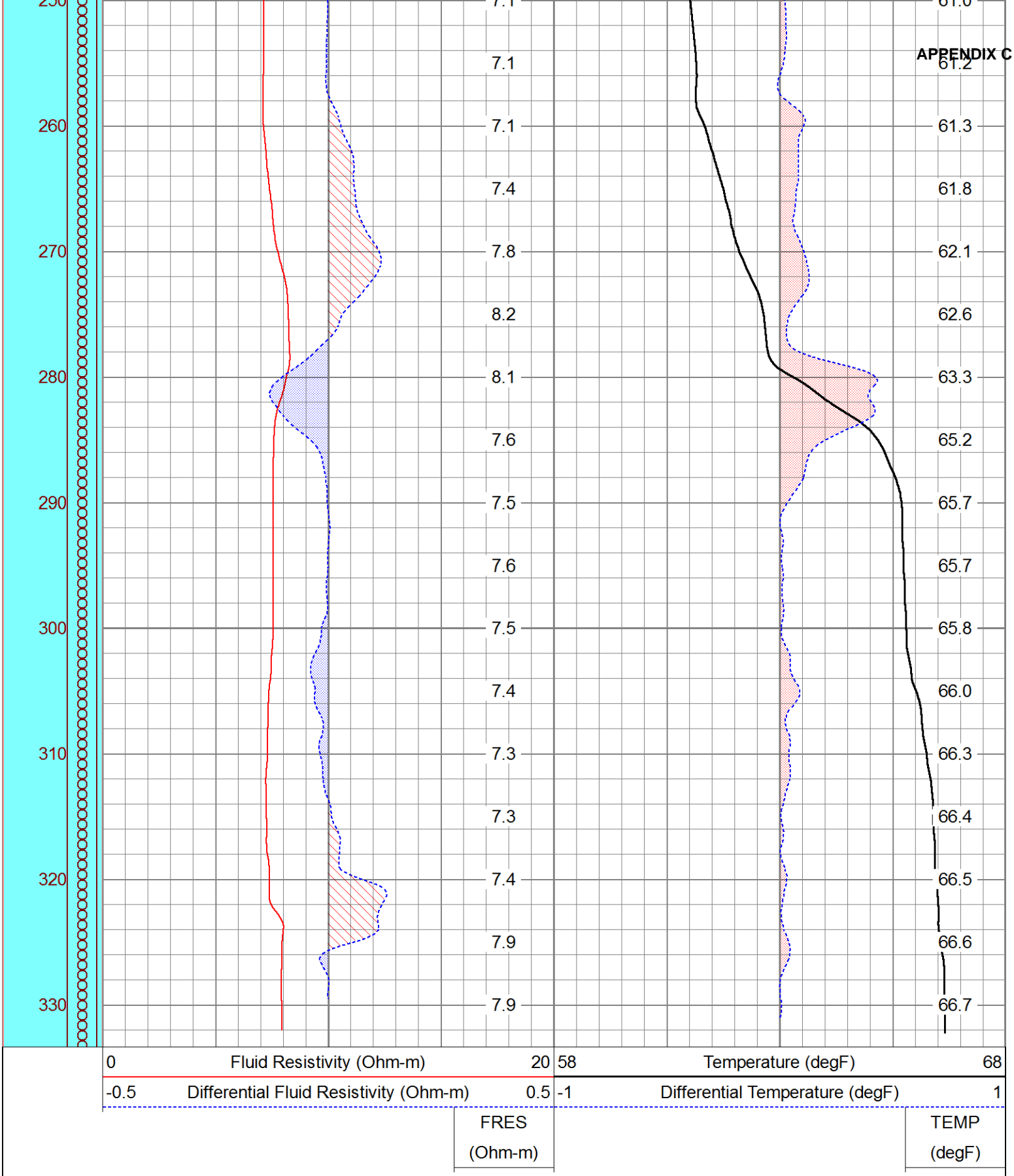
0	Fluid Resistivity (Ohm-m)	20	58	Temperature (degF)	68
-0.5	Differential Fluid Resistivity (Ohm-m)	0.5	-1	Differential Temperature (degF)	1
	FRES			TEMP	
	(Ohm-m)			(degF)	



C-148







PACIFIC SURVEYS

**DUAL INDUCTION
GAMMA-RAY**

Job No. 19184	Company CASCAD DRILLING
Well MW-6D	
Field SALINAS	
County MONTEREY	State CA

Location
799 W. BLANCO RD.
GPS: N 36o 40' 37" W 121o 44' 49"

Other Services:
TEMPERATURE
FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	02-24-2015		
Run Number	ONE		
Depth Driller	340'		
Depth Logger	335'		
Bottom Logged Interval	335'		
Top Log Interval	0'		
Open Hole Size	10.75" (0'-100')	9.875" (100'-250')	8" (250'-340')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	38'		
Bentonite Seal	N/A		
Time Well Ready	1000		
Time Logger on Bottom	1100		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10.75"	0'	100'				
TWO	9.875"	100'	250'				
THREE	8"	250'	340'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4" PVC		SCH 80	0'
Liner				340'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19184.db
 Dataset Pathname DIL2
 Dataset Creation Tue Feb 24 14:05:16 2015

Calibration Report

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1418.047	3489.658	cps	0.000	612.000	mmho/m	0.295	-418.923
Medium	2156.841	14524.973	cps	0.000	1960.000	mmho/m	0.158	-341.798

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Jan 10 13:10:57 2015

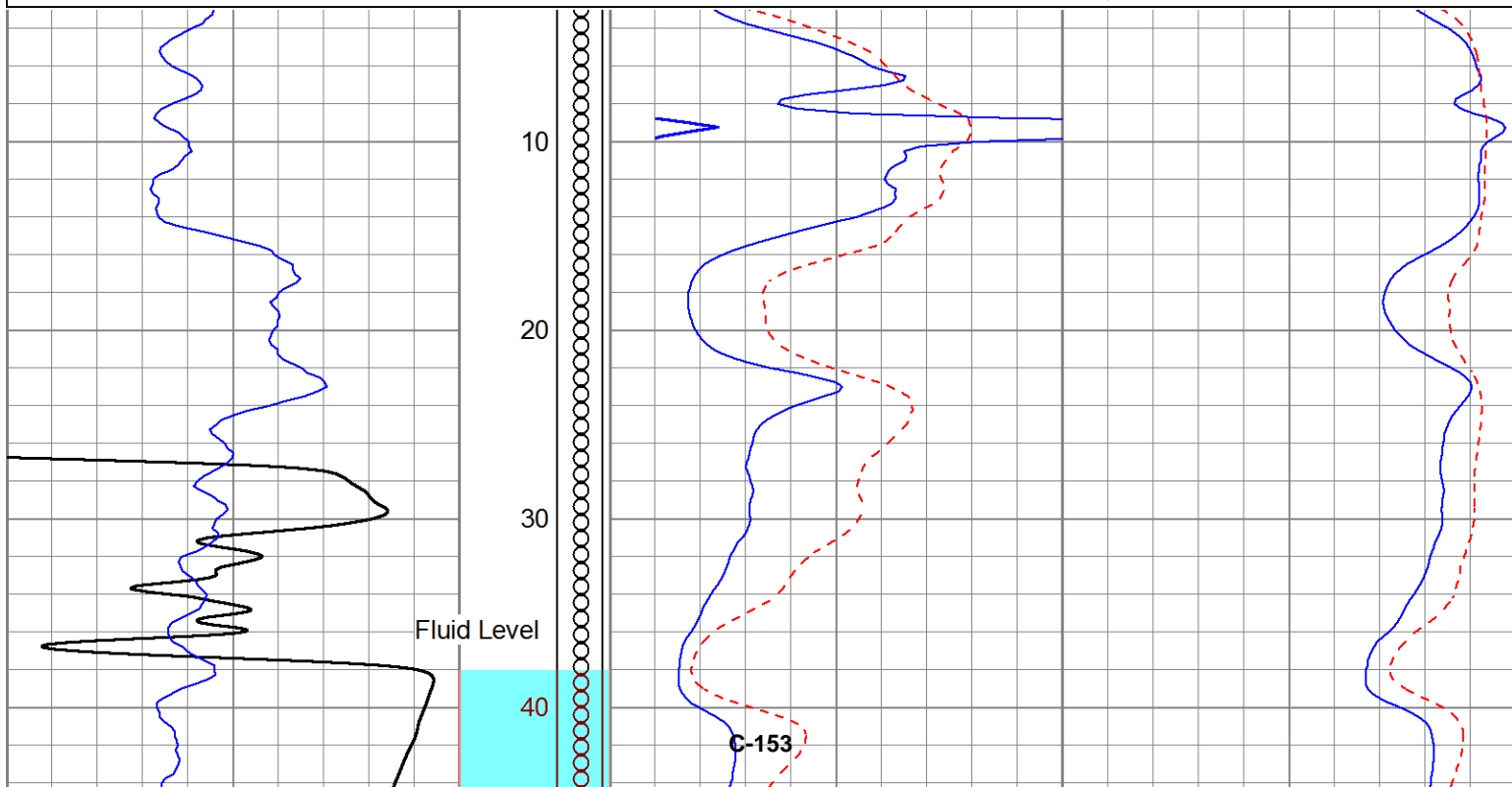
Calibrator Value: 162.0 GAPI

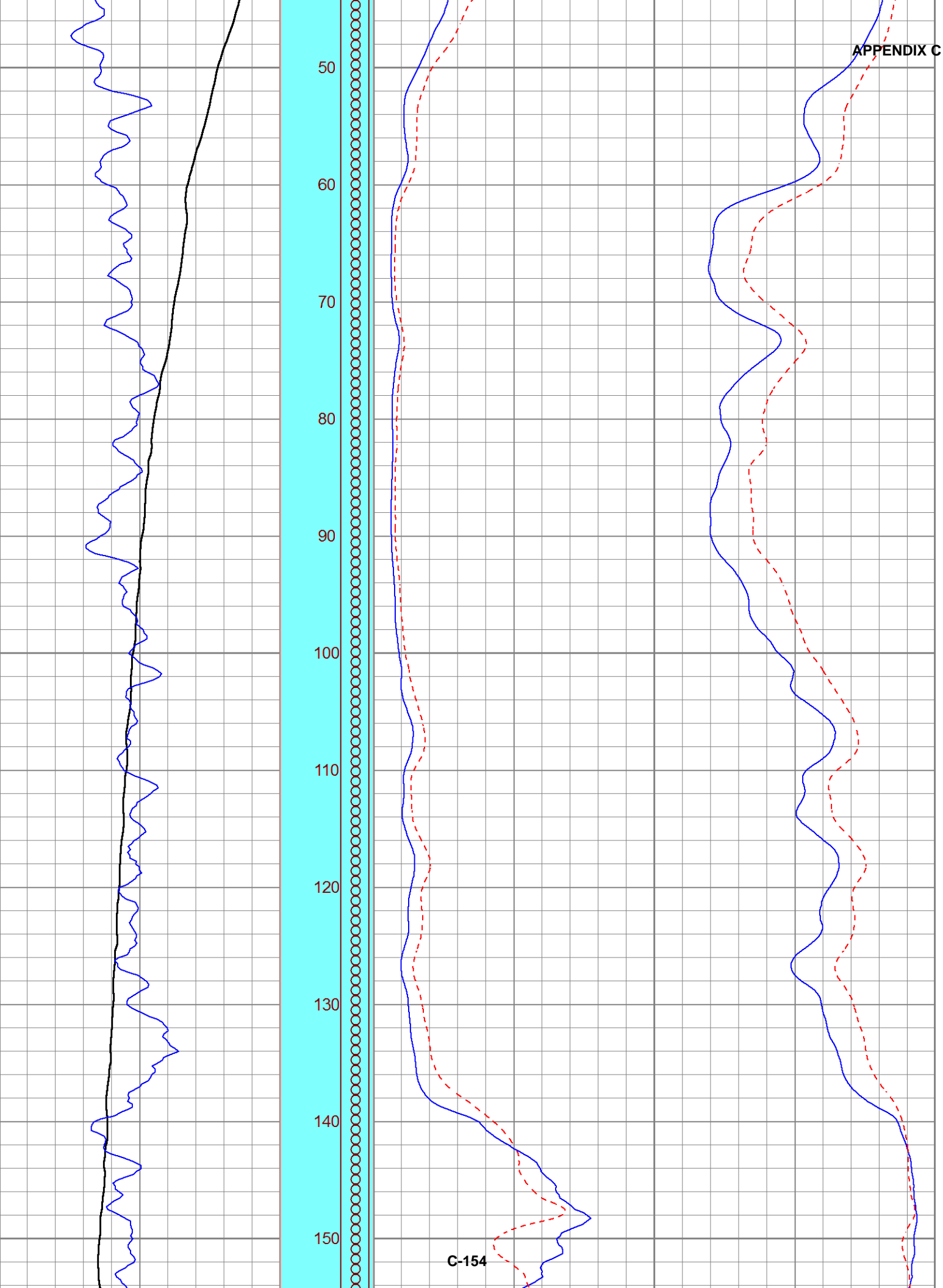
Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

Sensitivity: 1.2020 GAPI/cps

Database File 19184.db
 Dataset Pathname DIL2
 Presentation Format dil
 Dataset Creation Tue Feb 24 14:05:16 2015
 Charted by Depth in Feet scaled 1:120

-30	SP (mV)	120	0	RILM (Ohm-m)	100	200	CILM (mmho/m)	0
20	Gamma-Ray (GAPI)	120	0	RILD (Ohm-m)	100	200	CILD (mmho/m)	0
			100	RILM backup (Ohm-m)	1000		CILD backup	
			100	RILD backup (Ohm-m)	1000	2000	(mmho/m)	200
						2000	CILM backup	
							(mmho/m)	200





C-154

4" PVC Screened Casing →

← Gamma-Ray

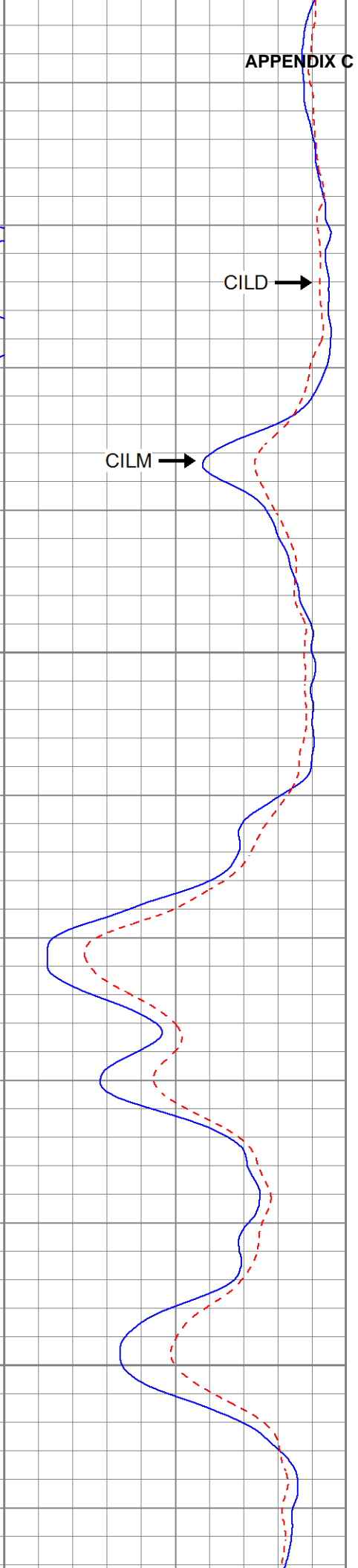
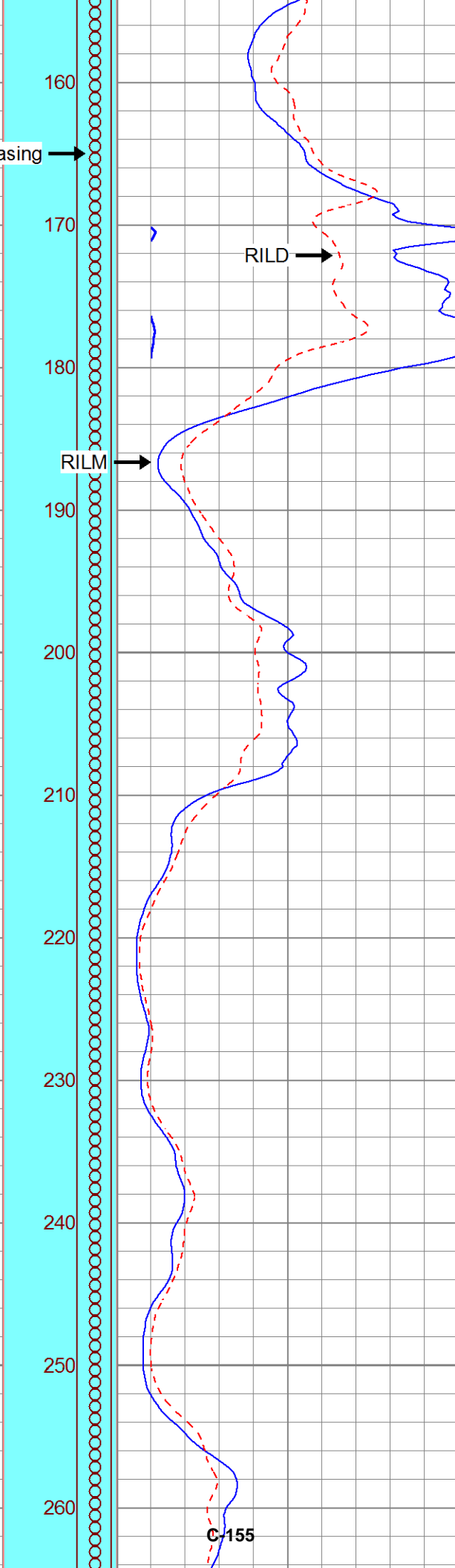
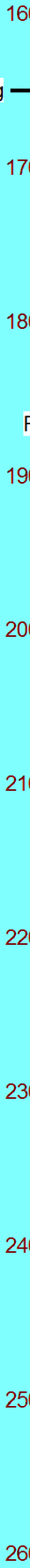
SP →

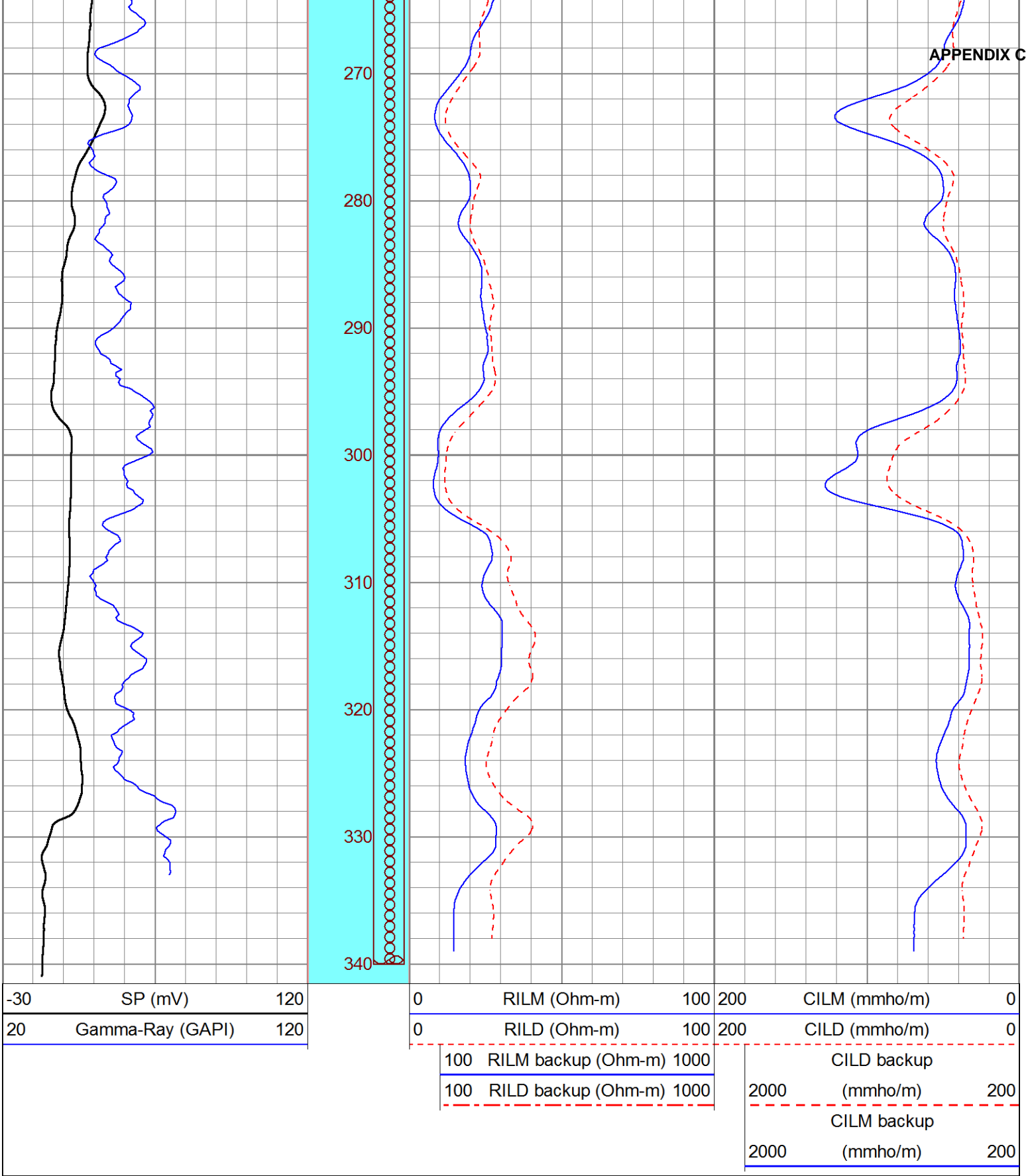
RILM →

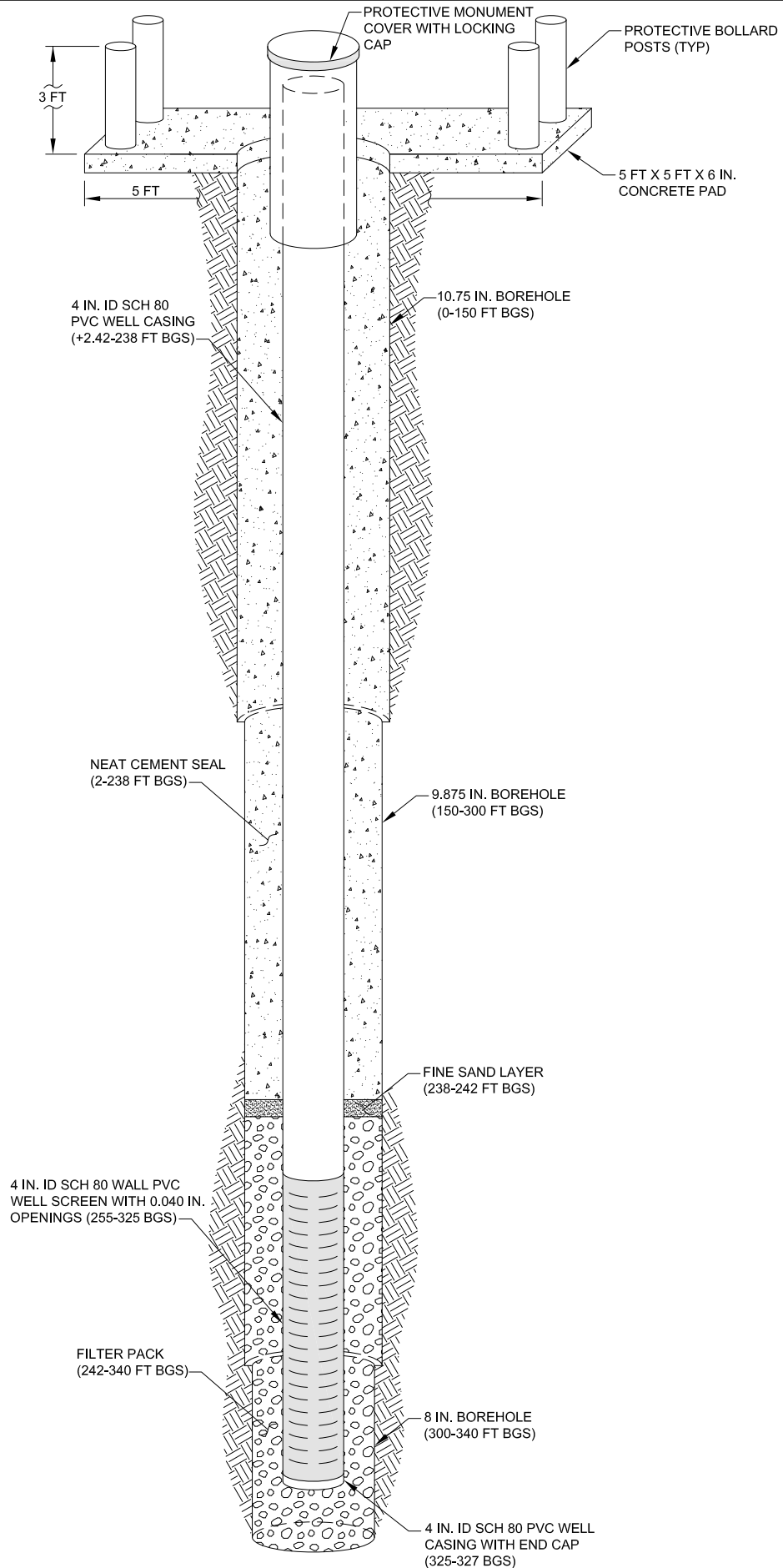
RILD →

CILM →

CILD →

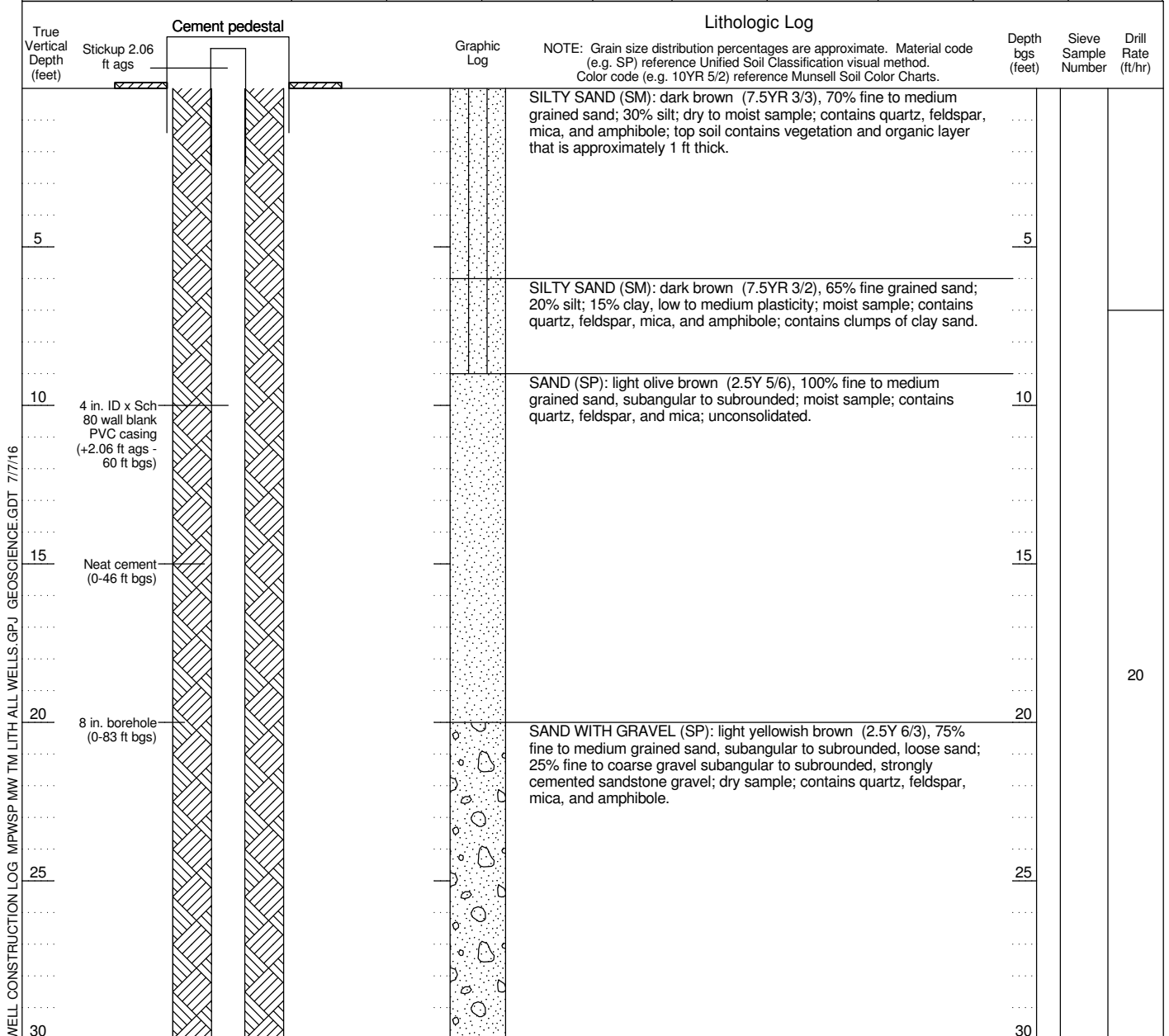






WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-7S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Lapis Rd							
REPORT DATE			LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.06	60	62.06	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	60	80	20	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	80	82.4	2.4	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	48.58 ft NAVD88									
TOC ELEVATION	50.64 ft NAVD88 (RP)									
START DATE	7/22/15									
FINISH DATE	7/23/15									



WELL NUMBER MPWSP MW-7S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Drill Rate (ft/hr)
35			SILTY SAND (SM): brown (10YR 4/3), 85% sand; 15% silt, none to low plasticity; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	35
40			SAND (SP): yellowish brown (10YR 5/4), 100% fine grained sand; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	40
45			NO SAMPLE: No recovery; lost core within borehole.	45
50	CEMEX Monterey Lapis Lustre #60 fine sand seal (46 - 49.5 ft bgs)		SAND (SP): pale brown (10YR 6/3), 90% medium to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	50
55	CEMEX Monterey Lapis Lustre #3 filter pack (49.5 - 83 ft bgs)		SAND (SP): light brownish gray (10YR 6/2), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	55
60			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 3/6), 80% fine to coarse grained sand, subangular to subrounded; 20% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	60
65	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (60 - 80 ft bgs)		SAND (SP): dark yellowish brown (10YR 4/4), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	65
70			SAND (SP): strong brown (7.5YR 4/6), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel rounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	70

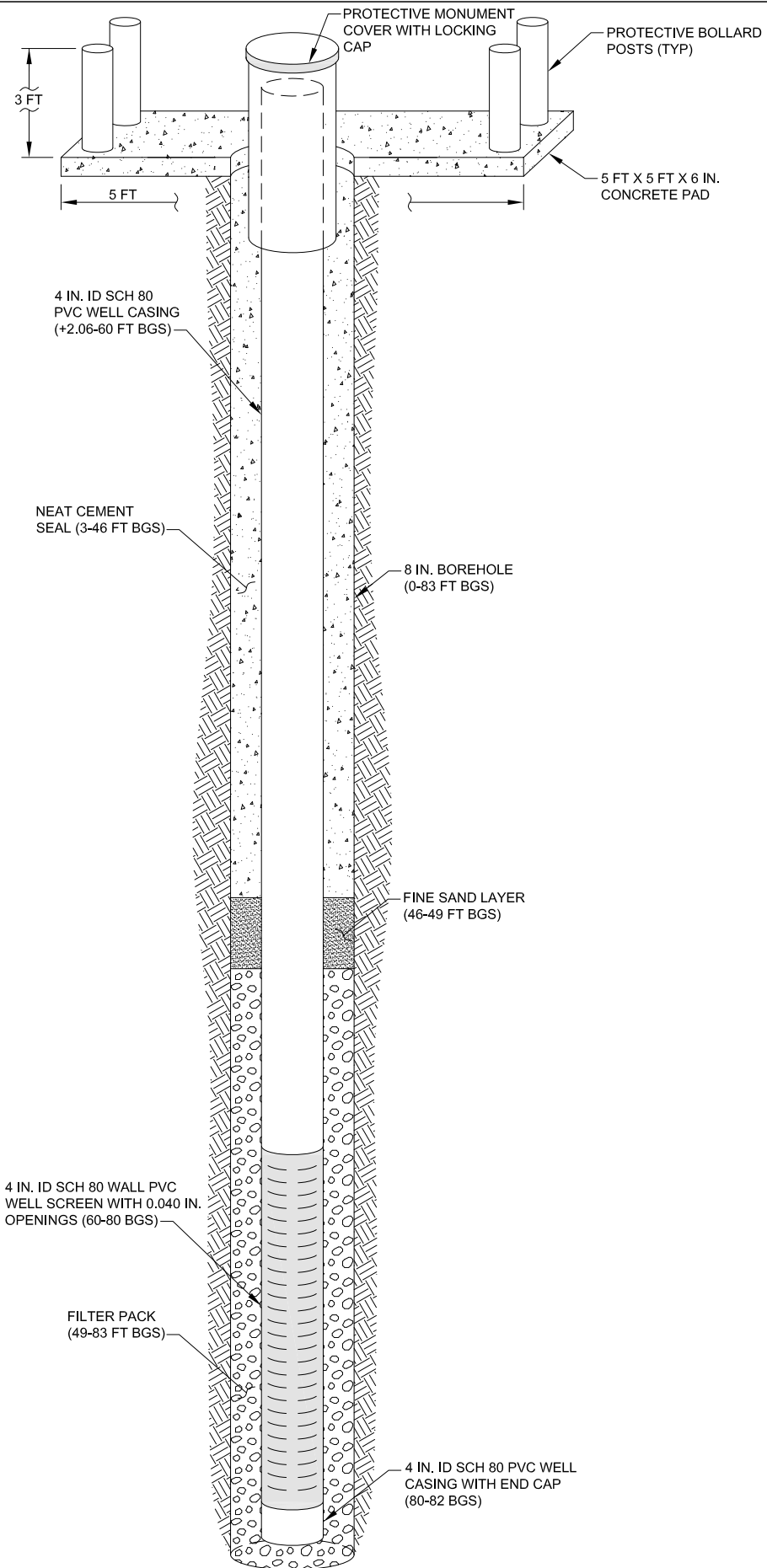
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-7S** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

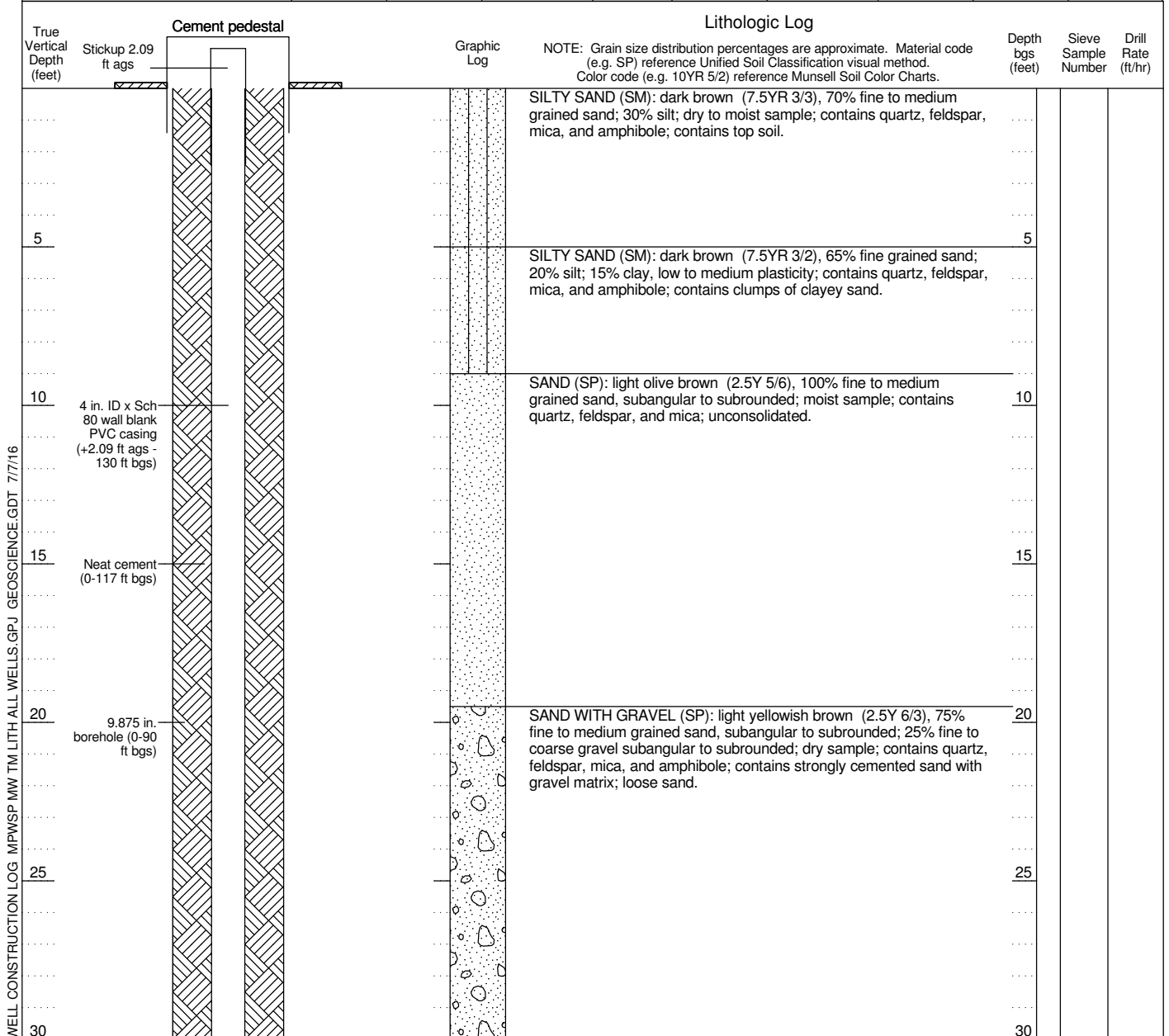
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		75		
80			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 90% sand, very fine to fine grained sand; 10% silt; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		80		20
	Blank casing with end cap (80-82.4 ft bgs)						
	TD 83 ft bgs		SILT WITH SAND (ML): olive brown (2.5Y 4/3), 50% silt; 25% fine grained sand; 25% clay; moist sample; contains quartz, feldspar, mica, and amphibole; medium to high plasticity.				
			Bottom of borehole at 83 feet.				

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-7M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Lapis Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.09	130	132.09	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic	Blank	-2.09	130	132.09	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	130	220	90	PVC	Sch 80	4 / ID	Slotted 0.04	
BOREHOLE DIAMETER	9.875, 8 in	Blank	220	222.375	2.375	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	48.20 ft NAVD88									
TOC ELEVATION	50.29 ft NAVD88 (RP)									
START DATE	7/13/15									
FINISH DATE	7/22/15									



WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lbs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			SILTY SAND (SM): brown (10YR 4/3), 85% sand, very fine to fine grained; 15% silt, none to low plasticity; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
35				35
			SAND (SP): pale brown (10YR 6/3), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
40				40
45				45
50				50
			SAND (SP): pale brown (10YR 6/3), 90% medium to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
			SAND (SP): light brownish gray (10YR 6/2), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
55				55
60				60
			SAND (SP): yellowish brown (10YR 5/4), 100% fine grained sand; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
			SAND (SP): strong brown (7.5YR 4/6), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel rounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
65				65
70				70

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 90% sand, very fine to fine grained; 10% silt; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		75		
80					80		
85					85		
90			SILT WITH SAND (ML): light olive brown (2.5Y 5/3), 80% silt; 20% sand, very fine to fine grained; low to medium plasticity; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		90		
95	8 in. borehole (90-223 ft bgs)		CLAY (CL): greenish black (10GY 2.5/1), 100% clay, high plasticity; moist sample.		95		
100			SAND (SP): dark yellowish brown (10YR 4/4), 100% medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		100		
105					105		
110			CLAY (CL): greenish black (10GY 2.5/1), 100% clay, high plasticity; moist sample.		110		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
115			SAND (SP): dark yellowish brown (10YR 3/6), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
120	CEMEX Monterey Lapis Lustre #60 fine sand seal (117 - 120 ft bgs)		SILTY SAND (SM): brown (10YR 5/3), 85% fine to medium grained sand, subangular to subrounded; 15% silt, none to low plasticity; moist to wet sample; contains quartz, feldspar, and mica; unconsolidated.	
125	CEMEX Monterey Lapis Lustre #3 filter pack (120 - 223.375 ft bgs)			5
130			SAND (SP): brown (10YR 5/3), 100% sand, very fine to fine grained; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
135	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (130 - 220 ft bgs)			
140				
145				
150			CLAY (CL): greenish gray (10GY 6/1), 100% clay, high plasticity; moist sample.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16


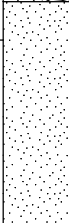
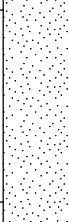
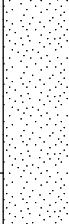

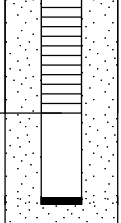
WELL NUMBER MPWSP MW-7M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			SILT (ML): dark greenish gray (10Y 4/1), 90% silt; 10% sand, very fine to fine grained; low plasticity; moist sample.	
			CLAY (CL): dark greenish gray (10Y 4/1), 85% clay, low plasticity; 10% sand, very fine grained; 5% silt; moist sample.	
155			SILTY SAND (SM): dark greenish gray (10Y 4/1), 75% sand, very fine grained; 20% silt; 5% clay; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	155
160			SAND WITH CLAY (SP-SC): dark greenish gray (10Y 4/1), 90% fine to coarse grained sand, subangular to subrounded; 10% clay; wet sample; contains quartz, feldspar, mica, and amphibole; contains clumps of clay.	160
165			CLAYEY SAND WITH GRAVEL (SC): grayish brown (2.5Y 5/2), 65% sand, subangular to subrounded; 20% clay, low plasticity; 15% gravel subangular to subrounded; trace cobbles; moist sample; contains quartz, feldspar, mica, and amphibole.	165
170			SAND (SP): dark yellowish brown (10YR 4/6), 100% fine grained sand; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	170
175				175
180				180
185				185
190			GRAVEL WITH SAND (GP): dark brown (7.5YR 3/2), 60% fine to coarse gravel rounded; 35% fine to coarse grained sand, subangular to subrounded; 5% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; contains trace round cobbles; unconsolidated.	190

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER
MPWSP MW-7M

BOREHOLE LITHOLOGIC LOG (continued)

CLIENT PROJECT NUMBER Cal Am 14077-15 LOCATION Marina, CA

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log			
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
195			SAND (SP): dark brown (10YR 3/3), 100% sand, very fine to fine grained; wet sample; unconsolidated.	195		
200				200		
205				205		
210				210		
215				215		
220	Blank casing with end cap (220-222.38 ft bgs)			220		
	TD 223.375 ft bgs					
			Bottom of borehole at 223.375 feet.			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19868	Company CASCADE DRILLING	Well MW-7M	State CA
File No.	County MONTEREY	Field MARINA	Other Services: DUAL INDUCTION GAMMA-RAY

Location
LAPIS RD. NEAR SOUTHERN INT. WITH DEL MONTE BLVD.
GPS: N 36o 42' 23" W 121o 47' 20"
Other Services:
DUAL INDUCTION
GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date			Elevation K.B. D.F. G.L.
Run Number	ONE		
Depth Driller	87'		
Depth Logger	86'		
Bottom Logged Interval	86'		
Top Log Interval	0'		
Open Hole Size	8" (0'-87')		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	45'		
Bentonite Seal	N/A		
Time Well Ready	1330		
Time Logger on Bottom	1345		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		
Borehole Record			
Run Number	ONE		
Bit	8"	From	To
		0'	87'
Tubing Record			
Run Number	ONE		
Bit	8"	From	To
		0'	87'
Size	4" PVC	Wgt/Ft	SCH 80
Top		Bottom	
0'		87'	

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19868.db
 Dataset Pathname tmpFR
 Dataset Creation Mon Jul 13 13:54:24 2015

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:18 2015

	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

FRT Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:15 2015

Resistivity Calibration:

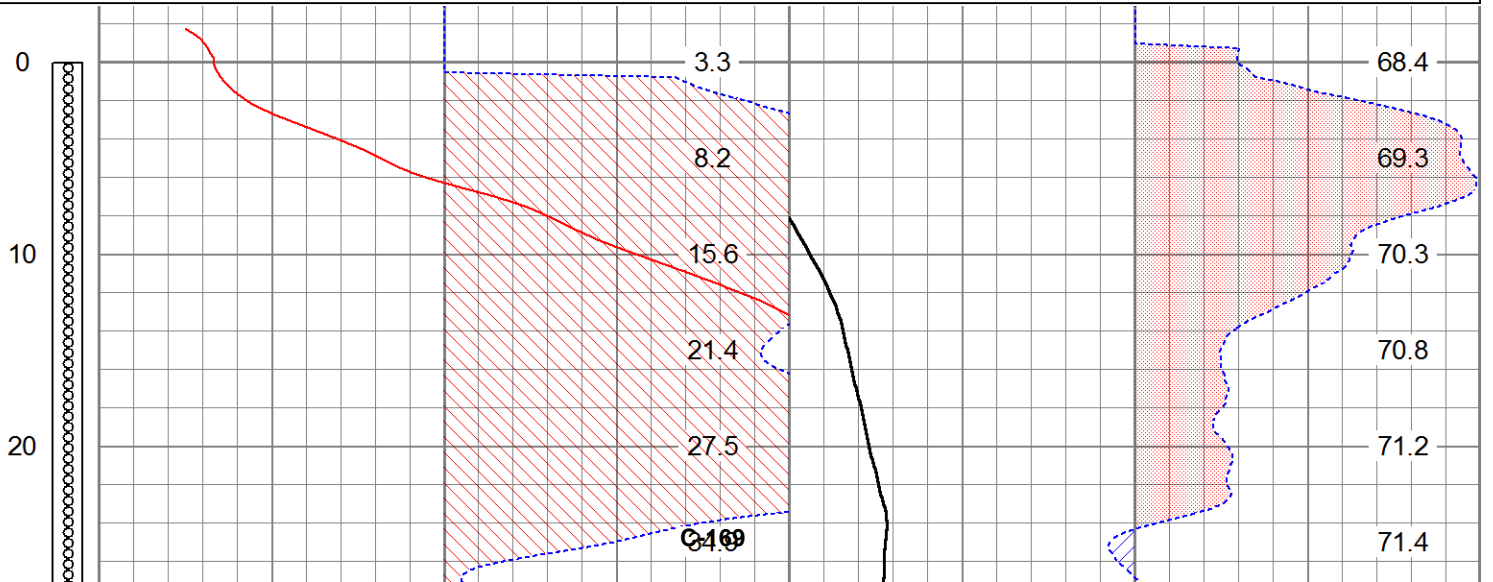
System Reading	Calibration Reference
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11466.000 cps	86.960 Ohm-m
Gain: -0.004	
Offset: 135.338	

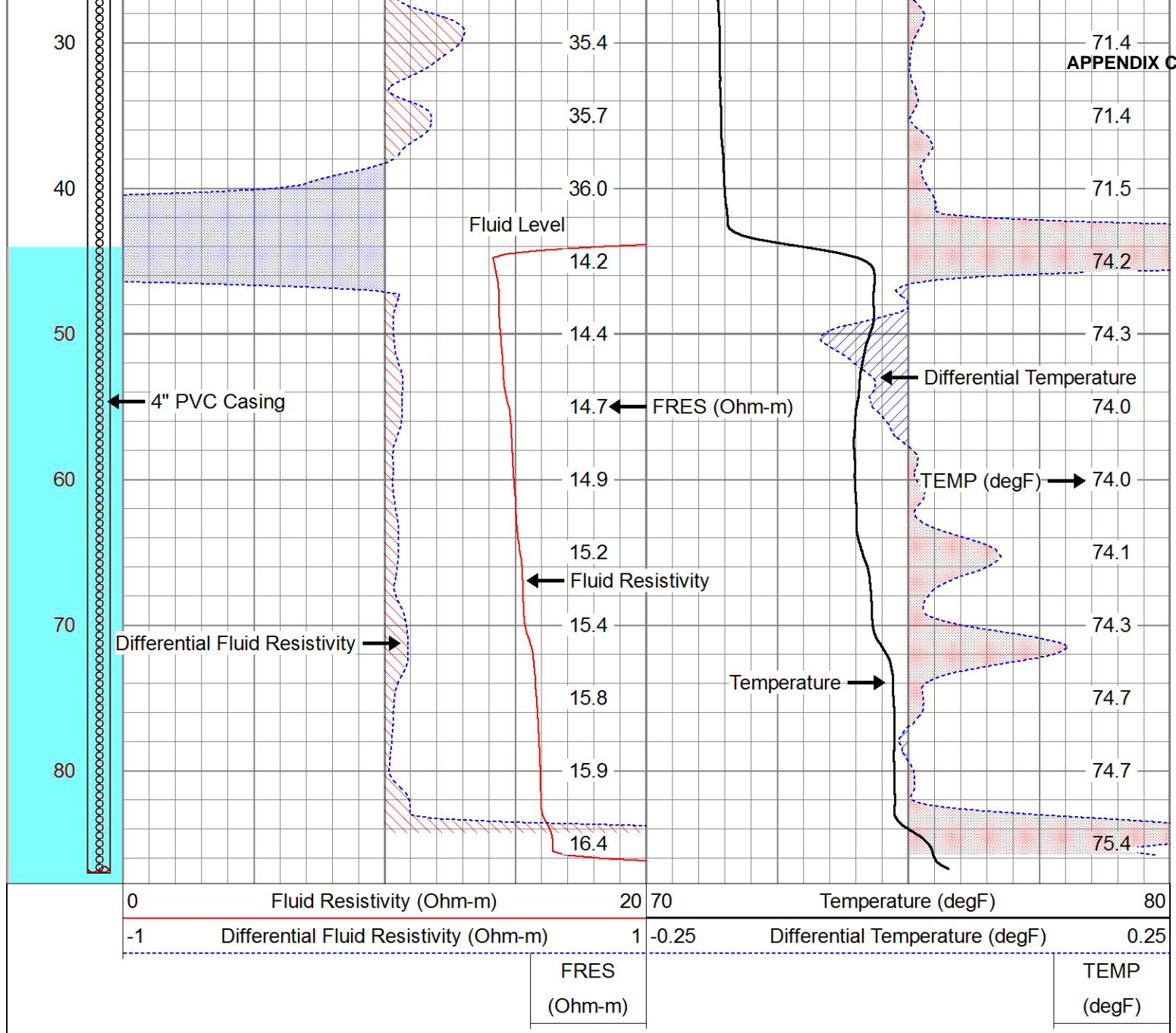
Conductivity Calibration:

System Reading	Calibration Reference
0.000 cps	0.000
1.000 cps	1.000
Gain: 1.000	
Offset: 0.000	

Database File 19868.db
 Dataset Pathname tmpFR
 Presentation Format frttemp2
 Dataset Creation Mon Jul 13 13:54:24 2015
 Charted by Depth in Feet scaled 1:120

0	Fluid Resistivity (Ohm-m)	20	70	Temperature (degF)	80
-1	Differential Fluid Resistivity (Ohm-m)	1	-0.25	Differential Temperature (degF)	0.25
	FRES			TEMP	
	(Ohm-m)			(degF)	





PACIFIC SURVEYS

**DUAL INDUCTION
GAMMA-RAY**

Job No. 19868	Company CASCADE DRILLING	Well MW-7M
File No.	Field MARINA	County MONTEREY
	State CA	Other Services:

Location
LAPIS RD. NEAR SOUTHERN INT. WITH DEL MONTE BLVD.
GPS: N 36o 42' 23" W 121o 47' 20"

TEMPERATURE
FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	07-13-2015		
Run Number	ONE		
Depth Driller	87'		
Depth Logger	86'		
Bottom Logged Interval	86'		
Top Log Interval	0'		
Open Hole Size	8" (0'-87")		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	45'		
Bentonite Seal	N/A		
Time Well Ready	1330		
Time Logger on Bottom	1345		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	8"	0'	87'
Casing Record	Size	Wgt/Ft	Top
Surface String			Bottom
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			87'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 19868.db
 Dataset Pathname dil2
 Dataset Creation Mon Jul 13 15:22:33 2015

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1408.289	3426.231	cps	0.000	612.000	mmho/m	0.303	-427.105
Medium	2130.555	14599.017	cps	0.000	1960.000	mmho/m	0.157	-334.916

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Jan 10 13:10:57 2015

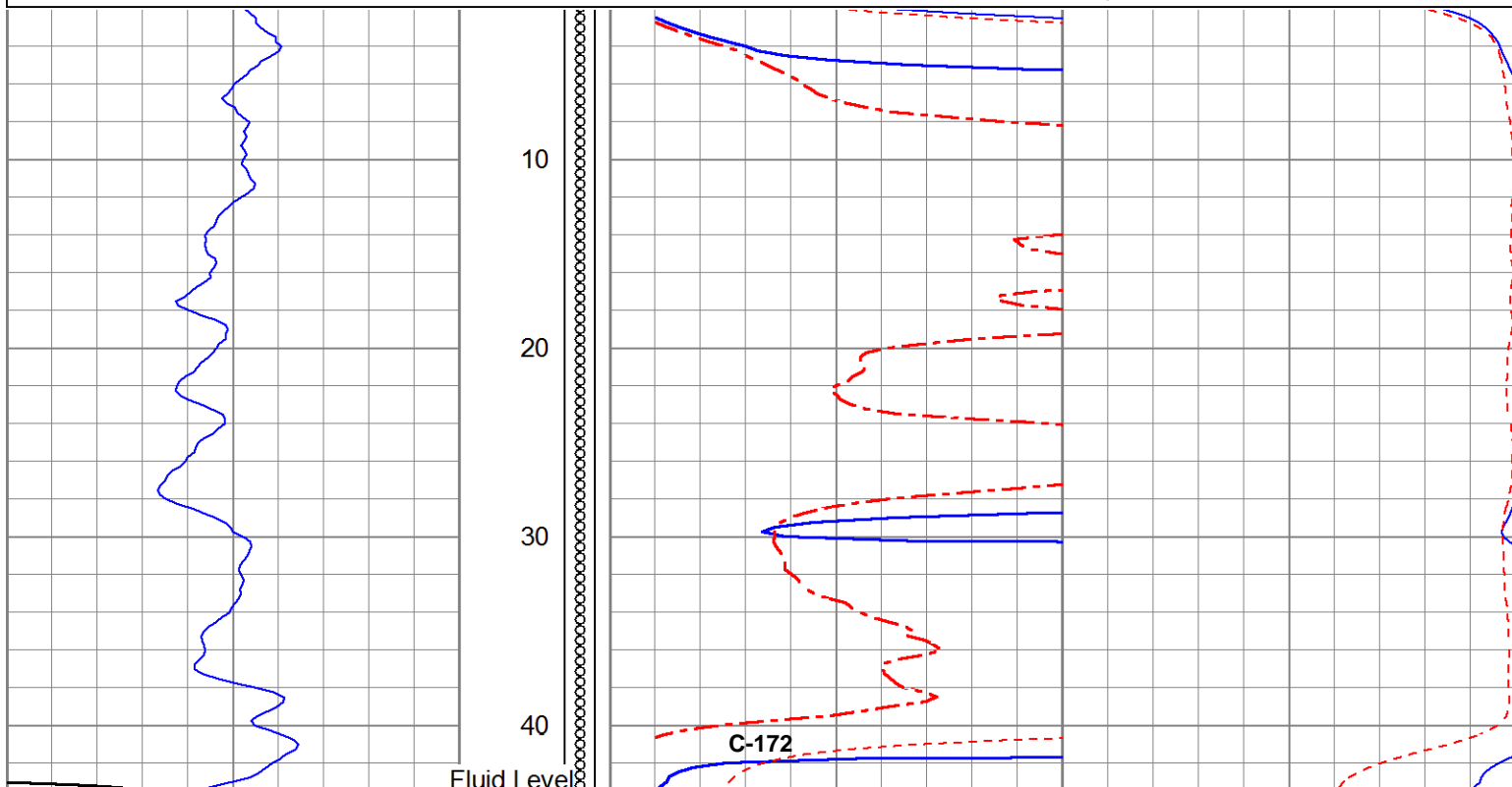
Calibrator Value: 162.0 GAPI

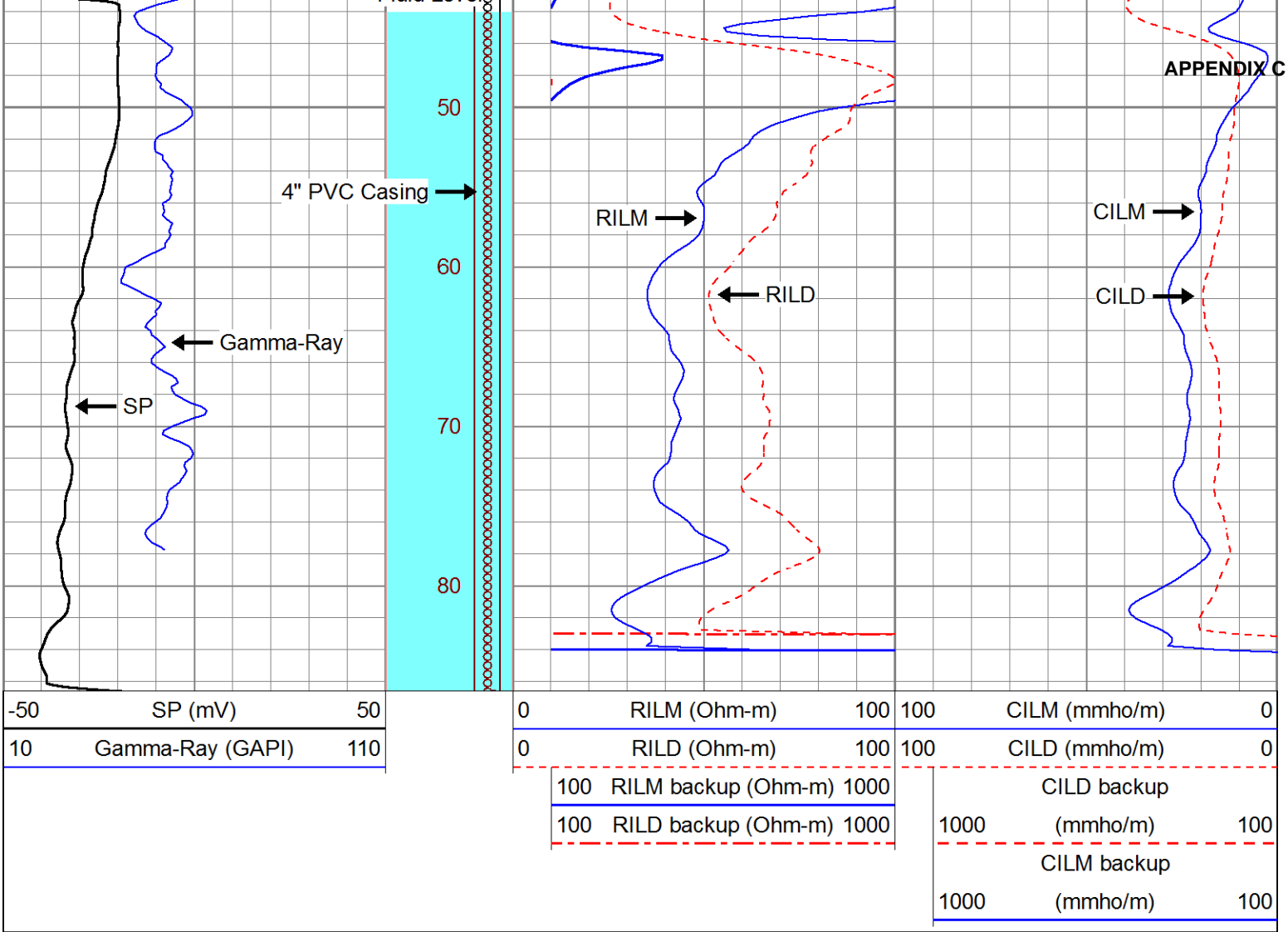
Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

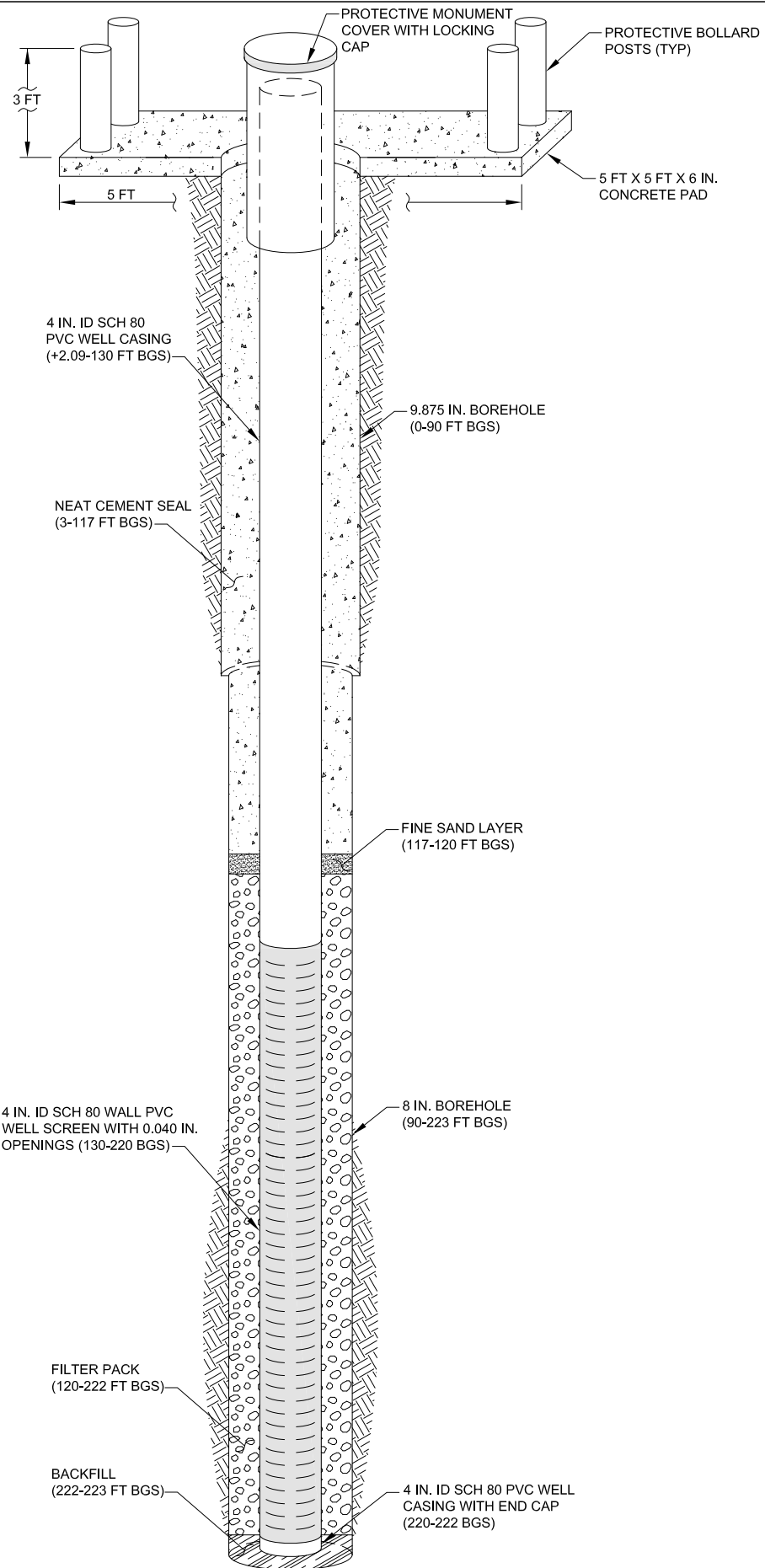
Sensitivity: 1.2020 GAPI/cps

Database File 19868.db
 Dataset Pathname dil2
 Presentation Format dil
 Dataset Creation Mon Jul 13 15:22:33 2015
 Charted by Depth in Feet scaled 1:120

-50	SP (mV)	50	0	RILM (Ohm-m)	100	100	CILM (mmho/m)	0
10	Gamma-Ray (GAPI)	110	0	RILD (Ohm-m)	100	100	CILD (mmho/m)	0
			100	RILM backup (Ohm-m)	1000		CILD backup	
			100	RILD backup (Ohm-m)	1000	1000	(mmho/m)	100
							CILM backup	
						1000	(mmho/m)	100

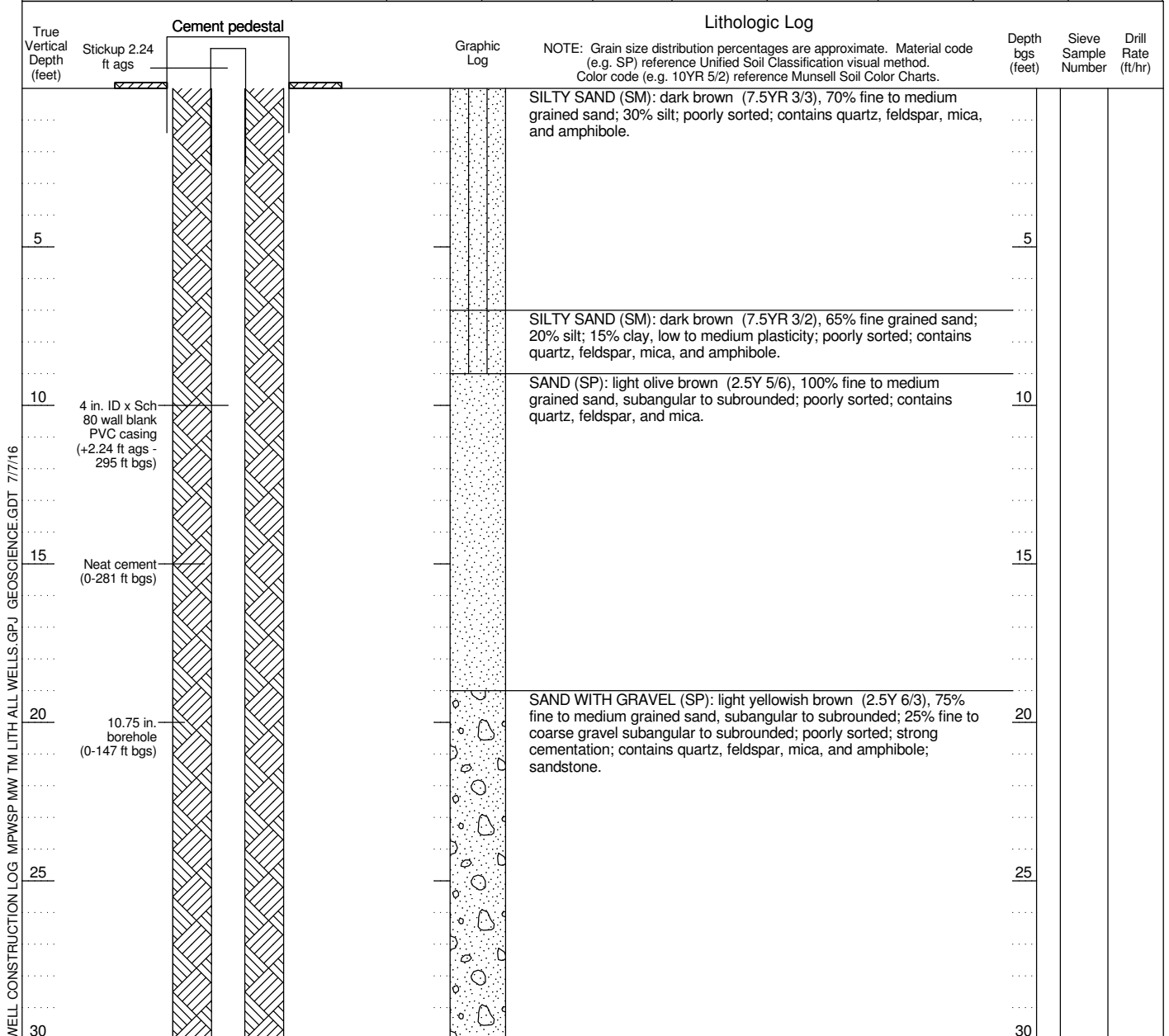






WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER		Cal Am 14077-15			LOCATION Marina, CA Lapis Rd					
REPORT DATE		Cascade Drilling D. King			LOGGED BY A. Khalighi					
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.24	295	297.24	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	295	345	50	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	345	347.77	2.77	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	48.05 ft NAVD88									
TOC ELEVATION	50.24 ft NAVD88 (RP)									
START DATE	6/27/15									
FINISH DATE	7/13/15									







WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lbs (feet)	Sieve Sample Number
35			SILTY SAND (SM): brown (10YR 4/3), 85% fine grained sand; 15% silt, no to low plasticity; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
40			SAND (SP): yellowish brown (10YR 5/4), 100% fine grained sand; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
45			SAND (SP): pale brown (10YR 6/3), 100% fine to coarse grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
50			SAND (SP): pale brown (10YR 6/3), 90% medium to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
55			SAND (SP): light brownish gray (10YR 6/2), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
			SAND (SP): dark yellowish brown (10YR 3/6), 100% fine to coarse grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
60			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
			SAND (SP): yellowish brown (10YR 5/4), 100% fine grained sand; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
65			SAND (SP): strong brown (7.5YR 4/6), 95% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
70				

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lbs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.		75	2	
80			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 90% fine grained sand; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.		80		
85			ELASTIC SILT WITH SAND (MH): olive brown (2.5Y 4/3), 50% silt, medium to high plasticity; 25% fine grained sand; 25% clay; contains quartz, feldspar, mica, and amphibole.		85		
90			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.		90		
95			SILT WITH SAND (ML): light olive brown (2.5Y 5/3), 80% silt, low to medium plasticity; 20% fine grained sand; contains quartz, feldspar, mica, and amphibole.		90		
			SAND (SP): dark yellowish brown (10YR 4/6), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, and mica.		95	3	
			CLAY (CL): greenish black (10GY 2.5/1), 100% clay, high plasticity.		95		
100			SAND (SP): dark yellowish brown (10YR 4/4), 100% medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.		100		
105			NO SAMPLE.		105		10
110			SAND (SP): dark yellowish brown (10YR 4/4), 100% medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.				
			FAT CLAY (CH): black (N2.5), 100% clay, high plasticity.		110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115							
				SAND WITH SILT (SP-SM): yellowish brown (10YR 5/4), 90% fine to medium grained sand, subangular to subrounded; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	115		
				SAND (SP): dark yellowish brown (10YR 3/6), 100% fine to coarse grained sand, subangular to subrounded; trace fine gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.			
				SAND (SP): brown (10YR 5/3), 90% fine to coarse grained sand, subangular to rounded; 5% fine to coarse gravel subangular to rounded; poorly sorted; contains quartz, feldspar, mica, and amphibole; 5% cobbles.		X	4
120				SILTY SAND (SM): yellowish brown (10YR 5/4), 70% fine grained sand; 30% silt, no to low plasticity; poorly sorted; contains quartz, feldspar, and mica.	120		
				SILTY SAND (SM): brown (10YR 5/3), 85% fine to medium grained sand, subangular to subrounded; 15% silt, no to low plasticity; poorly sorted; contains quartz, feldspar, and mica.			
125					125		
				SAND (SP): brown (10YR 5/3), 100% fine grained sand; poorly sorted; contains quartz, feldspar, mica, and amphibole.			
130					130		
						X	5
135					135		
				SAND (SP): brown (10YR 4/3), 100% fine grained sand; poorly sorted.			
				SAND (SP): brownish yellow (10YR 6/8), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, and mica.			
145					145		
						X	6
				FAT CLAY (CH): greenish gray (10GY 6/1), 100% clay, high plasticity.			
150					150		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

9.875 in.
borehole
(147-297 ft
bgs)

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			SILT (ML): greenish gray (10Y 6/1), 90% silt, low plasticity; 10% fine grained sand.	
			CLAY (CL): greenish gray (10GY 6/1), 85% clay, low plasticity; 10% fine grained sand; 5% silt.	
155			SILTY SAND (SM): dark greenish gray (10GY 4/1), 75% fine grained sand; 20% silt; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.	155
			SILTY SAND (SM): dark greenish gray (10GY 4/1), 70% fine to coarse grained sand, subangular to subrounded; 20% silt; 5% fine to coarse gravel subangular to subrounded; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
160			SAND (SP): dark greenish gray (10GY 4/1), 90% fine to coarse grained sand, subangular to rounded; 5% fine gravel subangular to rounded; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.	160
			CLAYEY SAND (SC): light yellowish brown (2.5Y 6/3), 75% fine to coarse grained sand, subangular to subrounded; 20% clay, high plasticity; 5% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
165			CLAYEY SAND WITH GRAVEL (SC): grayish brown (2.5Y 5/2), 65% fine to coarse grained sand, subangular to subrounded; 20% clay, low plasticity; 15% fine to coarse gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	165
			SAND (SP): dark yellowish brown (10YR 3/4), 100% fine grained sand; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
170				170
			SANDY CLAY (CL): greenish gray (10GY 6/1), 60% clay, high plasticity; 40% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
175			SAND (SP): dark yellowish brown (10YR 4/6), 100% fine to coarse grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	175
180				180
185			SAND (SP): light yellowish brown (2.5Y 6/4) and strong brown (7.5YR 4/6), 100% medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	185
190			GRAVEL WITH SAND (GP): dark brown (7.5YR 3/2), 60% fine to coarse gravel subangular to rounded; 40% fine to coarse grained sand, subangular to rounded; trace cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole; trace cobbles.	190

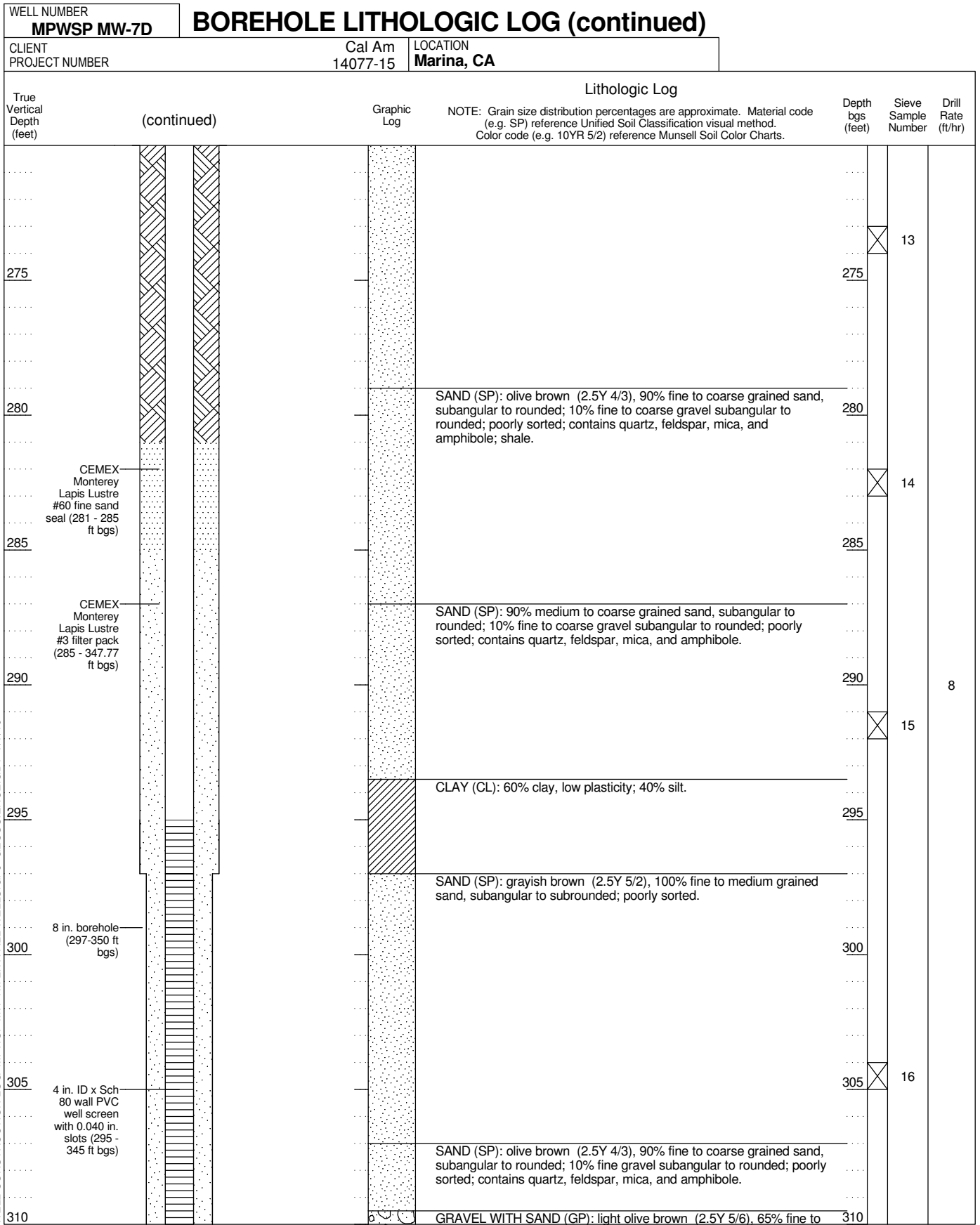
WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
				9
195			SAND WITH GRAVEL (SP): brown (10YR 5/3), 75% fine to coarse grained sand, subangular to rounded; 20% fine to coarse gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole; 5% cobbles. SAND (SP): dark brown (10YR 3/3), 100% fine grained sand; trace cobbles; trace fine to coarse gravel; trace silt; poorly sorted; contains quartz, feldspar, mica, and amphibole; sandstone.	195
200				200
205				10
210				210
215				215
220				11
225			FAT CLAY (CH): dark greenish gray (10Y 4/1), 100% clay, high plasticity.	225
			CLAYEY SAND (SC): brown (10YR 4/3), 70% fine grained sand; 20% clay, low plasticity; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
230				230

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
235			SAND WITH CLAY (SP-SC): olive brown (2.5Y 4/4), 90% fine grained sand; 5% silt; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.	235			
240			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/4), 80% fine to coarse grained sand, subangular to rounded; 10% silt; 5% fine to coarse gravel subangular to rounded; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	240			
245			SANDY CLAY WITH GRAVEL (CL): olive brown (2.5Y 4/4), 50% clay, high plasticity; 20% fine to coarse gravel subangular to rounded; 20% fine to coarse grained sand, subangular to rounded; 5% silt; 5% cobbles; contains quartz, feldspar, mica, and amphibole.	245			
250			SAND (SP): olive brown (2.5Y 4/4), 95% fine to medium grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	250			
255			CLAYEY GRAVEL WITH SAND (GC): olive brown (2.5Y 4/4), 50% fine to coarse gravel subangular to rounded; 25% fine to coarse grained sand, subangular to rounded; 10% silt; 10% clay; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	255			
260			SAND WITH CLAY (SP-SC): olive brown (2.5Y 4/4), 90% fine to coarse grained sand, subangular to subrounded; 5% silt; 5% clay; poorly sorted; contains quartz, feldspar, and amphibole.	260			
265			CLAY WITH SAND (CL): olive gray (5Y 4/2), 75% clay, low to medium plasticity; 15% fine to coarse grained sand, subangular to rounded; 5% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole.	265		11	
270			CLAYEY SAND (SC): brown (7.5YR 4/4), 80% fine to coarse grained sand, subangular to subrounded; 10% silt; 10% clay, low plasticity; poorly sorted; contains quartz, feldspar, mica, and amphibole.	270			
			CLAYEY SAND (SC): grayish brown (2.5Y 5/2), 65% fine to medium grained sand, subangular to subrounded; 20% clay, medium to high plasticity; 15% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.				
			SAND (SP): grayish brown (2.5Y 5/2), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.			12	
			FAT CLAY (CH): light yellowish brown (2.5Y 6/3), 70% clay, medium to high plasticity; 30% silt.				
			SAND (SP): dark grayish brown (2.5Y 4/2), 95% fine grained sand; 5% silt; trace fine gravel; trace clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.			8	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Drill Rate (ft/hr)
			coarse gravel subangular to subrounded; 20% fine to coarse grained sand, subangular to subrounded; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
315			SAND WITH CLAY AND GRAVEL (SP-SC): light olive brown (2.5Y 5/3), 65% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; 5% silt; 5% clay; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	315
			SAND WITH GRAVEL (SP): grayish brown (2.5Y 5/2), 75% coarse grained sand, subangular to subrounded; 15% fine to coarse gravel subangular to subrounded; 5% silt; 5% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
320			FAT CLAY WITH GRAVEL (CH): olive gray (5Y 5/2), 55% clay, medium to high plasticity; 15% fine to coarse gravel subangular to subrounded; 10% fine to coarse grained sand, subangular to subrounded; 5% silt; 15% cobbles; contains quartz, feldspar, mica, and amphibole.	320
			FAT CLAY (CH): olive gray (5Y 5/2), 100% clay, high plasticity.	
325			SAND (SP): olive gray (5Y 4/2), 100% fine to medium grained sand, subangular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	325
330				17
335			GRAVEL WITH SAND (GP): olive brown (2.5Y 4/3), 50% fine to coarse gravel subangular to subrounded; 35% fine to coarse grained sand, subangular to subrounded; 5% silt; 10% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole; shale.	335
340			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 50% fine to coarse grained sand, subangular to subrounded; 35% fine to coarse gravel subangular to subrounded; 5% silt; 10% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	340
			GRAVELLY FAT CLAY (CH): olive brown (2.5Y 4/3), 50% clay, high plasticity; 35% fine to coarse gravel subrounded to rounded; 10% fine to coarse grained sand, subrounded to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole.	
345			SAND WITH SILT (SP-SM): olive brown (2.5Y 4/3), 80% fine to coarse grained sand; 10% fine gravel; 10% silt; poorly sorted; contains quartz, feldspar, mica, and amphibole.	345
			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/3), 50% fine to coarse grained sand, subangular to subrounded; 35% fine to coarse gravel subangular to subrounded; 5% silt; 10% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.	
350			GRAVELLY FAT CLAY (CH): light yellowish brown (2.5Y 6/3), 50% clay, high plasticity; 35% fine to coarse gravel subrounded to rounded; 10% fine to coarse grained sand, subrounded to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole.	350
				18
				8
				19
	Blank casing with end cap (345 - 347.77 ft bgs)			
	Backfill with native material (347.77-350 ft bgs)			
	TD 350 ft bgs			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-7D		BOREHOLE LITHOLOGIC LOG (continued)				
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA			
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.			
			SAND WITH GRAVEL (SP): olive brown (2.5Y 4/3), 50% fine to coarse grained sand, subangular to subrounded; 35% fine to coarse gravel subangular to subrounded; 5% silt; 10% cobbles; poorly sorted; contains quartz, feldspar, mica, and amphibole.			
			Bottom of borehole at 350 feet.			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19744
 Company CASCAD DRILLING
 Well MW-7D
 Field MARINA
 County MONTEREY State CA

Location LAPIS RD. NEAR SOUTHERN INT. WITH DEL MONTE BLVD.
 GPS: N 36o 42' 23" W 121o 47' 20"
 Other Services: DUAL INDUCTION GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0' above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	07-07-2015		
Run Number	ONE		
Depth Driller	351'		
Depth Logger	350'		
Bottom Logged Interval	350'		
Top Log Interval	40'		
Open Hole Size	10.75" (0'-97')	9.875" (97'-257')	8" (257'-351')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	45'		
Bentonite Seal	N/A		
Time Well Ready	1230		
Time Logger on Bottom	1245		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	J. SOBOLEW		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	10.75"	0'	97'
TWO	9.875"	97'	257'
THREE	8"	257'	351'
Casing Record	Size	Wgt/Ft	Top
Surface String			Bottom
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			351'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19744.db
 Dataset Pathname tmp
 Dataset Creation Tue Jul 07 12:51:37 2015

Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:18 2015

	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

FRT Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:15 2015

Resistivity Calibration:

System Reading	Calibration Reference
32145.000 cps	1.800 Ohm-m
11466.000 cps	86.960 Ohm-m

Gain: -0.004
 Offset: 135.338

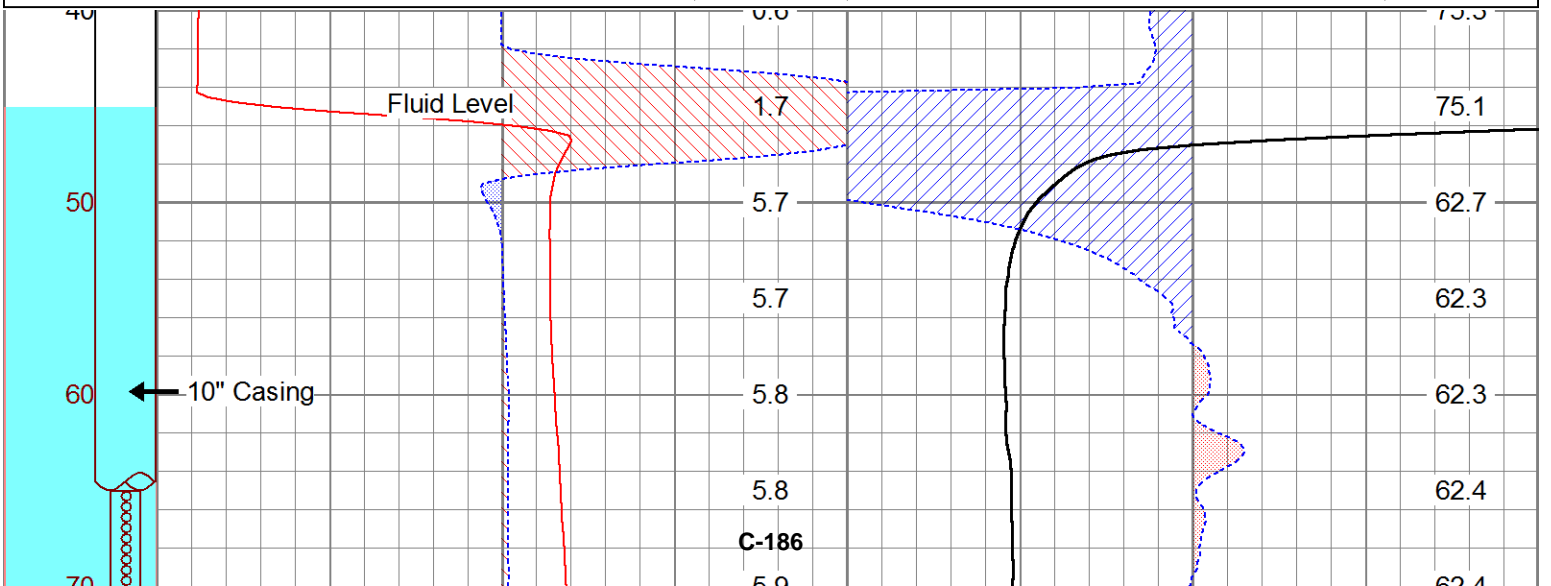
Conductivity Calibration:

System Reading	Calibration Reference
0.000 cps	0.000
1.000 cps	1.000

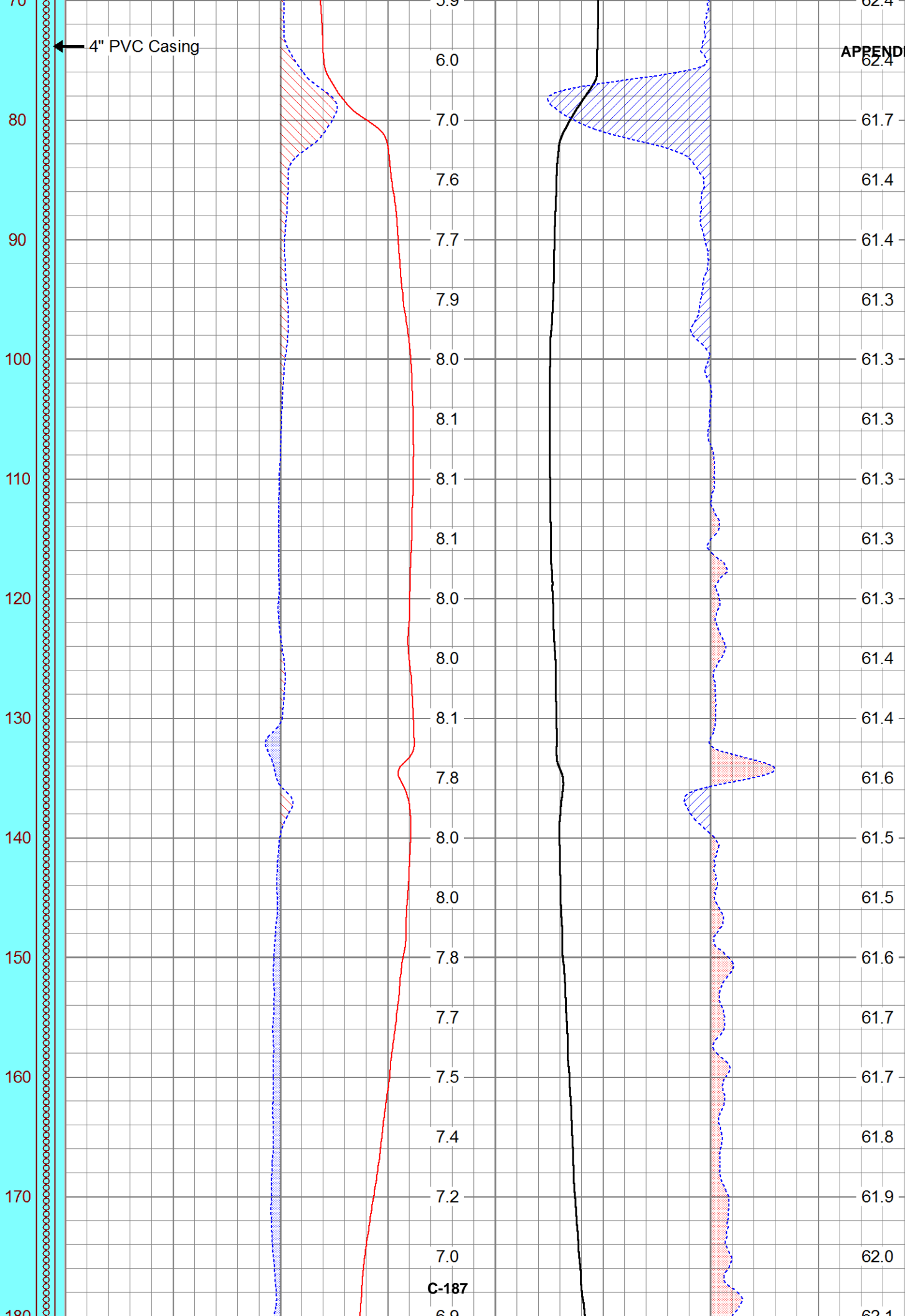
Gain: 1.000
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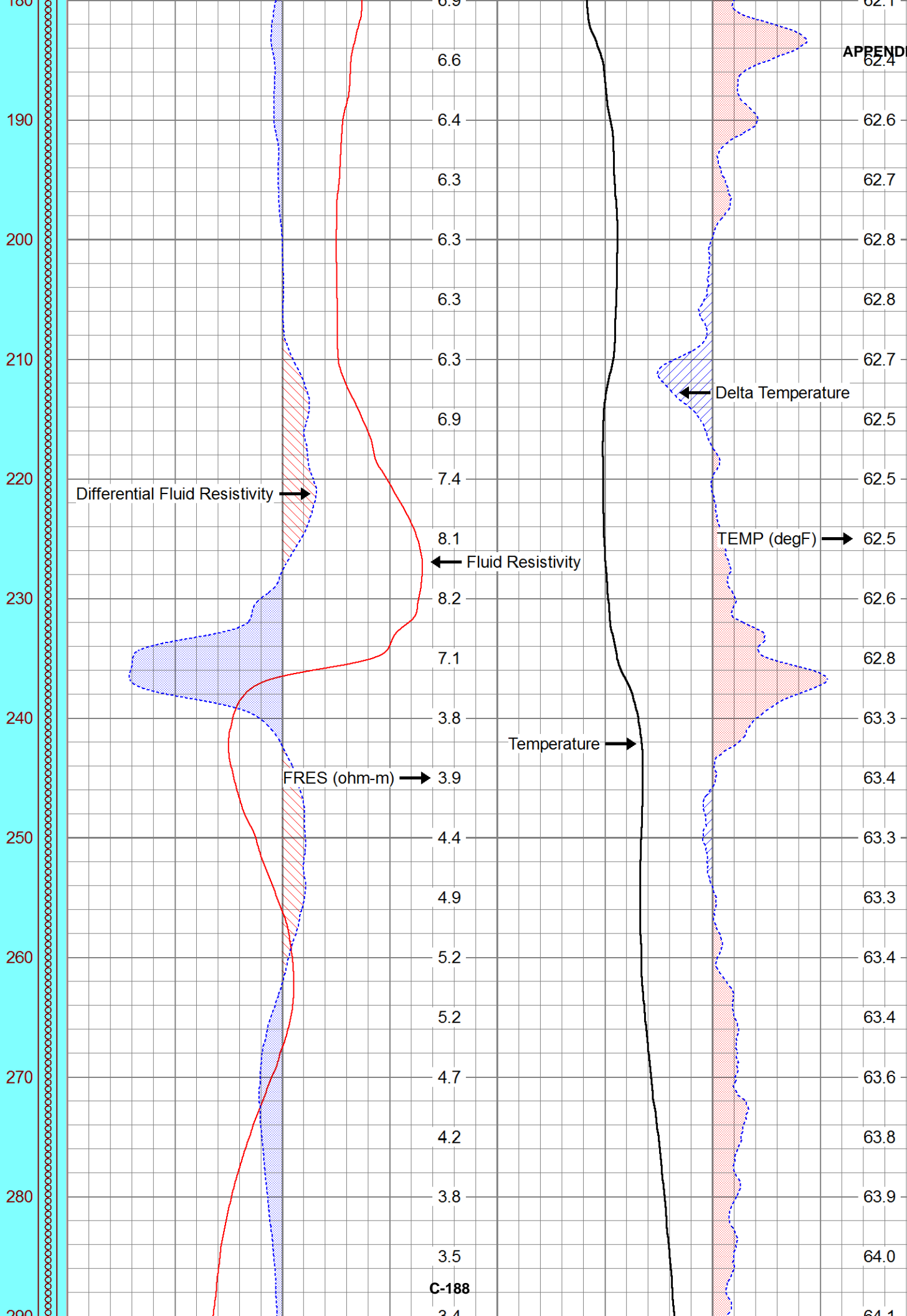
Database File 19744.db
 Dataset Pathname tmp
 Presentation Format frttemp2
 Dataset Creation Tue Jul 07 12:51:37 2015
 Charted by Depth in Feet scaled 1:120

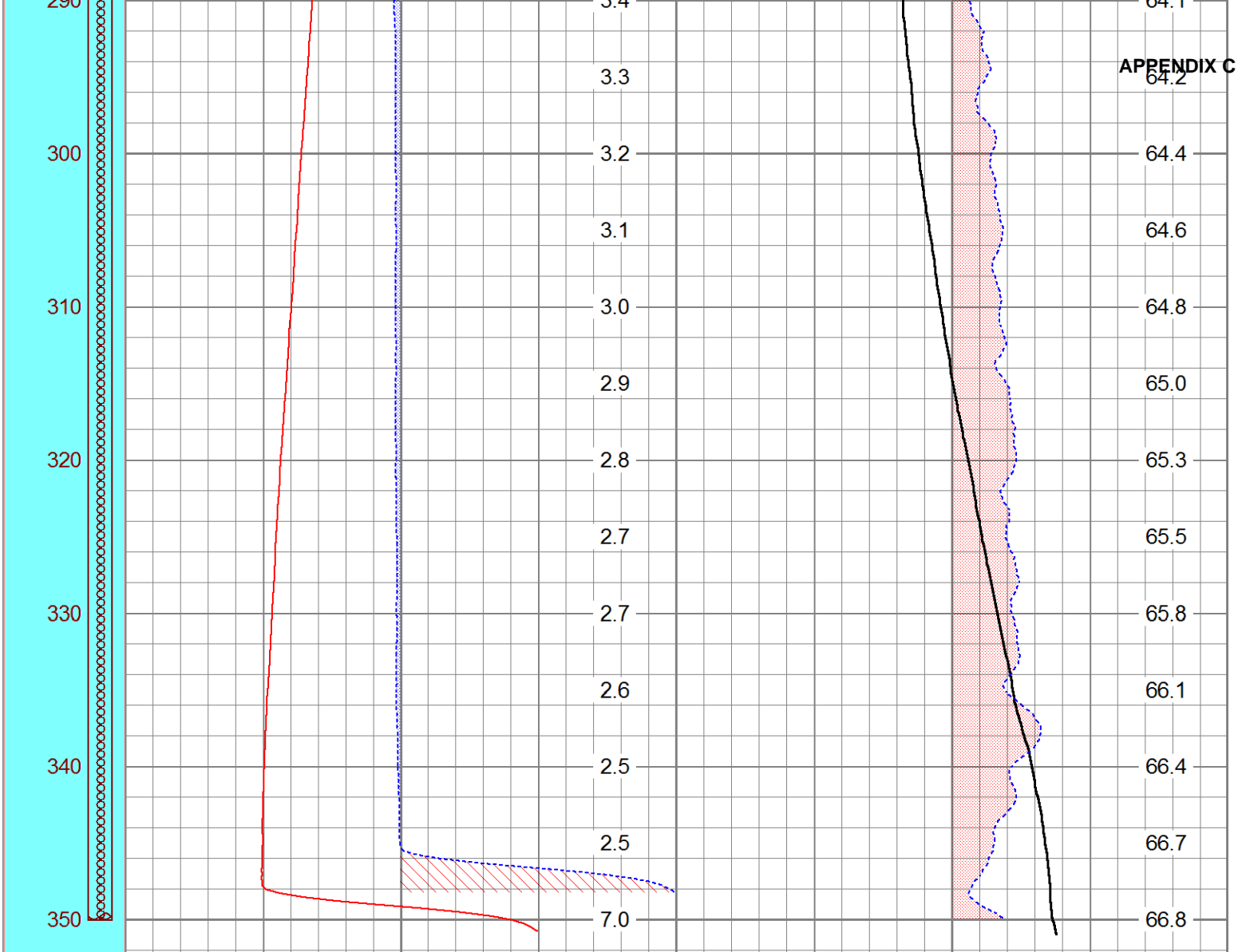
0	Fluid Resistivity (Ohm-m)	10	60	Temperature (degF)	70
-1	Differential Fluid Resistivity (Ohm-m)	1	-0.25	Differential Temperature (degF)	0.25
	FRES			TEMP	
	(Ohm-m)			(degF)	



4" PVC Casing







0	Fluid Resistivity (Ohm-m)	10	60	Temperature (degF)	70
-1	Differential Fluid Resistivity (Ohm-m)	1	-0.25	Differential Temperature (degF)	0.25
FRES (Ohm-m)			TEMP (degF)		

PACIFIC SURVEYS

**DUAL INDUCTION
GAMMA-RAY**

Job No. 19744	Company CASCADe DRILLING	Well MW-7D	Field MARINA	County MONTEREY	State CA
File No.	Other Services:				

Location
LAPIS RD. NEAR SOUTHERN INT. WITH DEL MONTE BLVD.
GPS: N 36o 42' 23" W 121o 47' 20"

TEMPERATURE
FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	07-07-2015		
Run Number	ONE		
Depth Driller	351'		
Depth Logger	350'		
Bottom Logged Interval	350'		
Top Log Interval	40'		
Open Hole Size	10.75" (0'-97")	9.875" (97"-257")	8" (257"-351")
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	45'		
Bentonite Seal	N/A		
Time Well Ready	1230		
Time Logger on Bottom	1245		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	J. SOBOLEW		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10.75"	0'	97'				
TWO	9.875"	97'	257'				
THREE	8"	257'	351'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4" PVC	SCH 80	0'	351'
Liner				

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19744.db
 Dataset Pathname dil
 Dataset Creation Tue Jul 07 13:52:31 2015

Calibration Report

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1432.080	3651.560	cps	0.000	612.000	mmho/m	0.276	-394.883
Medium	2032.000	14281.200	cps	0.000	1960.000	mmho/m	0.160	-325.140

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Jan 10 13:10:57 2015

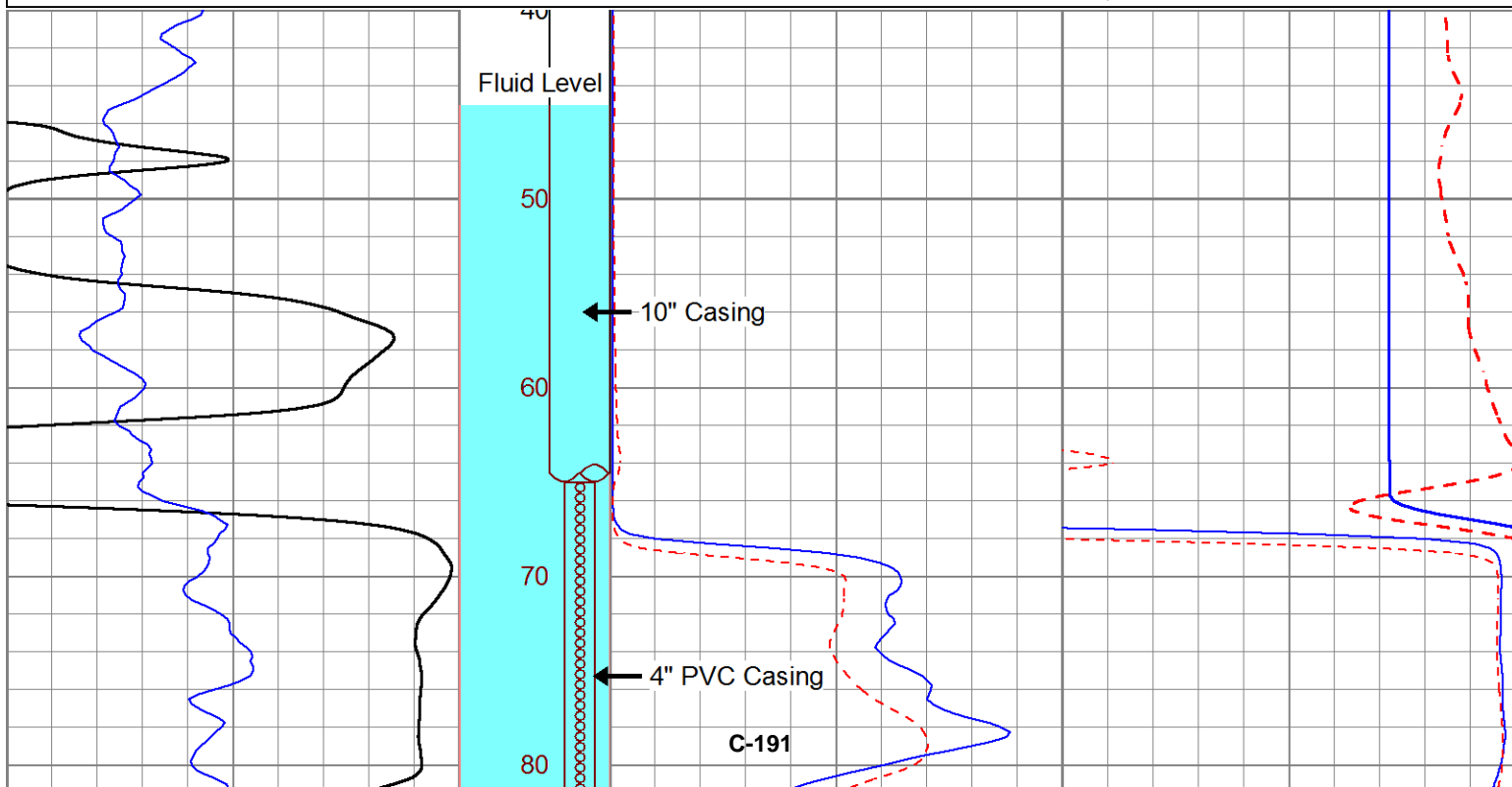
Calibrator Value: 162.0 GAPI

Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

Sensitivity: 1.2020 GAPI/cps

Database File 19744.db
 Dataset Pathname dil
 Presentation Format dil
 Dataset Creation Tue Jul 07 13:52:31 2015
 Charted by Depth in Feet scaled 1:120

-10	SP (mV)	90	0	RILM (Ohm-m)	50	1000	CILM (mmho/m)	0
10	Gamma-Ray (GAPI)	110	0	RILD (Ohm-m)	50	1000	CILD (mmho/m)	0
			50	RILM backup (Ohm-m)	500		CILD backup	
			50	RILD backup (Ohm-m)	500	10000	(mmho/m)	1000
							CILM backup	
						10000	(mmho/m)	1000

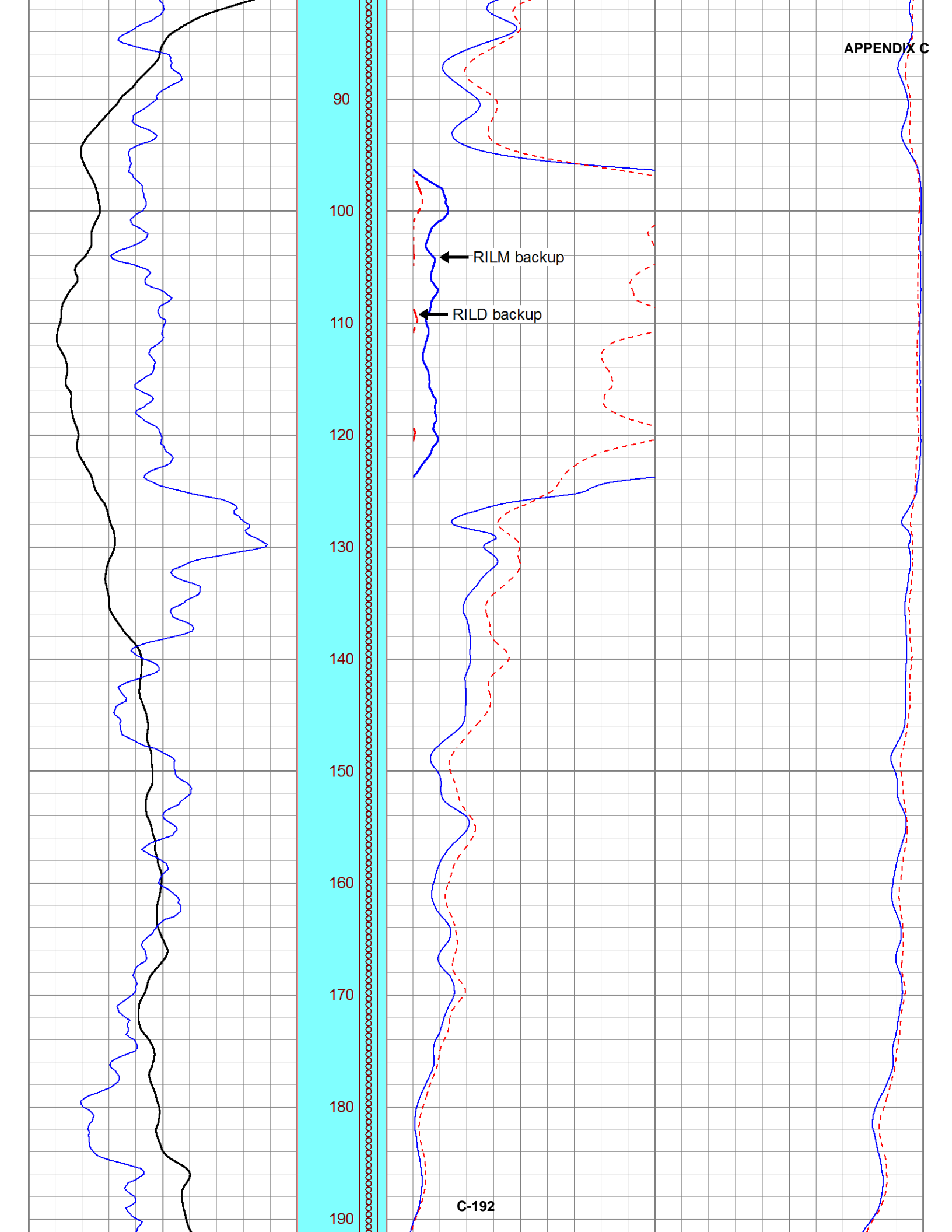


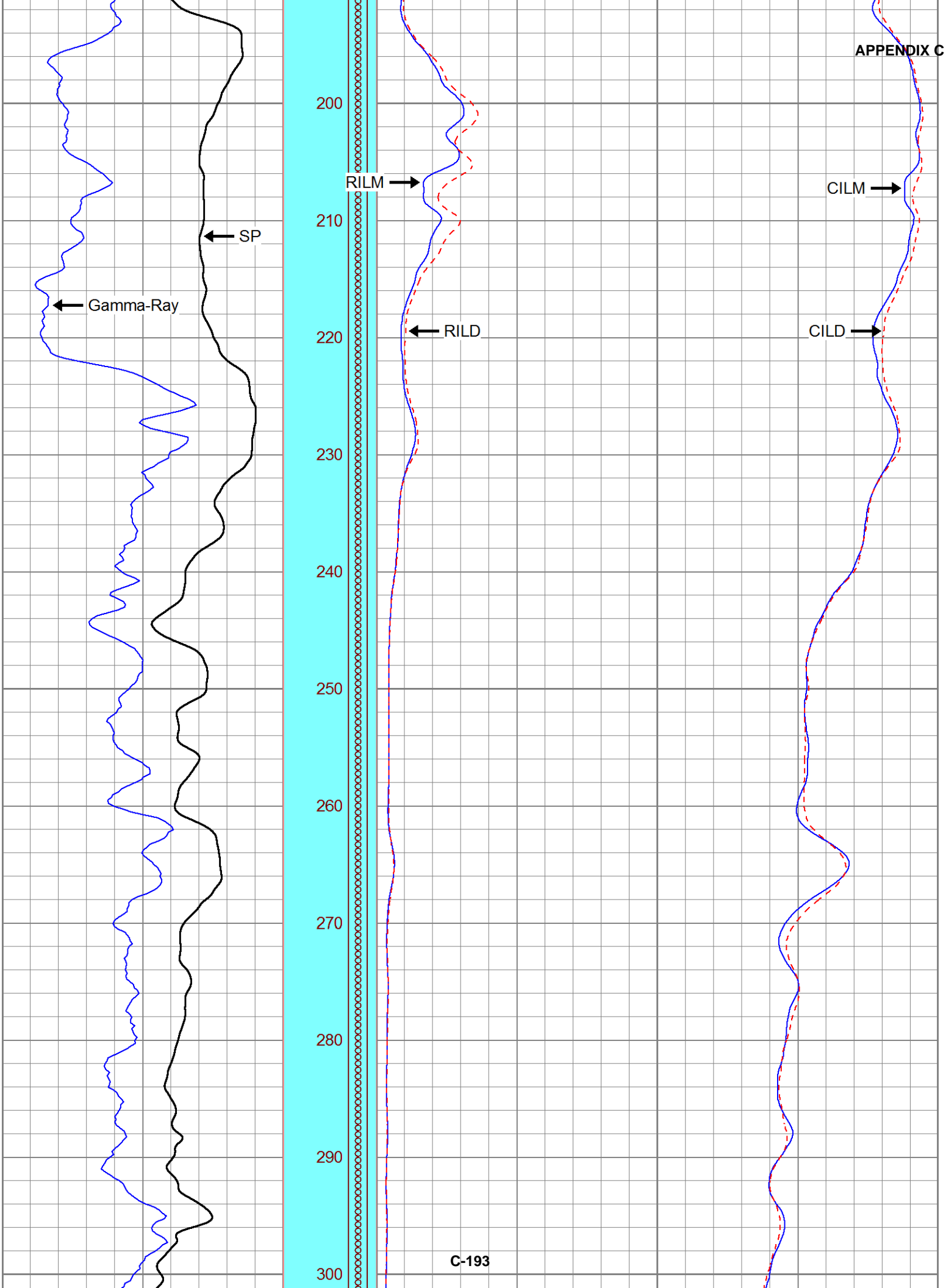
90
100
110
120
130
140
150
160
170
180
190

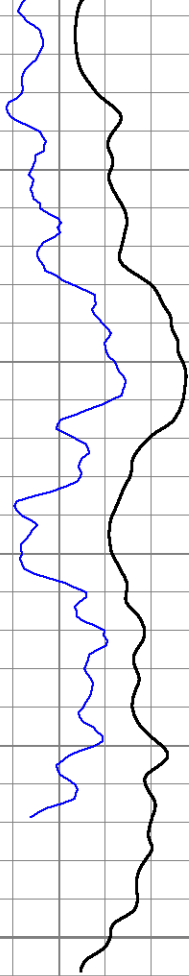
← RILM backup

← RILD backup

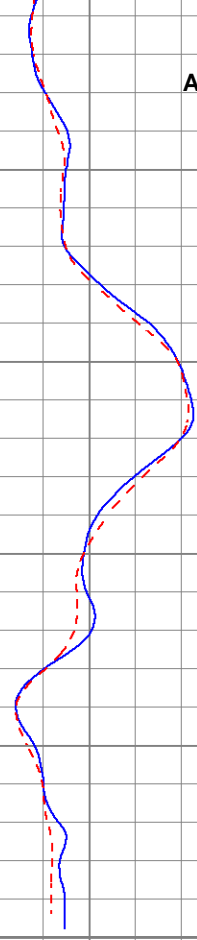
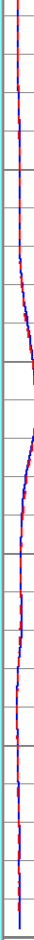
C-192







310
320
330
340
350

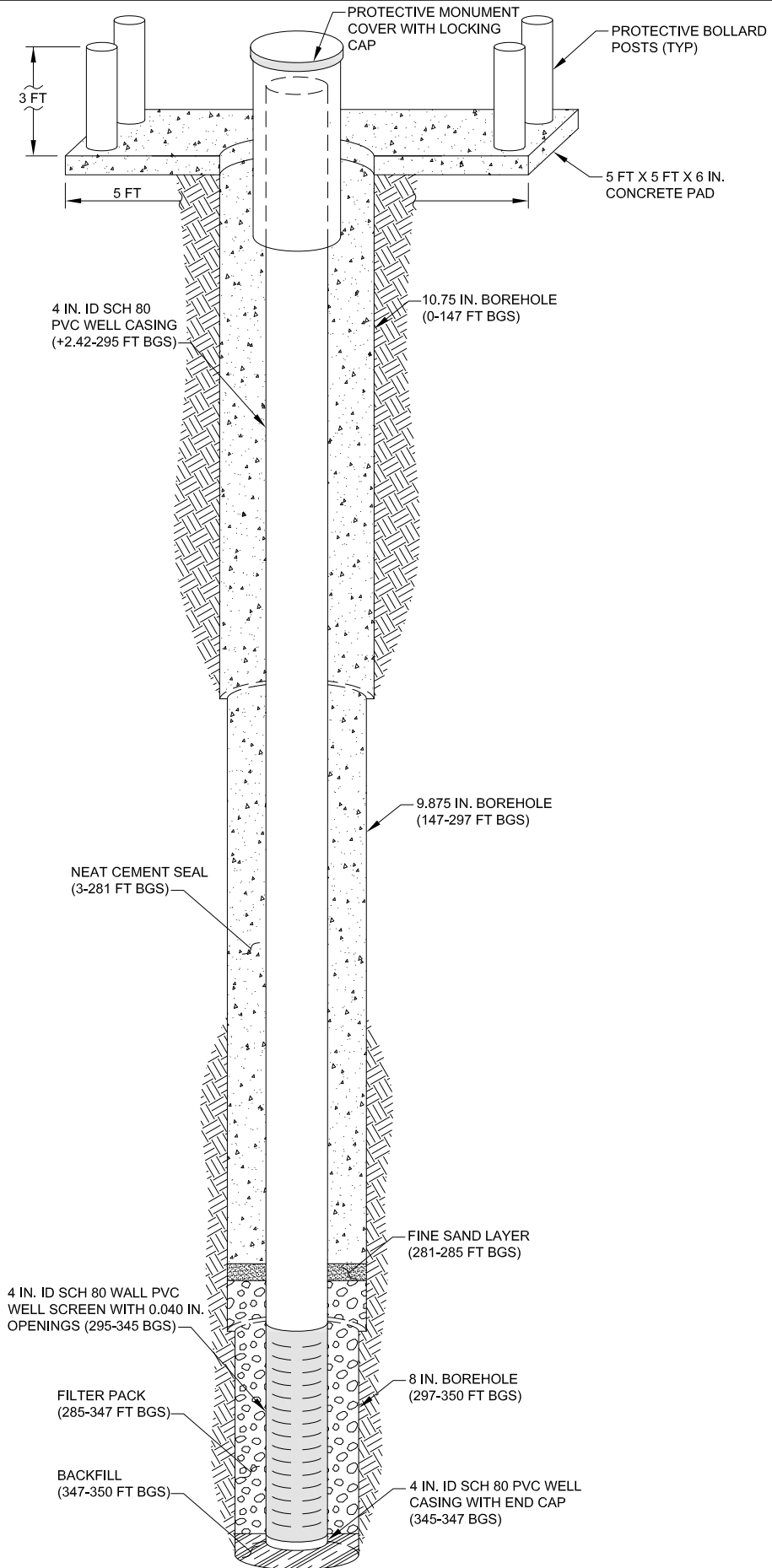


-10	SP (mV)	90
10	Gamma-Ray (GAPI)	110

0	RILM (Ohm-m)	50	1000	CILM (mmho/m)	0
0	RILD (Ohm-m)	50	1000	CILD (mmho/m)	0

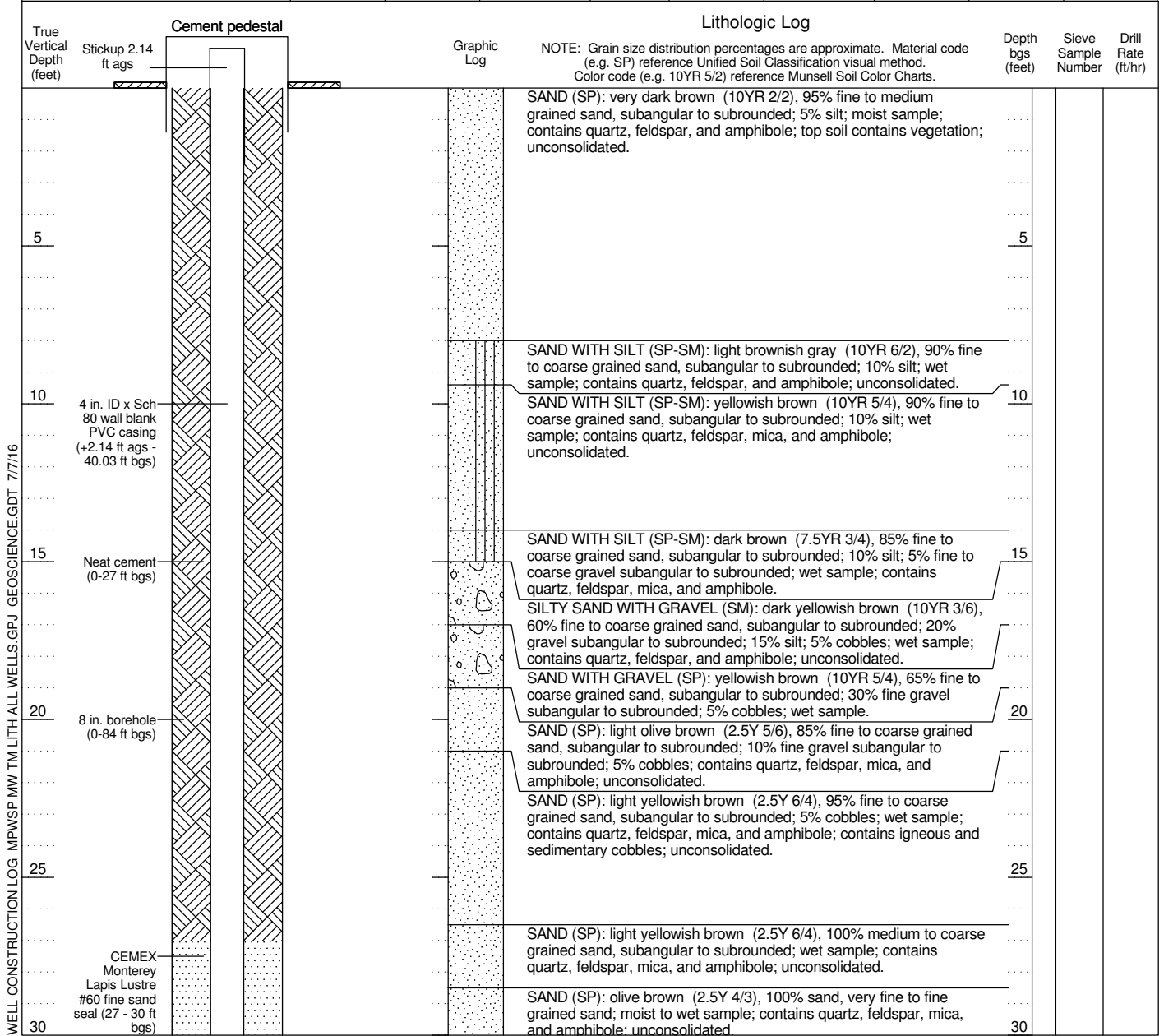
50	RILM backup (Ohm-m)	500
50	RILD backup (Ohm-m)	500

	CILD backup	
10000	(mmho/m)	1000
	CILM backup	
10000	(mmho/m)	1000



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-8S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER		Cal Am 14077-15			LOCATION Marina, CA Monte Rd					
REPORT DATE		Cascade Drilling D. King			LOGGED BY A. Khalighi					
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.14	40.03	42.17	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic	Blank	-2.14	40.03	42.17	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	40.03	80.03	40	PVC	Sch 80	4 / ID	Slotted	
BOREHOLE DIAMETER	8 in	Blank	80.03	82.54	2.51	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	17.82 ft NAVD88									
TOC ELEVATION	19.96 ft NAVD88 (RP)									
START DATE	5/12/15									
FINISH DATE	5/13/15									

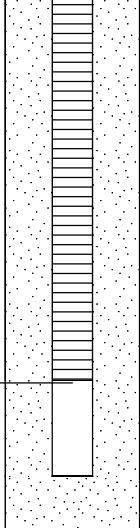
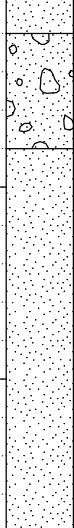


WELL NUMBER MPWSP MW-8S		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35	CEMEX Monterey Lapis Lustre #3 filter pack (30 - 82.54 ft bgs)				35		
40					40		
45	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (40.03-80.03 ft bgs)		CLAY (CL): olive gray (5Y 4/2), 90% clay, high plasticity; 10% silt; moist sample. SAND (SP): dark yellowish brown (10YR 4/6), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole; unconsolidated.		45		
50			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole; unconsolidated.		50		
55			SAND (SP): brown (10YR 4/3), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole; contains igneous and sedimentary gravel; unconsolidated. SAND (SP): grayish brown (10YR 5/2), 100% medium to coarse grained sand, subangular to rounded, predominately coarse grained sand; wet sample; contains quartz, feldspar, and amphibole; unconsolidated.		55		
60					60		
65			SAND (SP): dark brown (10YR 3/3), 95% sand, very fine to fine grained sand; 5% silt; trace cobbles; moist to wet sample; contains rounded igneous and sedimentary cobbles (less than 5%); unconsolidated.		65		4
70					70		

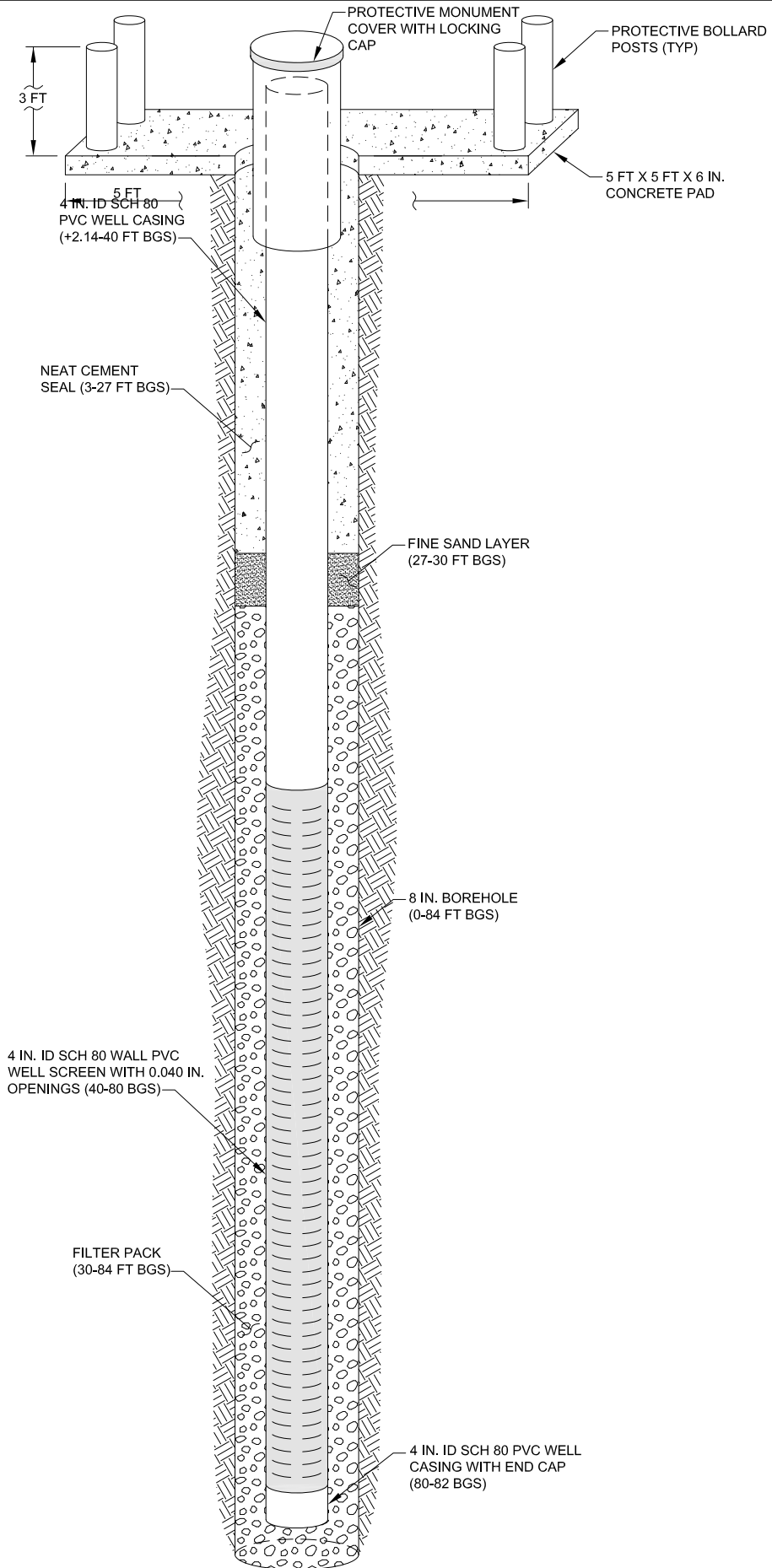
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-8S** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 Marina, CA

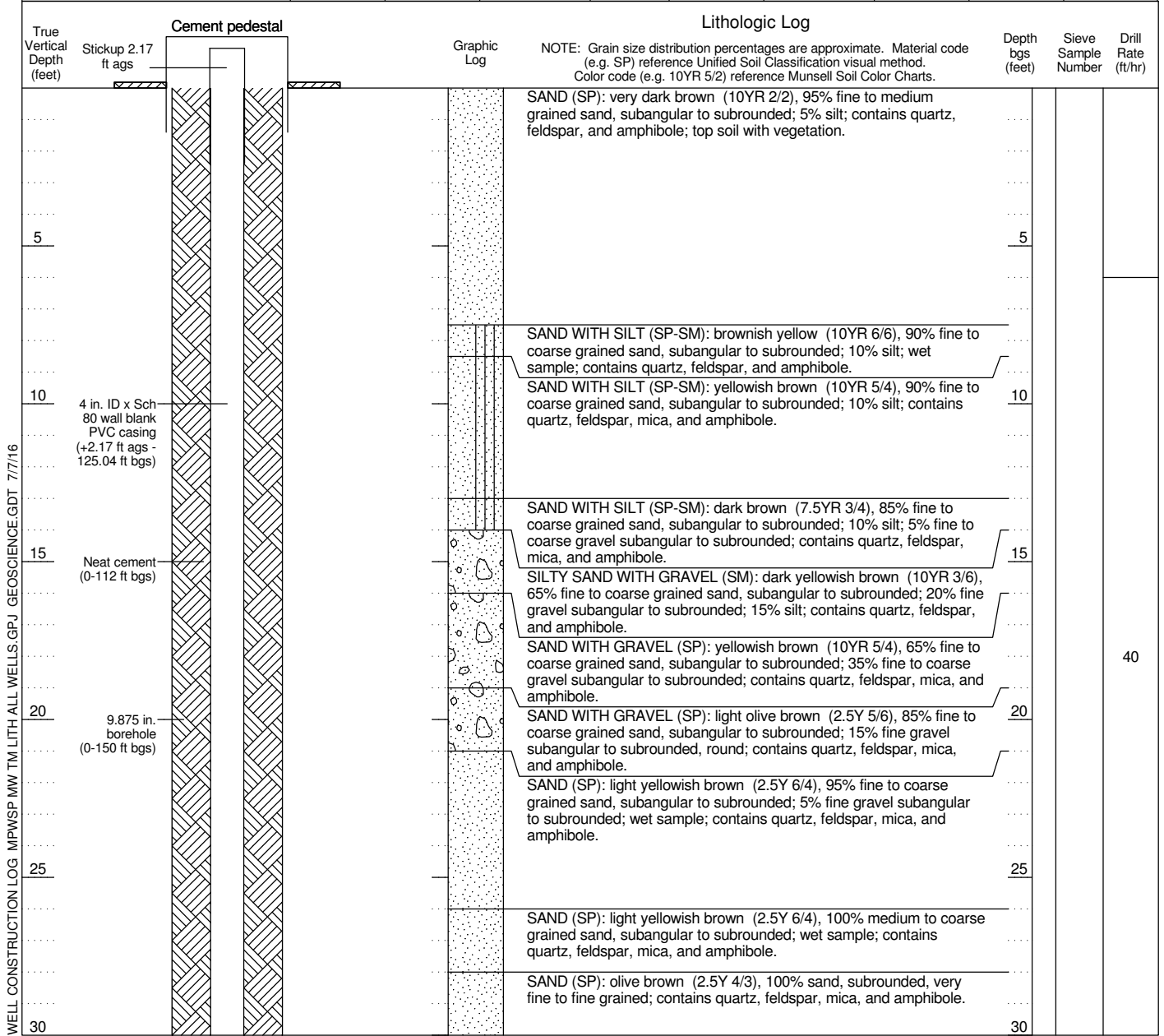
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
75			SAND WITH GRAVEL (SP); grayish brown (10YR 5/2), 80% fine to coarse grained sand, subangular to subrounded; 15% gravel subangular to subrounded; 5% cobbles; contains quartz, feldspar, and amphibole; contains igneous and sedimentary cobbles; unconsolidated.		
80			SAND (SP); dark yellowish brown (10YR 3/4), 100% sand, very fine to fine grained sand; moist to wet sample; contains quartz, feldspar, mica, and amphibole; contains lens of coarse gravel; unconsolidated.	75	
	Blank casing with end cap (80.03-82.54 ft bgs)				
	TD 84 ft bgs				4
			Bottom of borehole at 84 feet.		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-8M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Monte Rd							
REPORT DATE			LOGGED BY J. Sobolew							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.17	125.04	127.21	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	125.04	215.04	90	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	9.875, 8 in	Blank	215.04	217.54	2.5	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	17.82 ft NAVD88									
TOC ELEVATION	19.99 ft NAVD88 (RP)									
START DATE	5/04/15									
FINISH DATE	5/12/15									



WELL NUMBER **MPWSP MW-8M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT PROJECT NUMBER **Cal Am 14077-15** LOCATION **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35					35		
40				SAND (SP): dark yellowish brown (10YR 4/6), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole.	40		40
45					45		
50				SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and amphibole.	50		
55					55		
60				SAND (SP): brown (10YR 4/3), 90% fine to coarse grained sand, subangular to subrounded; 10% gravel subangular to subrounded; contains quartz, feldspar, and amphibole. SAND (SP): grayish brown (10YR 5/2), 100% medium to coarse grained sand, subangular to rounded, predominantly coarse grained; wet sample; contains quartz, feldspar, and amphibole.	60		26
65				SAND (SP): dark brown (10YR 3/3), 95% sand, very fine to fine grained; 5% silt; trace cobbles; moist sample; contains trace cobbles.	65		
70					70		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75			SAND WITH GRAVEL (SP): grayish brown (10YR 5/2), 80% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subrounded to rounded; contains quartz, feldspar, and amphibole.		75		26
80			SAND (SP): dark yellowish brown (10YR 3/4), 100% sand, very fine to fine grained; moist sample; contains quartz, feldspar, mica, and amphibole.		80		
85			SANDY SILT (ML): dark yellowish brown (10YR 4/6), 60% silt; 40% sand, very fine to fine grained; contains quartz, feldspar, mica, and amphibole.		85		
90			FAT CLAY (CH): grayish brown (2.5Y 5/2) and grayish green (5G 4/2), 100% clay, high plasticity.		90		
95					95		
100					100		
105					105		
110			SILT (ML): light olive brown (2.5Y 5/4), 75% silt; 15% clay, medium plasticity; 10% fine grained sand; moist sample.		110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
115	CEMEX Monterey Lapis Lustre #60 fine sand seal (112 - 115 ft bgs)		SAND (SP): light olive brown (2.5Y 5/3), 100% fine to medium grained sand, subangular to subrounded, predominantly medium grained; moist sample; contains quartz, feldspar, mica, and amphibole.	115
120	CEMEX Monterey Lapis Lustre #3 filter pack (115 - 220 ft bgs)		SAND WITH GRAVEL (SP): brown (10YR 5/3), 85% fine to coarse grained sand, subangular to subrounded; 15% fine to coarse gravel subangular to subrounded; contains quartz, feldspar, and amphibole; contains slight clay matrix.	120
125				125
130	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (125.04-215.04 ft bgs)			130
135				135
140			FAT CLAY (CH): light yellowish brown (2.5Y 6/3), 100% clay, medium plasticity.	
145			SAND WITH GRAVEL (SP): dark grayish brown (10YR 4/2), 70% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel subangular to subrounded; trace silt; contains quartz, feldspar, mica, and amphibole.	140
			SILT (ML): olive (5Y 5/3), 100% silt; low to medium plasticity.	
			SAND WITH GRAVEL (SP): pale brown (10YR 6/3), 75% fine to coarse grained sand; 25% fine to coarse gravel; medium sorted; contains quartz, feldspar, mica, and amphibole.	145
150			SILT (ML): olive (5Y 5/3), 100% silt.	150

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-8M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log			
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
155			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 75% fine to coarse grained sand, subangular to subrounded, subangular to subrounded; 25% fine to coarse gravel subangular to subrounded, subrounded; contains quartz, feldspar, and amphibole.	155		
160			CLAYEY GRAVEL (GC): dark olive gray (5Y 3/2), 50% fine to coarse gravel subrounded to rounded; 45% clay, medium plasticity; 5% fine to coarse grained sand, subrounded to rounded; contains quartz, feldspar, and amphibole.	160		
165			SAND WITH GRAVEL (SP): very dark grayish brown (10YR 3/2), 75% fine to coarse grained sand, subangular to subrounded; 25% fine to coarse gravel subangular to subrounded; trace silt; wet sample; contains quartz, feldspar, and amphibole; contains Monterey Shale.	165		8
170			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 3/6), 85% fine to coarse grained sand, subrounded to rounded; 15% fine to coarse gravel subrounded to rounded; wet sample; contains quartz, feldspar, and amphibole; contains Monterey Shale.	170		
175			SAND (SP): very dark grayish brown (10YR 3/2), 100% fine grained sand; wet sample; weak cementation; contains quartz, feldspar, mica, and amphibole; grain size becomes fine from 210 ft to 220 ft and contains high amphibole content and silt (5% to 10%).	175		
180						
185						30
190						

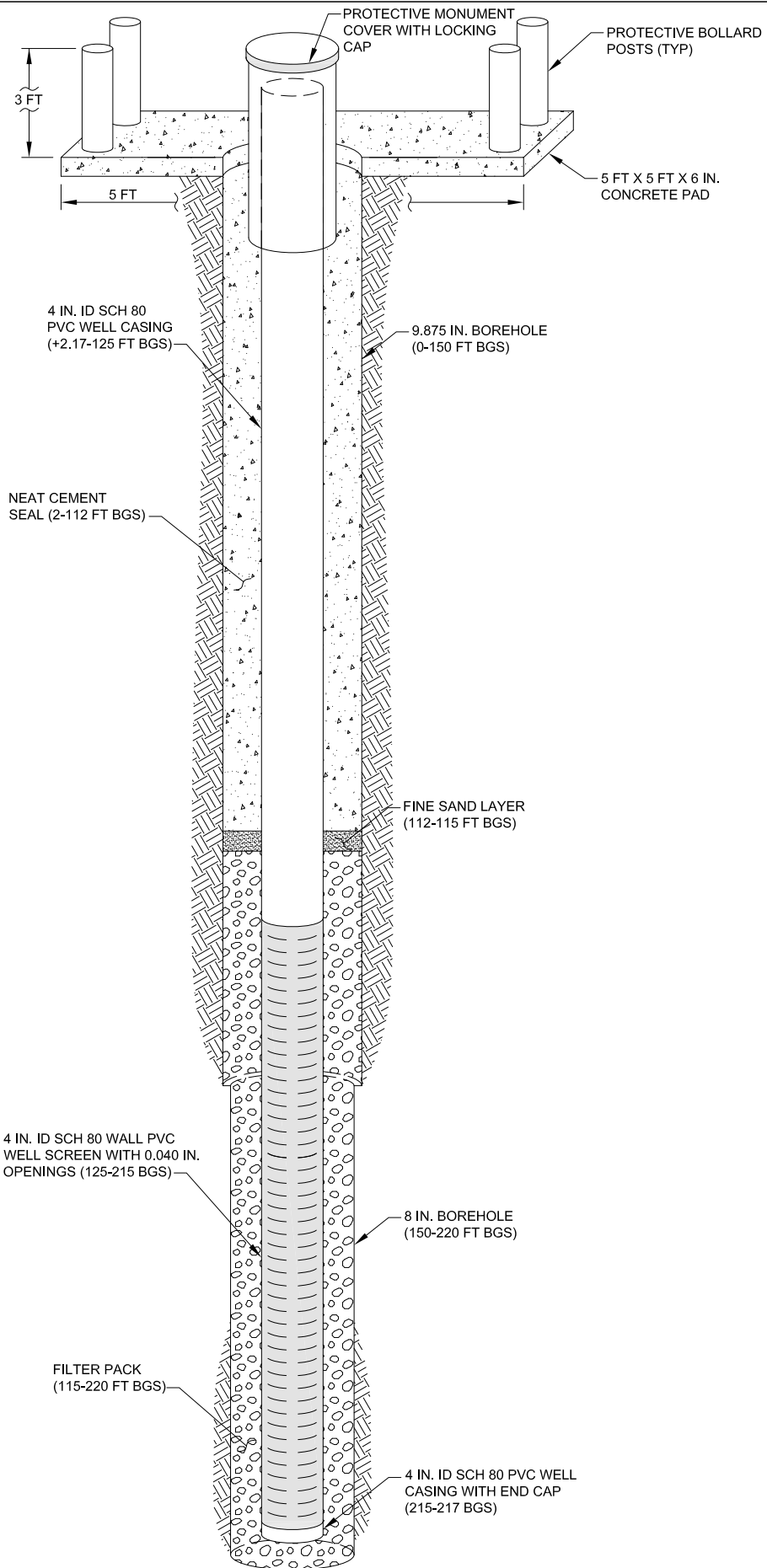
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-8M** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 Marina, CA

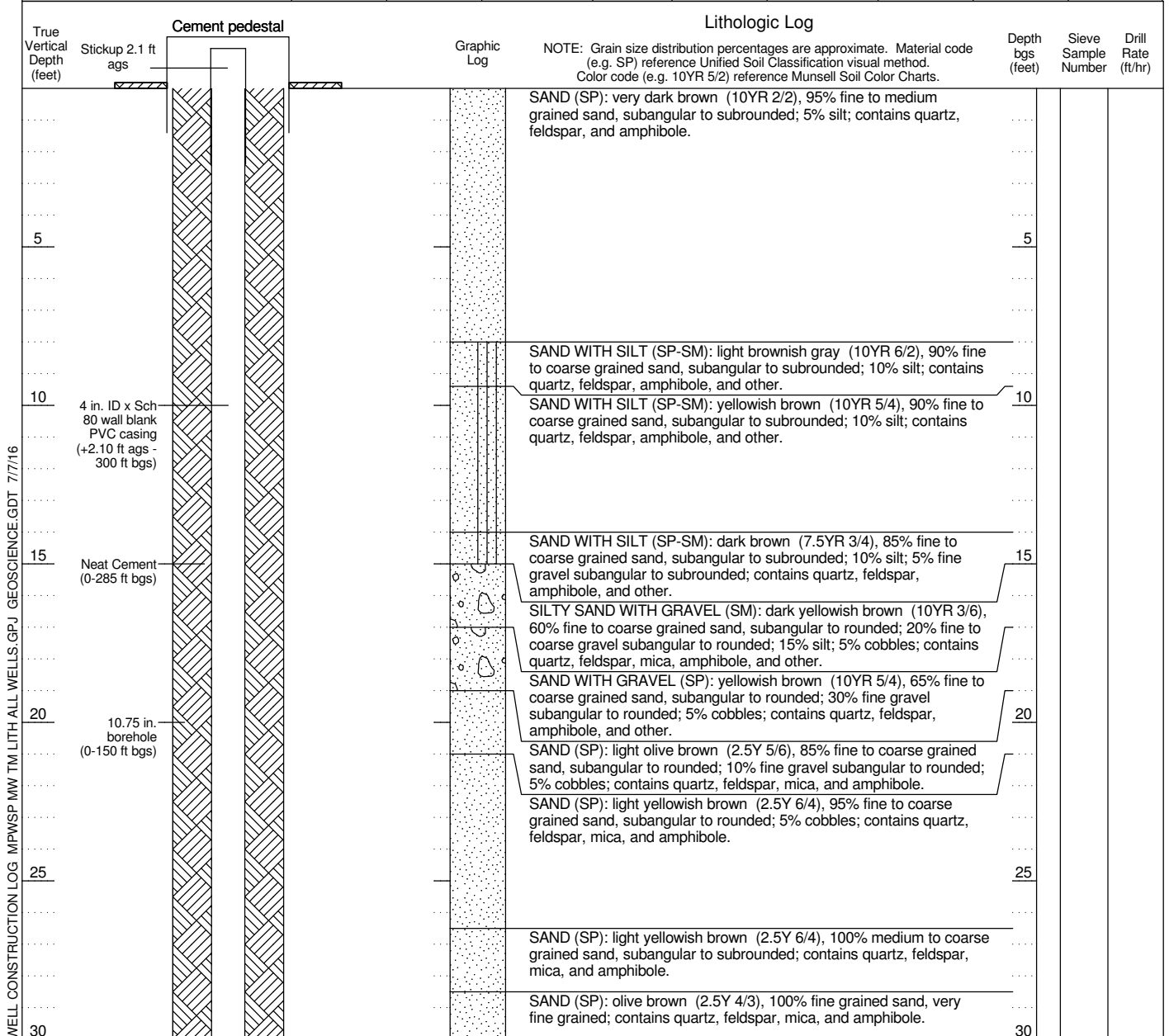
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log				
			Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)		
195			195		30		
200			200				
205			205				
210			210				
215			215				
220			220				
TD 220 ft bgs							
Bottom of borehole at 220 feet.							

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Monte Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.1	300	302.1	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	300	350	50	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in		Blank	350	352.8	2.8	PVC	Sch 80	4 / ID	
SURFACE ELEVATION	17.98 ft NAVD88									
TOC ELEVATION	20.08 ft NAVD88 (RP)									
START DATE	4/14/15									
FINISH DATE	5/03/15									



WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
35					35		
40					40		
45					45		
50					50		
55				CLAY (CL): olive gray (5Y 4/2), 90% clay, high plasticity; 10% silt. SAND (SP): dark yellowish brown (10YR 4/6), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, amphibole, and other.	55		
60				SAND (SP): dark yellowish brown (10YR 4/4), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, and amphibole.	60		
65				SAND (SP): brown (10YR 4/3), 90% fine to coarse grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; contains quartz, feldspar, and amphibole. SAND (SP): grayish brown (10YR 5/2), 100% medium to coarse grained sand, subangular to rounded; contains quartz, feldspar, and amphibole.	65	1	
70				SAND (SP): dark brown (10YR 3/3), 95% fine grained sand, subangular to subrounded; 5% silt; trace cobbles; contains quartz, feldspar, mica, and amphibole.	70	2	
							9

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			SAND WITH GRAVEL (SP): grayish brown (10YR 5/2), 80% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole.			3	
75			SAND (SP): dark yellowish brown (10YR 3/4), 100% fine grained sand, some very fine; contains quartz, feldspar, mica, and amphibole.		75		
80					80		
			SAND WITH GRAVEL (SP): grayish brown (2.5Y 5/2), 85% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; contains quartz, feldspar, and amphibole.			4	
85			SAND (SP): black (N2.5), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.		85		
			FAT CLAY (CH): grayish brown (2.5Y 5/2), 100% clay, medium to high plasticity.				
90			FAT CLAY (CH): grayish green (5G 4/2), 100% clay, medium to high plasticity.		90		9
95					95		
100					100		
105			SILT (ML): light olive brown (2.5Y 5/4), 60% silt; 30% clay, low to medium plasticity; 10% fine grained sand.		105		
110					110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
115			CLAYEY SAND (SC): dark greenish gray (10Y 4/1), 60% fine grained sand; 20% silt; 20% clay, low plasticity.		115		
			SAND (SP): olive brown (2.5Y 4/3), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.				
			SAND (SP): brown (10YR 5/3), 85% fine to coarse grained sand, angular to rounded; 10% fine to coarse gravel angular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole.				
120					120		
						5	
125					125		
							9
130					130	6	
135					135		
140			CLAY (CL): light yellowish brown (2.5Y 6/3), 95% clay, medium plasticity; 5% silt.		140		
			SAND (SP): dark grayish brown (10YR 4/2), 90% fine to medium grained sand, subangular to subrounded; 10% fine gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole.				
			GRAVELLY CLAY (CL): dark gray (2.5Y 4/1), 55% clay, medium plasticity; 35% fine to coarse gravel subrounded to rounded; 5% fine to coarse grained sand, subrounded to rounded; 5% silt; contains quartz, feldspar, mica, and amphibole.				
145			SAND (SP): dark olive gray (5Y 3/2), 100% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.		145		
							7
			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 70% fine to coarse grained sand, subangular to rounded; 25% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole; shale.				
150					150		6

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)						
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA					
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)	
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.					
155	9.875 in. borehole (150-280 ft bgs)		CLAYEY GRAVEL (GC): dark olive gray (5Y 3/2), 50% fine to coarse gravel subangular to rounded; 30% clay, medium to high plasticity; 5% fine to coarse grained sand, subangular to rounded; 5% silt; 10% cobbles; contains quartz, feldspar, and amphibole; shale.	155	8			
160			SAND WITH GRAVEL (SP): dark yellowish brown (10YR 4/6), 70% fine to coarse grained sand, subangular to rounded; 25% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole; shale.	160				
165			SAND (SP): yellowish brown (10YR 5/4), 90% fine grained sand, subrounded to rounded; 5% fine to coarse gravel subrounded to rounded; 5% cobbles; contains quartz, feldspar, and amphibole; shale.	165	9			
170			SAND WITH GRAVEL (SP): very dark grayish brown (10YR 3/2), 70% fine to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel subangular to subrounded; 5% silt; 5% cobbles; contains quartz, feldspar, and amphibole.	170				
175			GRAVEL WITH SAND (GP): dark yellowish brown (10YR 3/6), 80% fine to coarse gravel subrounded to rounded; 15% fine to coarse grained sand, subrounded to rounded; 5% cobbles; contains quartz, feldspar, and amphibole.	175	6			
180			SAND (SP): very dark grayish brown (10YR 3/2), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole; friable sandstone.	180				
185				185	10			
190				190				
							11	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195			SAND WITH SILT (SP-SM): very dark grayish brown (10YR 3/2), 90% fine grained sand; 10% silt; contains quartz, feldspar, mica, and amphibole; friable sandstone.		195	12	
200			SAND (SP): very dark grayish brown (10YR 3/2), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole; friable sandstone.		200		6
205			SAND WITH CLAY (SP-SC): very dark grayish brown (10YR 3/2), 85% fine grained sand; 10% silt; 5% clay; contains quartz, feldspar, mica, and amphibole; friable sandstone.		205	13	
210					210		
215					215	14	
220					220		8
225					225	15	
230			CLAY WITH SAND (CL): light olive brown (2.5Y 5/3), 80% clay, low to medium plasticity; 20% fine grained sand.		230		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth lgs (feet)	Sieve Sample Number
235			235	
240			240	
245			245	
250			250	
255			255	
260			260	
265			265	
270			270	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			amphibole.	
			CLAY (CL): dark grayish brown (2.5Y 4/2), 100% clay, medium plasticity.	
275				8
			CLAY (CL): dark yellowish brown (10YR 3/6), 100% clay, medium to high plasticity.	
280				
	8 in. borehole (280-360 ft bgs)			
285				
	CEMEX Monterey Lapis Lustre #60 fine sand seal (285 - 288 ft bgs)		SILTY SAND (SM): light olive brown (2.5Y 5/4), 80% fine grained sand; 15% silt; 5% clay, no to low plasticity.	
290				
	CEMEX Monterey Lapis Lustre #3 filter pack (288 - 360 ft bgs)			
295			CLAY (CL): light olive brown (2.5Y 5/3), 80% clay, low plasticity; 15% silt; 5% fine grained sand.	
			SAND WITH GRAVEL (SP): gray (2.5Y 5/1), 85% fine to coarse grained sand, subangular to rounded; 15% fine to coarse gravel subangular to rounded; contains quartz, feldspar, and amphibole; shale.	
300				17
	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (300 - 350 ft bgs)			
305				
310				

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-8D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lbs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
						18	
315			SAND WITH GRAVEL (SP): gray (2.5Y 5/1), 65% fine to coarse grained sand, subangular to rounded; 35% fine to coarse gravel subangular to rounded; trace clay; contains quartz, feldspar, and amphibole; shale.				
			FAT CLAY WITH SAND (CH): light olive brown (2.5Y 5/3), 70% clay, medium to high plasticity; 10% fine to coarse gravel subrounded to rounded; 10% fine to coarse grained sand, subrounded to rounded; 10% cobbles; contains quartz, feldspar, and amphibole.	315			5
			SAND WITH GRAVEL (SP): gray (2.5Y 5/1), 60% fine to coarse grained sand, subrounded to rounded; 20% fine to coarse gravel subrounded to rounded; 20% cobbles; contains quartz, feldspar, and amphibole; shale.				
320			SAND (SP): light olive brown (2.5Y 5/3), 90% fine to coarse grained sand, subangular to rounded; 5% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, and amphibole.	320			
						19	
325			FAT CLAY (CH): yellowish brown (10YR 5/8), 100% clay, high plasticity.	325			
			SAND (SP): dark yellowish brown (10YR 4/4), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.				
330			SAND (SP): light olive brown (2.5Y 5/3), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	330			
						20	
335			SAND (SP): olive brown (2.5Y 4/4), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	335			
340				340			
345				345			
350				350			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-8D** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			Material Code	Description			
355				NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.			
360	Blank casing with end cap (350-352.8 ft bgs) TD 360 ft bgs		FAT CLAY WITH GRAVEL (CH): light olive brown (2.5Y 5/3), 70% clay, medium to high plasticity; 15% fine to coarse gravel subrounded to rounded; 10% fine to coarse grained sand, subrounded to rounded; 5% cobbles; contains quartz, feldspar, and amphibole; shale.				
			FAT CLAY (CH): light olive brown (2.5Y 5/3), 100% clay, medium to high plasticity.		355		
			SILTY SAND (SM): dark gray (2.5Y 4/1), 70% fine to coarse grained sand, subrounded to rounded; 10% fine to coarse gravel subrounded to rounded; 10% silt; 5% clay; 5% cobbles; contains quartz, feldspar, and amphibole; shale.				
			FAT CLAY WITH GRAVEL (CH): light olive brown (2.5Y 5/3), 85% clay, medium to high plasticity; 15% fine to coarse gravel rounded; rounded; trace cobbles; shale.		360		
			Bottom of borehole at 360 feet.				

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19537
 Company CASCADRE DRILLING
 Well MW-8D
 Field SALINAS
 County MONTEREY State CA

Location
 325 MONTE RD.
 GPS: N 36o 43' 36" W 121o 47' 15"
 Other Services:
 DUAL INDUCTION
 GAMMA-RAY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	04-20-2015		
Run Number	ONE		
Depth Driller	360'		
Depth Logger	355'		
Bottom Logged Interval	355'		
Top Log Interval	0'		
Open Hole Size	10.75" (0'-150')	9.875" (150'-276')	8" (250'-340')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	14'		
Bentonite Seal	N/A		
Time Well Ready	1200		
Time Logger on Bottom	1230		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	10.75"	0'	150'
TWO	9.875"	150'	276'
THREE	8"	267'	360'
Casing Record	Size	Wgt/Ft	Top
Surface String			
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			360'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19537.db
 Dataset Pathname tmp
 Dataset Creation Mon Apr 20 12:35:45 2015

Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:18 2015

	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

FRT Calibration Report

Serial Number: 3553
 Tool Model: MLS
 Performed: Mon Feb 23 16:47:15 2015

Resistivity Calibration:

System Reading	Calibration Reference
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11466.000 cps	86.960 Ohm-m

Gain: -0.004
 Offset: 135.338

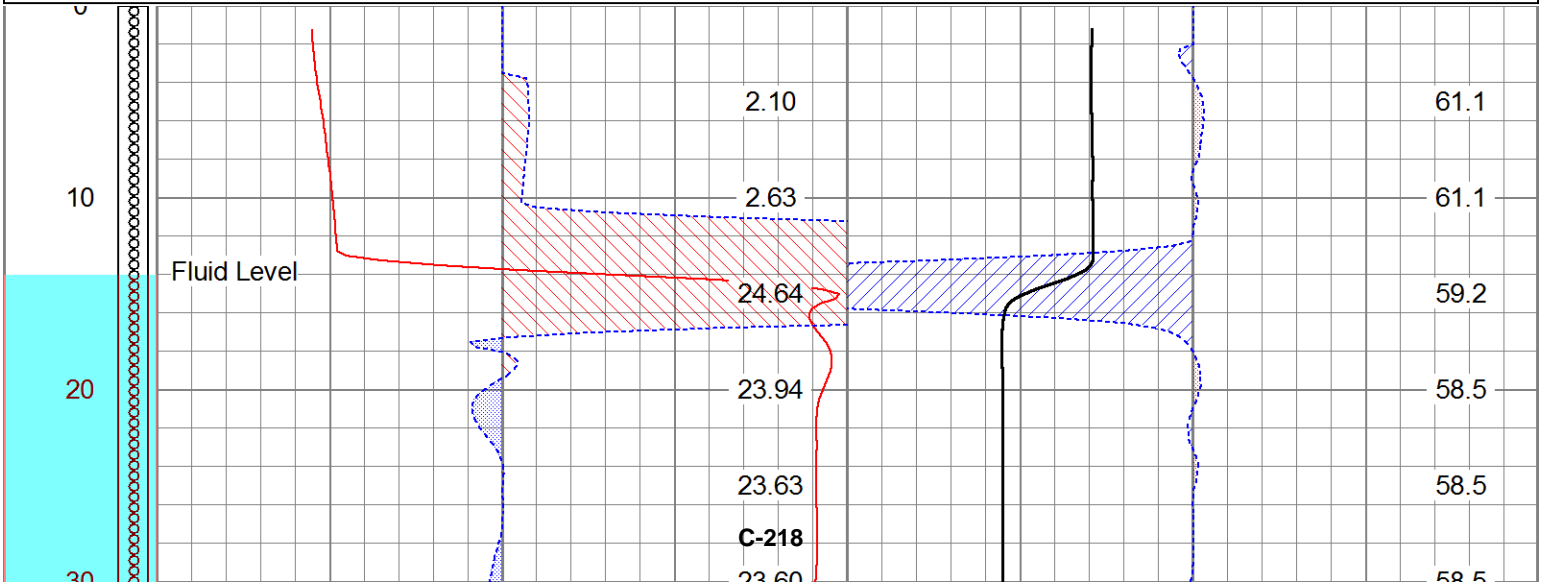
Conductivity Calibration:

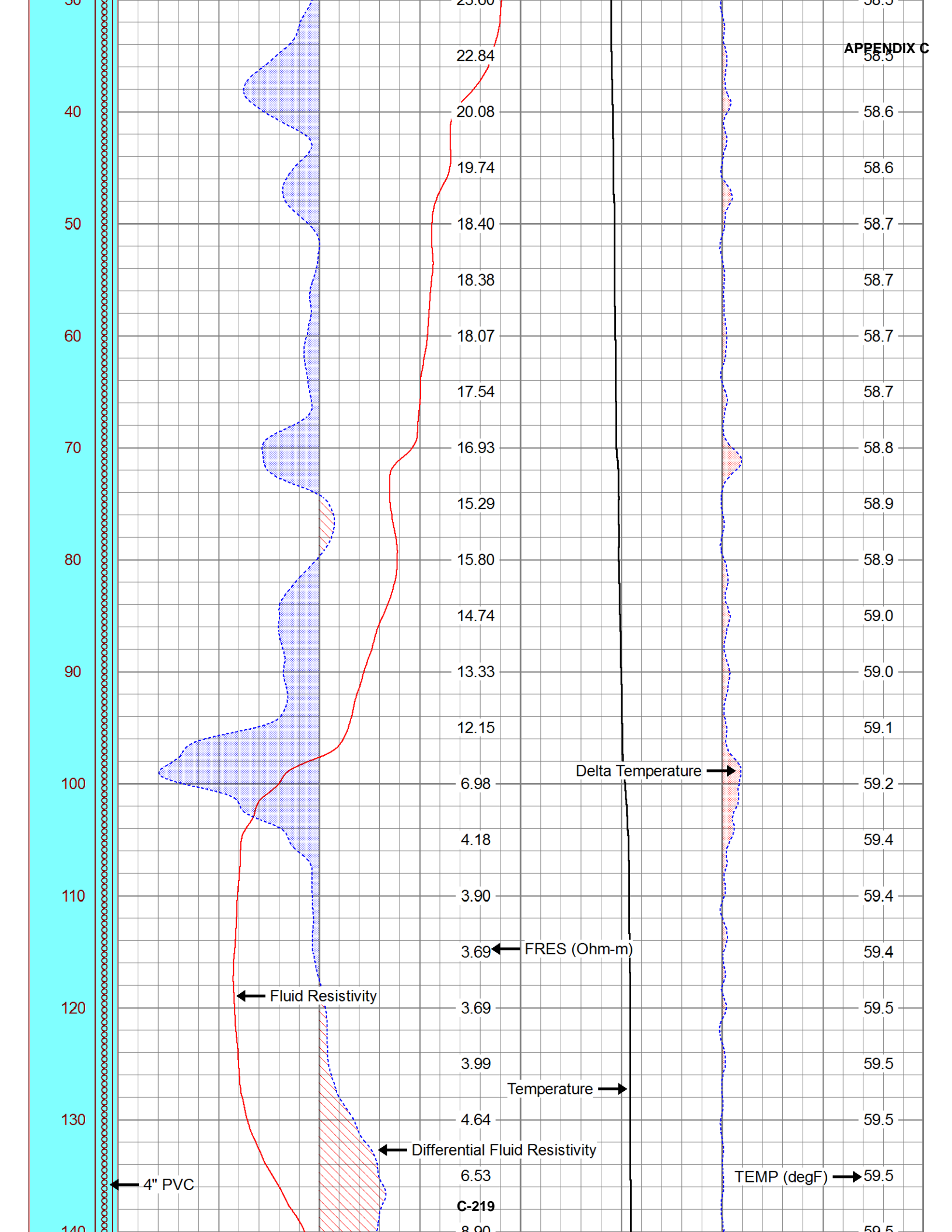
System Reading	Calibration Reference
0.000 cps	0.000
1.000 cps	1.000

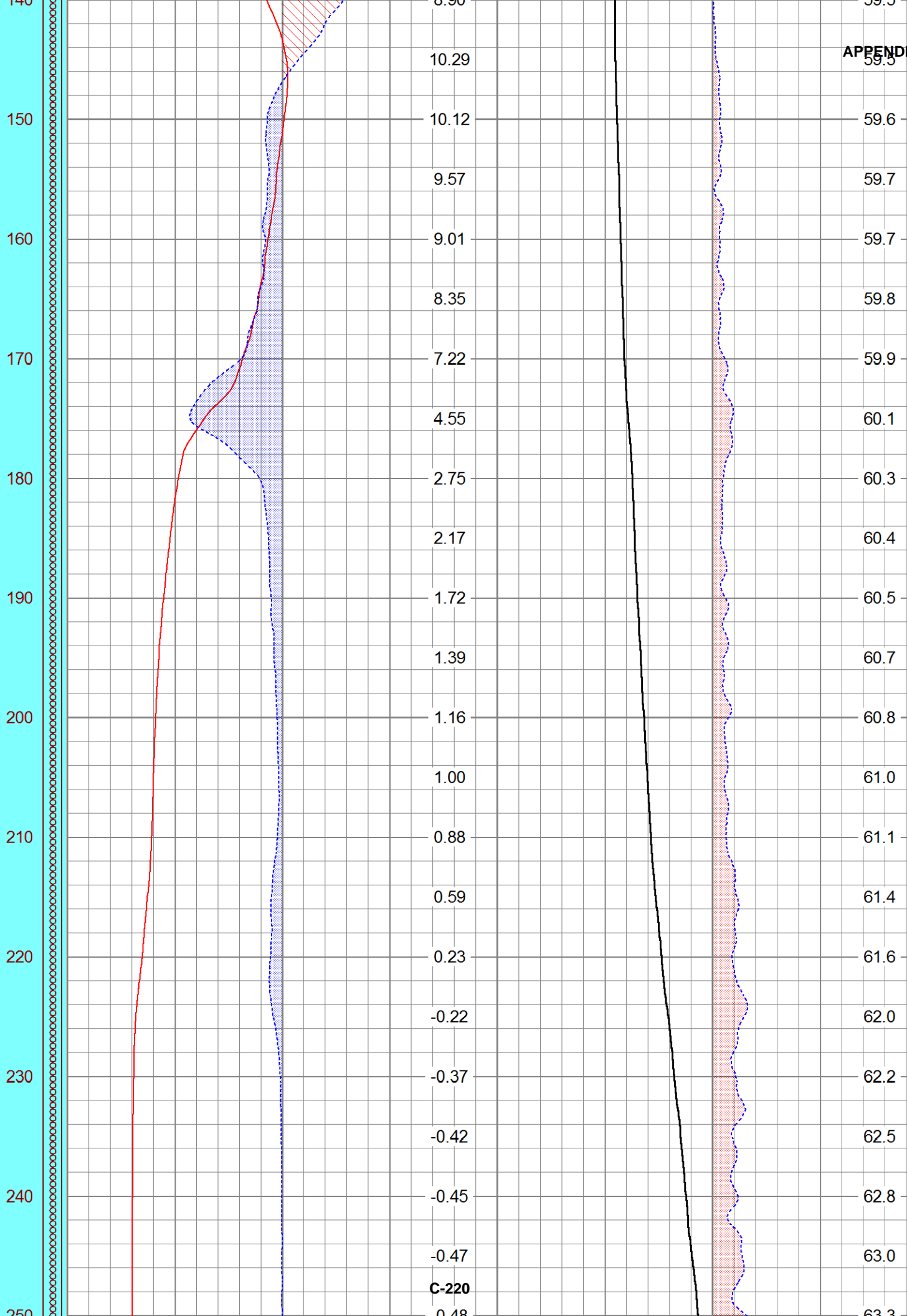
Gain: 1.000
 Offset: 0.000

Database File 19537.db
 Dataset Pathname tmp
 Presentation Format frttemp2
 Dataset Creation Mon Apr 20 12:35:45 2015
 Charted by Depth in Feet scaled 1:120

-5	Fluid Resistivity (Ohm-m)	25	54	Temperature (degF)	74
-1.5	Differential Fluid Resistivity (Ohm-m)	1.5	-0.5	Differential Temperature (degF)	0.5
	FRES			TEMP	
	(Ohm-m)			(degF)	

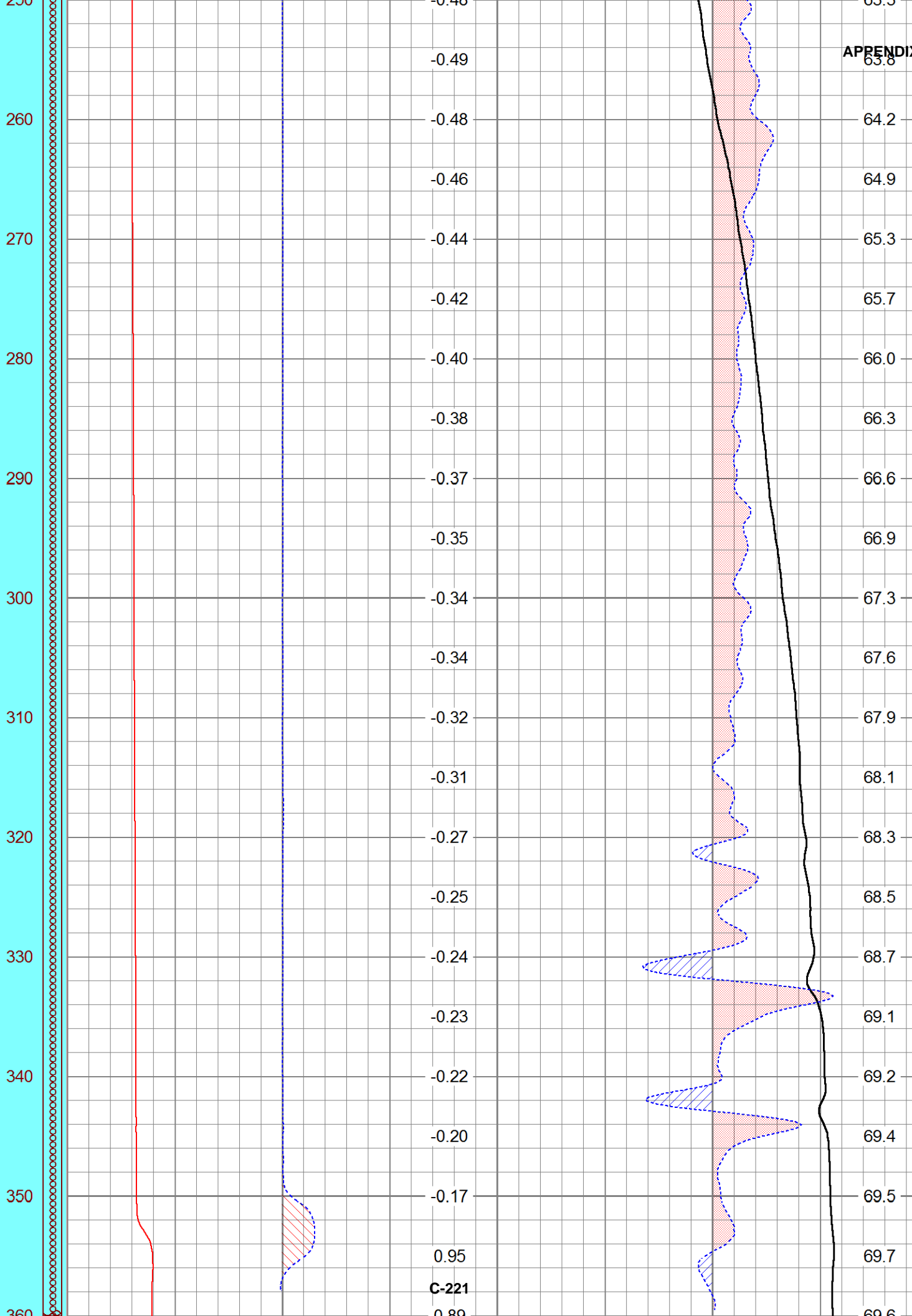






C-220

-0.48



300				0.69										7	09.0	
	-5	Fluid Resistivity (Ohm-m)			25	54	Temperature (degF)									74
	-1.5	Differential Fluid Resistivity (Ohm-m)			1.5	-0.5	Differential Temperature (degF)									0.5
					FRES (Ohm-m)										TEMP (degF)	

APPENDIX C

PACIFIC SURVEYS

**DUAL INDUCTION
GAMMA-RAY**

Job No. 19537	Company CASCADE DRILLING
Well MW-8D	
Field SALINAS	
County MONTEREY	State CA

Location
325 MONTE RD.
GPS: N 36o 43' 36" W 121o 47' 15"

Other Services:
TEMPERATURE
FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	04-20-2015		
Run Number	ONE		
Depth Driller	360'		
Depth Logger	355'		
Bottom Logged Interval	355'		
Top Log Interval	0'		
Open Hole Size	10.75" (0'-150')	9.875" (150'-276')	8" (250'-340')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	14'		
Bentonite Seal	N/A		
Time Well Ready	1200		
Time Logger on Bottom	1230		
Equipment Number	PS-8		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A. KHALIGHI		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10.75"	0'	150'				
TWO	9.875"	150'	276'				
THREE	8"	267'	360'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4" PVC		SCH 80	0'
Liner				360'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19537.db
 Dataset Pathname dil1
 Dataset Creation Mon Apr 20 14:03:49 2015

Calibration Report

Serial-Model:
Surface Cal Performed:

0001-ALT

APPENDIX C

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1432.079	3651.555	cps	0.000	612.000	mmho/m	0.276	-394.883
Medium	2031.999	14281.231	cps	0.000	1960.000	mmho/m	0.160	-325.140

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Sat Jan 10 13:10:57 2015

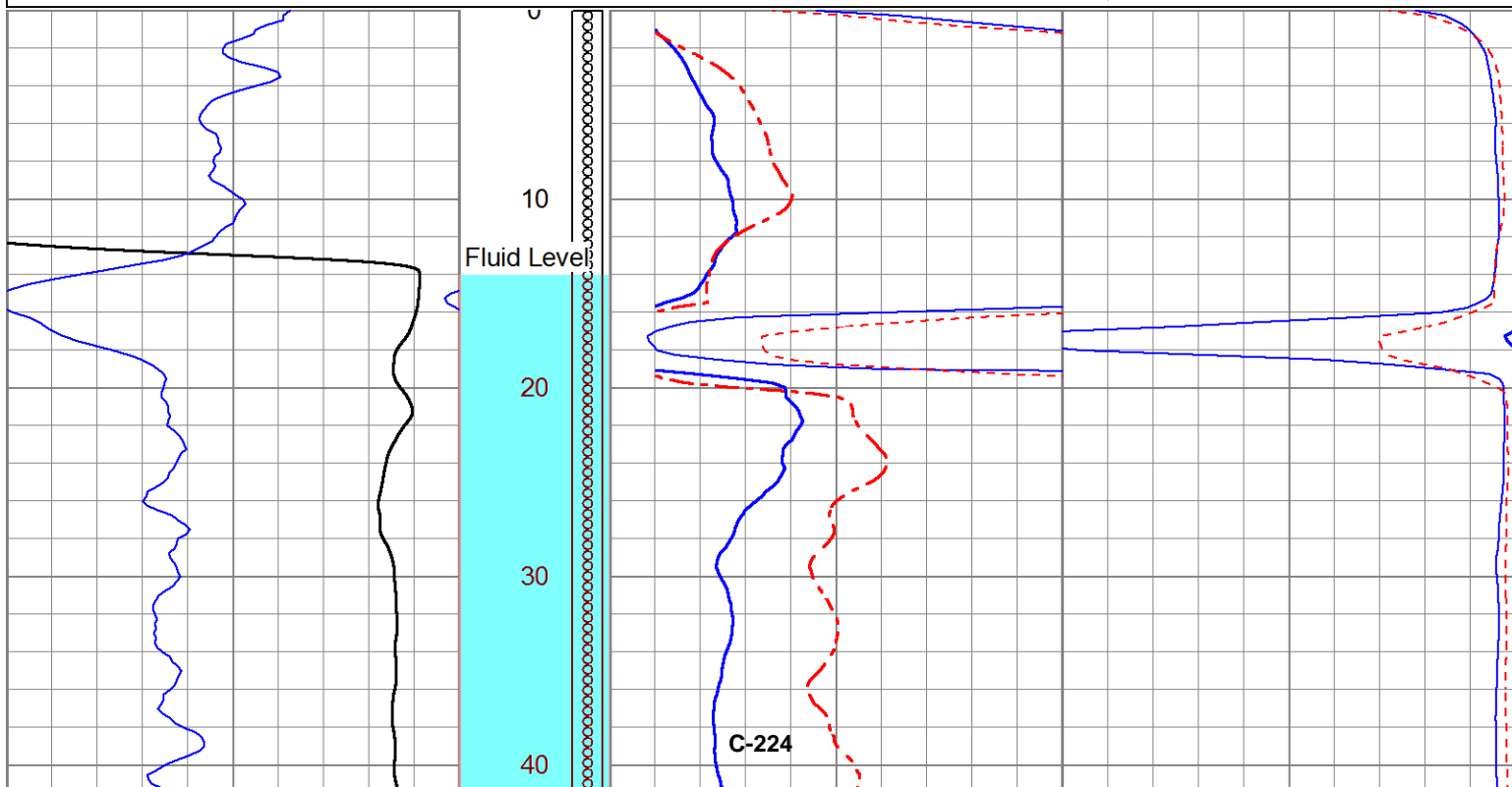
Calibrator Value: 162.0 GAPI

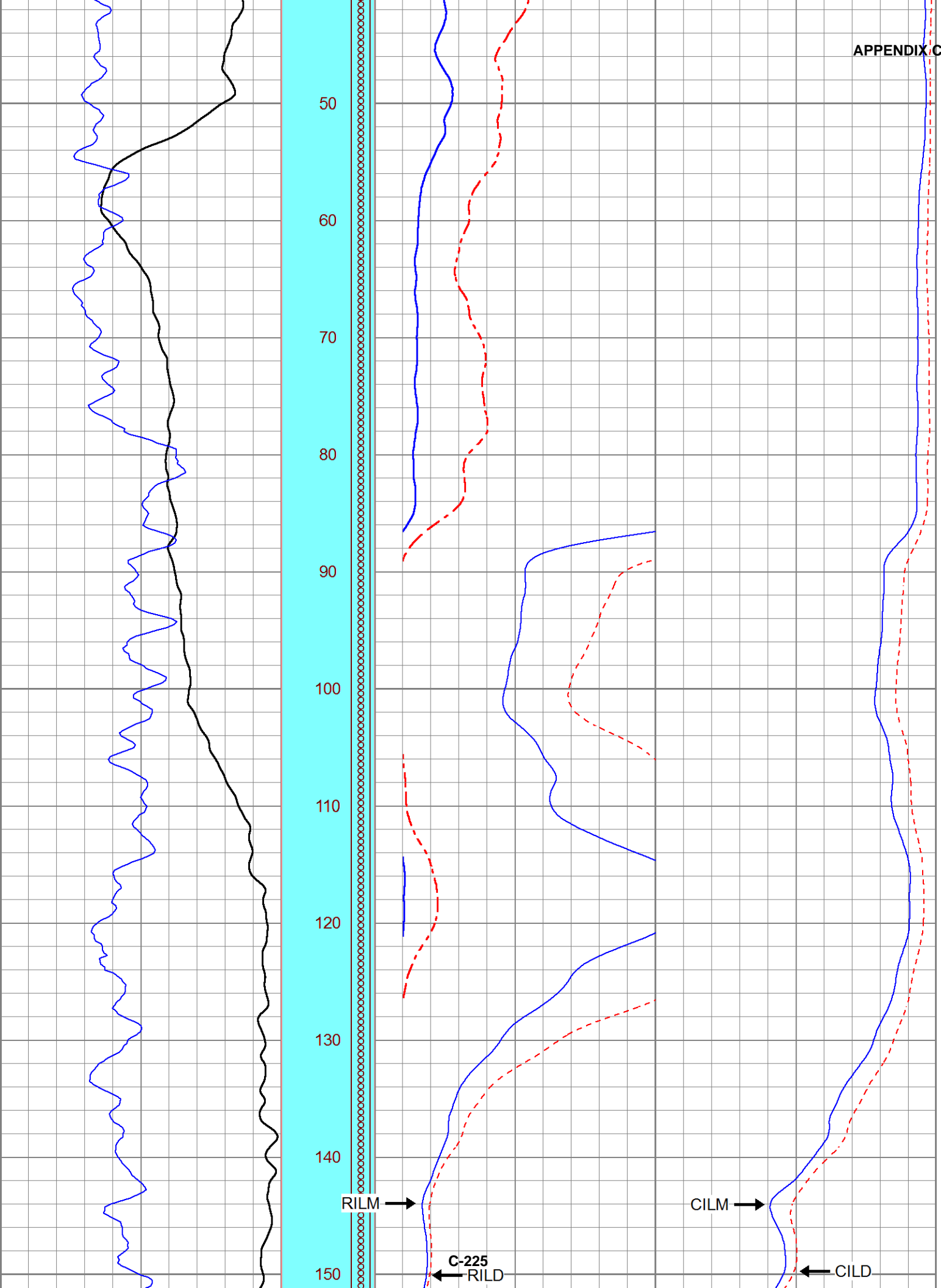
Background Reading: 46.1 cps
 Calibrator Reading: 180.8 cps

Sensitivity: 1.2020 GAPI/cps

Database File 19537.db
 Dataset Pathname dil1
 Presentation Format dil
 Dataset Creation Mon Apr 20 14:03:49 2015
 Charted by Depth in Feet scaled 1:120

-140	SP (mV)	60	0	RILM (Ohm-m)	10	1000	CILM (mmho/m)	0
20	Gamma-Ray (GAPI)	120	0	RILD (Ohm-m)	10	1000	CILD (mmho/m)	0
			10	RILM backup (Ohm-m)	100		CILD backup	
			10	RILD backup (Ohm-m)	100	10000	(mmho/m)	1000
							CILM backup	
						10000	(mmho/m)	1000





50

60

70

80

90

100

110

120

130

140

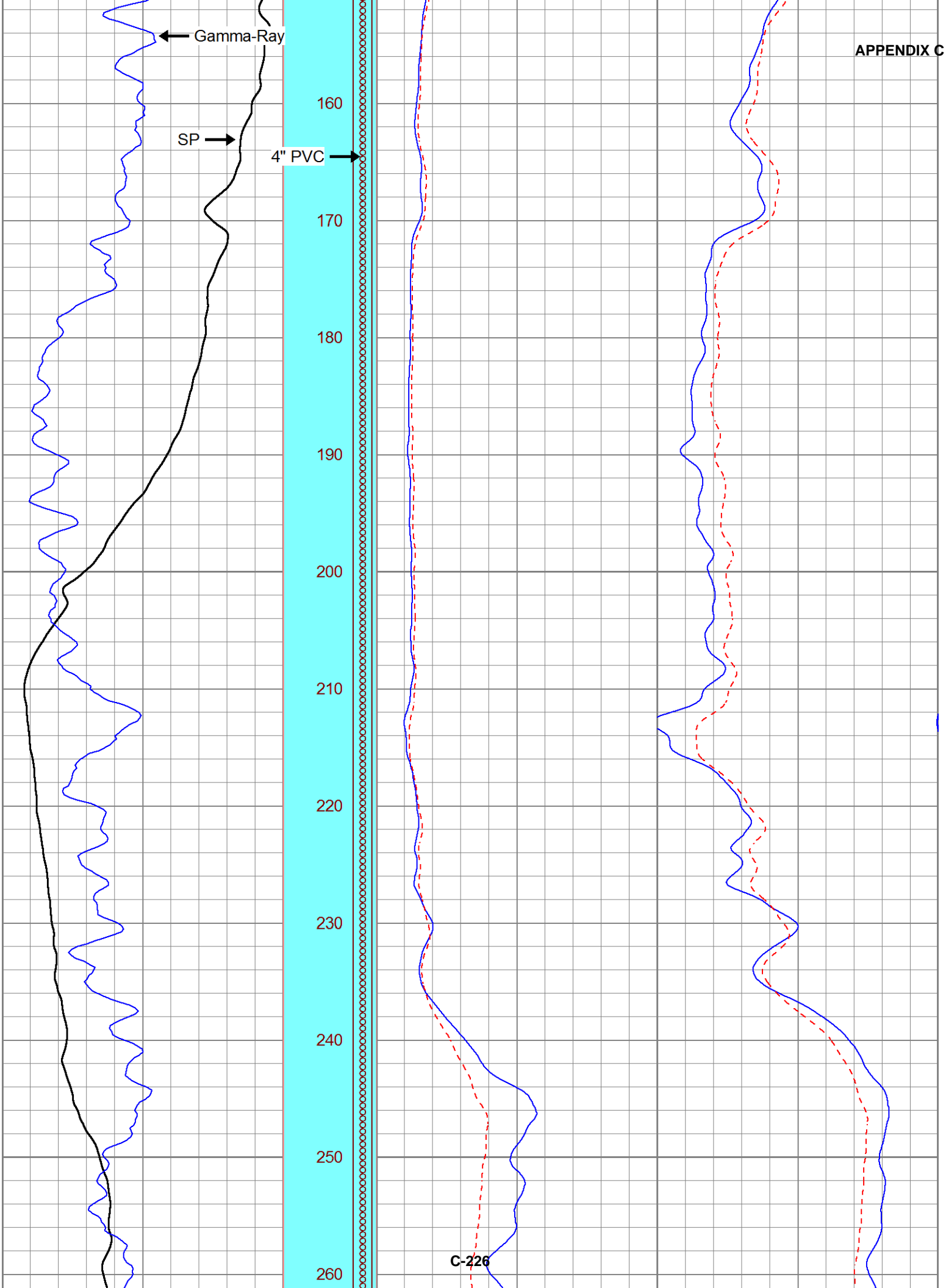
150

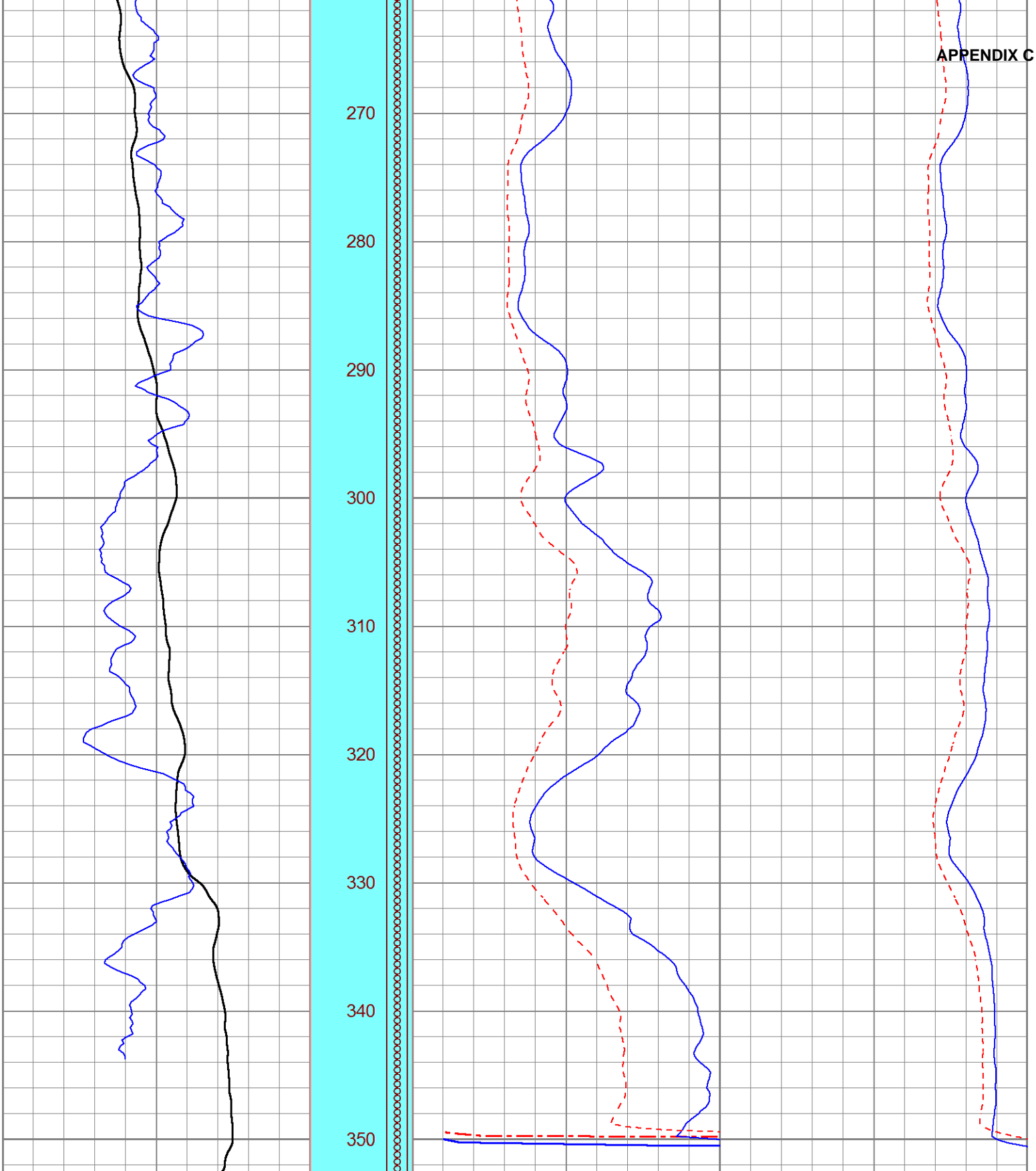
RILM →

← C-225 RILD

→ CILM

← CILD



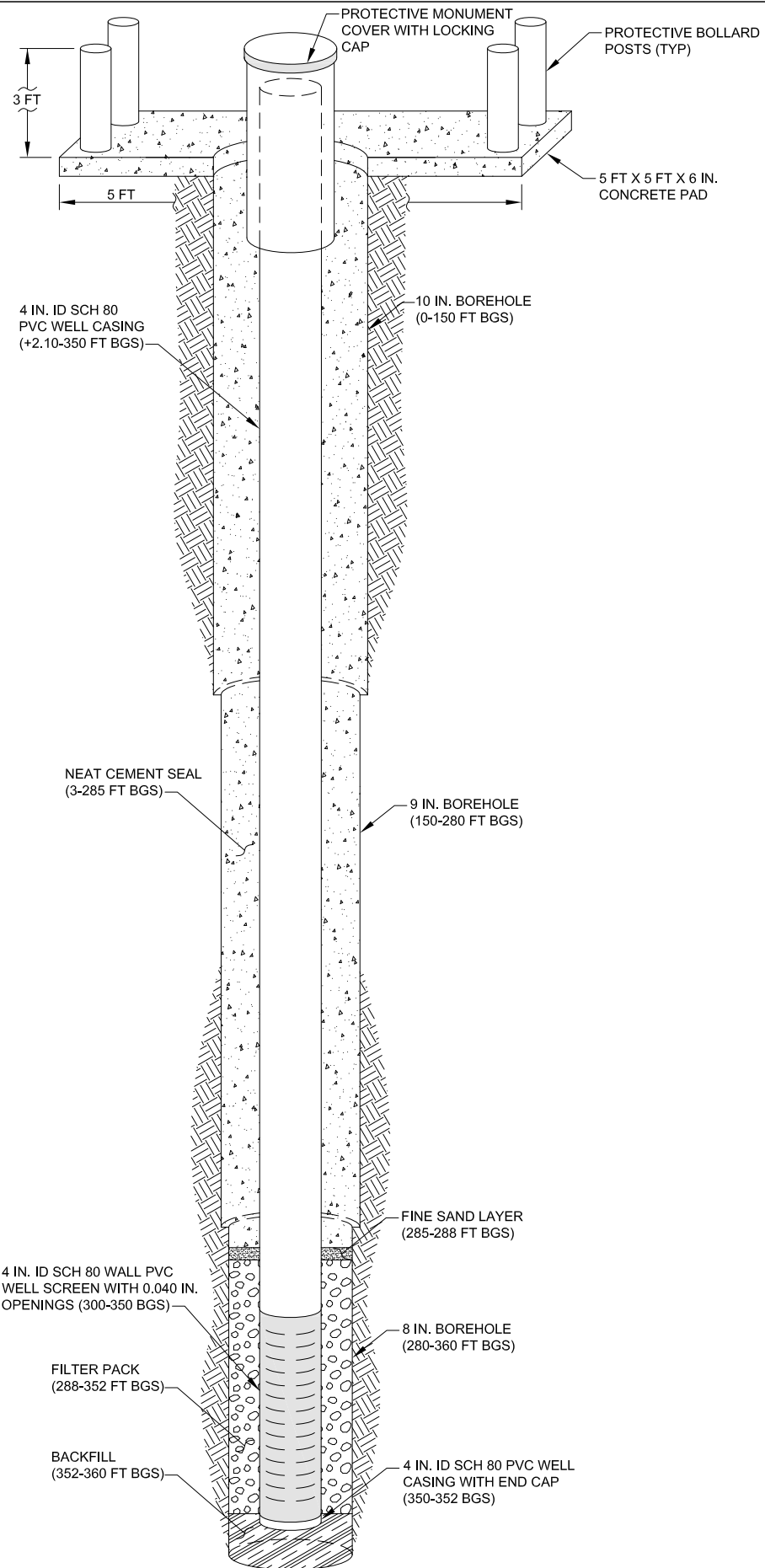


-140	SP (mV)	60
20	Gamma-Ray (GAPI)	120

0	RILM (Ohm-m)	10	1000	CILM (mmho/m)	0
0	RILD (Ohm-m)	10	1000	CILD (mmho/m)	0

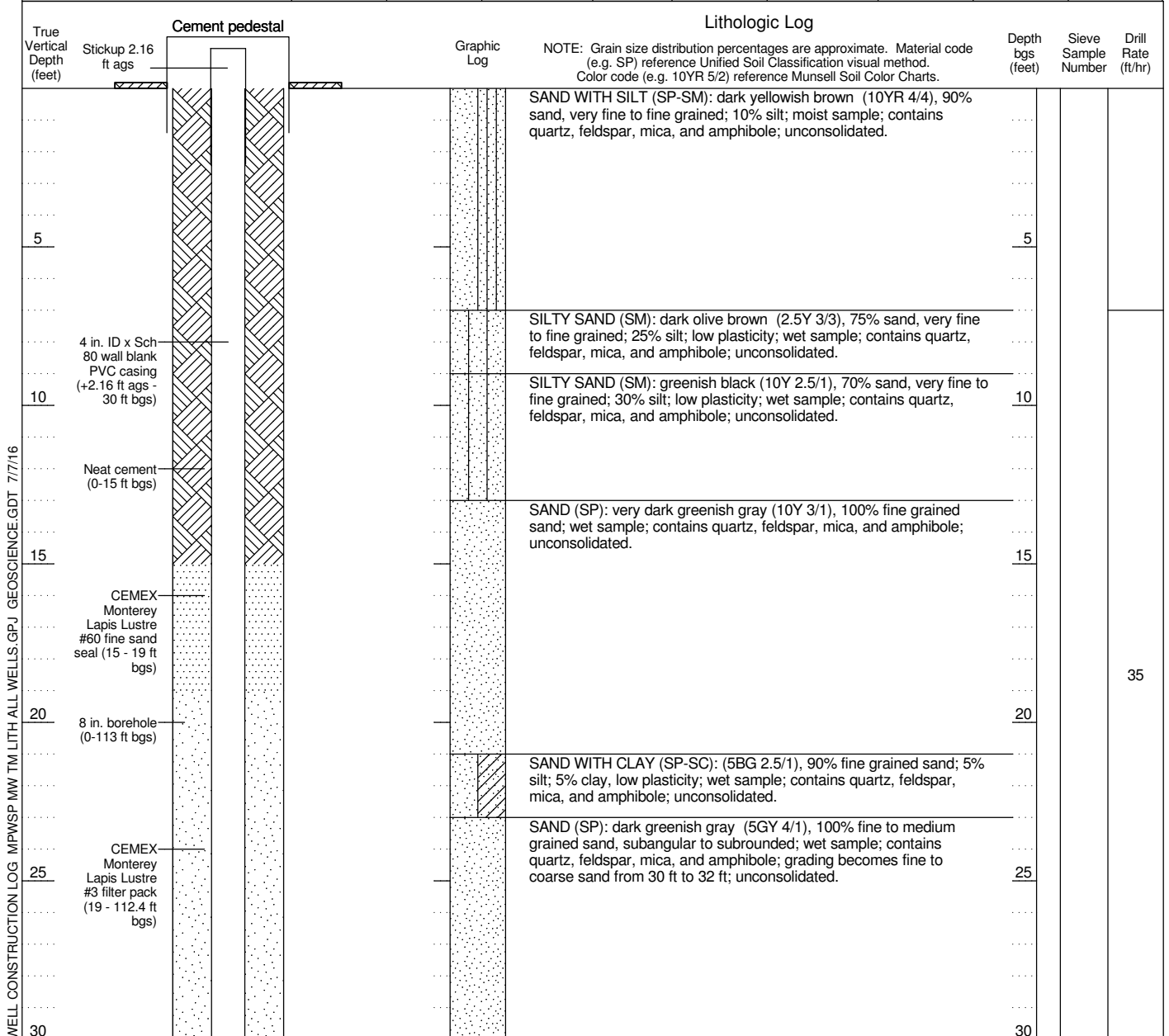
10	RILM backup (Ohm-m)	100
10	RILD backup (Ohm-m)	100

	CILD backup	
10000	(mmho/m)	1000
	CILM backup	
10000	(mmho/m)	1000



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-9S		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA Monte Rd								
REPORT DATE		DRILLING CONTRACTOR Cascade Drilling								
DRILLING CONTRACTOR DRILLER		LOGGED BY J. Sobolew								
DRILLING RIG TYPE	ProSonic 600T	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)
DRILLING METHOD	Sonic	Blank	-2.16	30	32.16	PVC	Sch 80	4 / ID		
SAMPLING METHOD	Core	Screen	30	110	80	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	8 in	Blank	110	112.4	2.4	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	16.26 ft NAVD88									
TOC ELEVATION	18.42 ft NAVD88 (RP)									
START DATE	6/13/15									
FINISH DATE	6/14/15									



WELL NUMBER MPWSP MW-9S		BOREHOLE LITHOLOGIC LOG (continued)			
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA		
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		
			Depth bgs (feet)	Sieve Sample Number	
35	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (30-110 ft bgs)		SAND (SP): dark greenish gray (10GY 4/1), 100% sand, subangular to subrounded, very fine to fine grained; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	35	
			SAND (SP): dark greenish gray (5GY 4/1), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		
40			SANDY SILT (ML): very dark greenish gray (5GY 3/1), 40% silt; 30% sand, very fine grained; 30% clay, low to medium plasticity; moist sample; contains quartz, feldspar, mica, and amphibole.	40	
45					45
				SAND (SP): very dark greenish gray (5GY 3/1), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	
50				CLAY (CL): very dark greenish gray (5GY 3/1), 80% clay, high plasticity; 15% silt; 5% sand, very fine to fine grained; moist sample; contains shells.	50
				SILT (ML): black (N2.5), 70% silt; 30% clay, medium plasticity; contains shells from 56 ft to 57 ft.	
55					55
60				60	
			SAND WITH SILT (SP-SM): very dark gray (N3), 90% sand, subangular to subrounded, very fine to fine grained; 10% silt; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.		
65				65	
			SILT (ML): very dark gray (N3), 70% silt; 30% clay, medium plasticity; fine grained sand; moist sample; contains shells from 67 ft to 69 ft.		
70				70	
			SILT WITH SAND (ML): very dark gray (N3), 80% silt; 15% sand, very fine sand; 5% clay, low to medium plasticity; moist sample.		

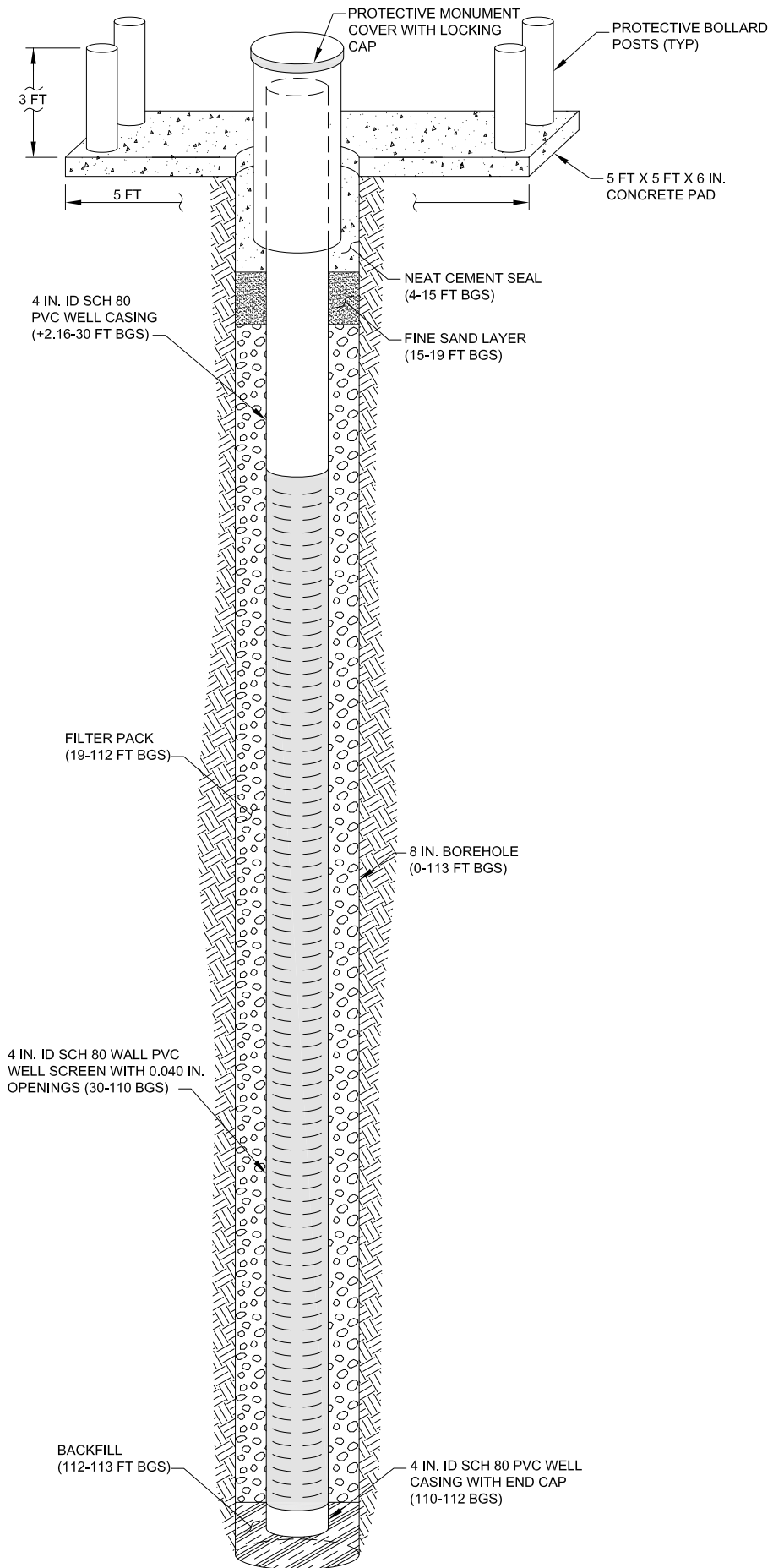
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9S		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75					75		35
				SAND WITH SILT (SP-SM): very dark gray (N3), 90% sand, very fine to fine sand; 10% silt; moist to wet sample; contains quartz, mica, and amphibole; unconsolidated.			
80					80		
85					85		
90					90		
95				SILTY SAND (SM): very dark gray (N3), 60% sand, very fine grained; 40% silt; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	95		
100				SAND (SP): greenish black (5GY 2.5/1), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	100		25
105				SAND (SP): dark olive gray (5Y 3/2), 100% fine to coarse grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole.	105		
				CLAY (CL): greenish black (5GY 2.5/1), 85% clay, low plasticity; 15% silt.			
				SAND (SP): grayish green (5G 5/2), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, and mica; unconsolidated.			
110					110		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

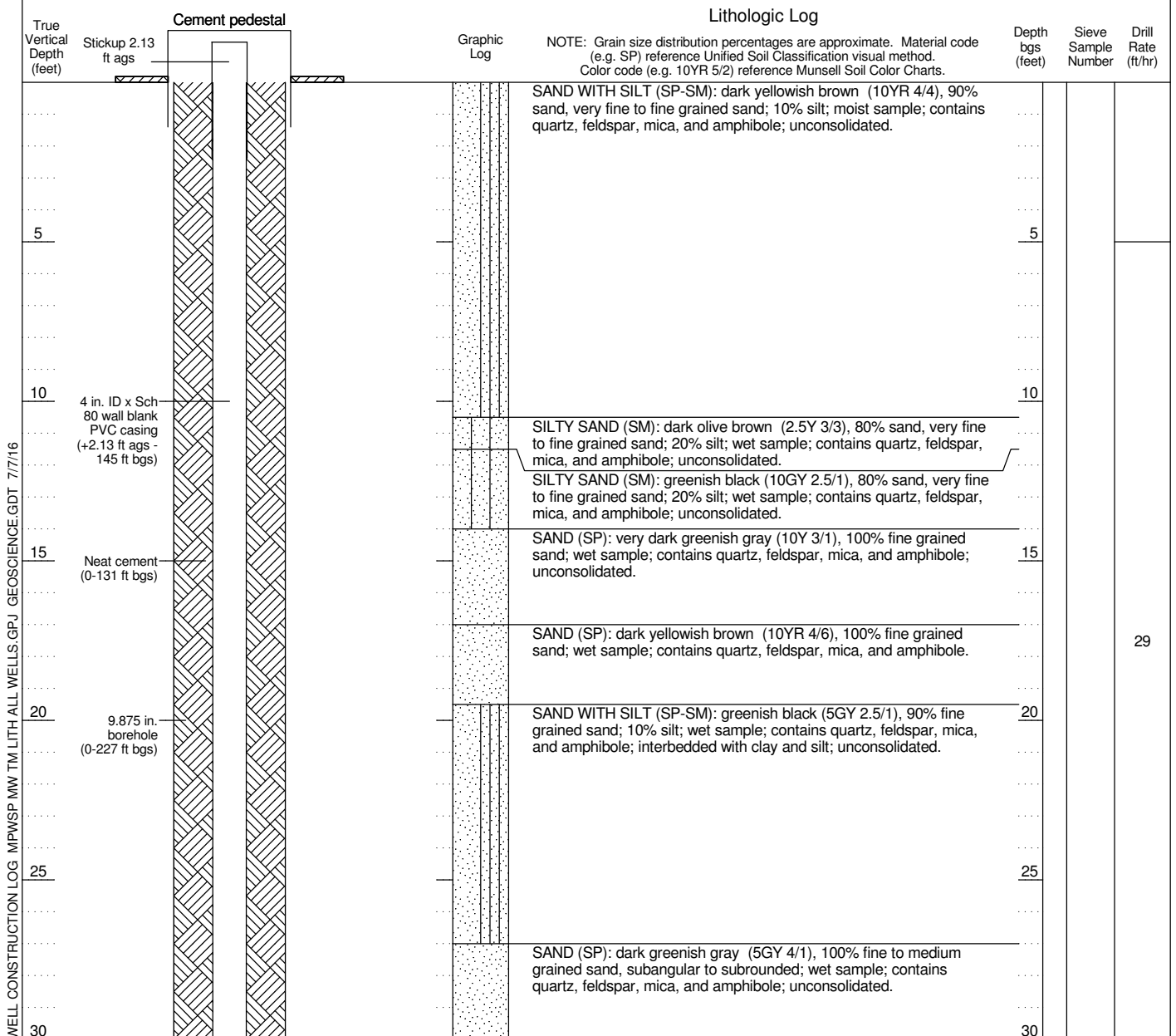
WELL NUMBER MPWSP MW-9S		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
	Blank casing with end cap (110-112.4 ft bgs)			
	Backfill with native material (112.4-113 ft bgs) TD 113 ft bgs			
				25
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts. CLAY (CL): greenish gray (5GY 6/1), 100% clay, high plasticity; moist sample. Bottom of borehole at 113 feet.	

WELL CONSTRUCTION LOG, MPWSP MW TM LITH ALL WELLS.GPJ, GEOSCIENCE.GDT, 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15			LOCATION Marina, CA Monte Rd							
REPORT DATE			LOGGED BY A. Khalighi							
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.13	145	147.13	PVC	Sch 80	4 /			
DRILLING METHOD	Sonic									
SAMPLING METHOD	Core	Screen	145	225	80	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	9.875 in	Blank	225	227	2	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	16.19 ft NAVD88									
TOC ELEVATION	18.32 ft NAVD88 (RP)									
START DATE	6/03/15									
FINISH DATE	6/13/15									



WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS: GPJ GEOSCIENCE: GDT 7/7/16

WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
35				35
40				40
45				45
50				50
55				55
60				60
65				65
70				70

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
75				SAND WITH SILT (SP-SM): black (N2.5), 90% sand, very fine to fine grained sand; 10% silt; moist to wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	75		29
80					80		
85					85		
90					90		
95				SILTY SAND (SM): black (N2.5), 60% sand, very fine grained sand; 40% silt; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	95		15
100				SAND (SP): greenish black (5GY 2.5/1), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	100		
105				SAND (SP): dark olive gray (5Y 3/2), 100% fine to coarse grained sand, subangular to subrounded; moist sample; contains quartz, feldspar, mica, and amphibole.	105		
110				SAND (SP): greenish black (10Y 2.5/1), 95% fine to coarse grained sand; 5% fine gravel; moist sample; contains quartz, feldspar, mica,	110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			and amphibole.	
			CLAY (CL): greenish gray (5G 6/1), 100% clay, high plasticity; moist sample.	15
115				115
120				120
125			SILTY SAND (SM): very dark greenish gray (5GY 3/1), 70% fine grained sand; 30% silt; moist sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	125
130			CLAY (CL): dark greenish gray (5GY 4/1), 100% clay, high plasticity; moist sample.	130
135	CEMEX Monterey Lapis Lustre #60 fine sand seal (131 - 135 ft bgs)		SAND (SP): dark greenish gray (5GY 4/1), 100% fine to medium grained sand; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	135
140	CEMEX Monterey Lapis Lustre #3 filter pack (135 - 227 ft bgs)		SAND WITH GRAVEL (SP): dark greenish gray (5GY 4/1), 70% fine to coarse grained sand, subrounded to rounded; 20% fine to coarse gravel subrounded to rounded fine gravel and rounded coarse gravel; 10% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; contains Monterey Shale and round cobbles; unconsolidated.	140
145				145
150	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (145-225 ft bgs)			150

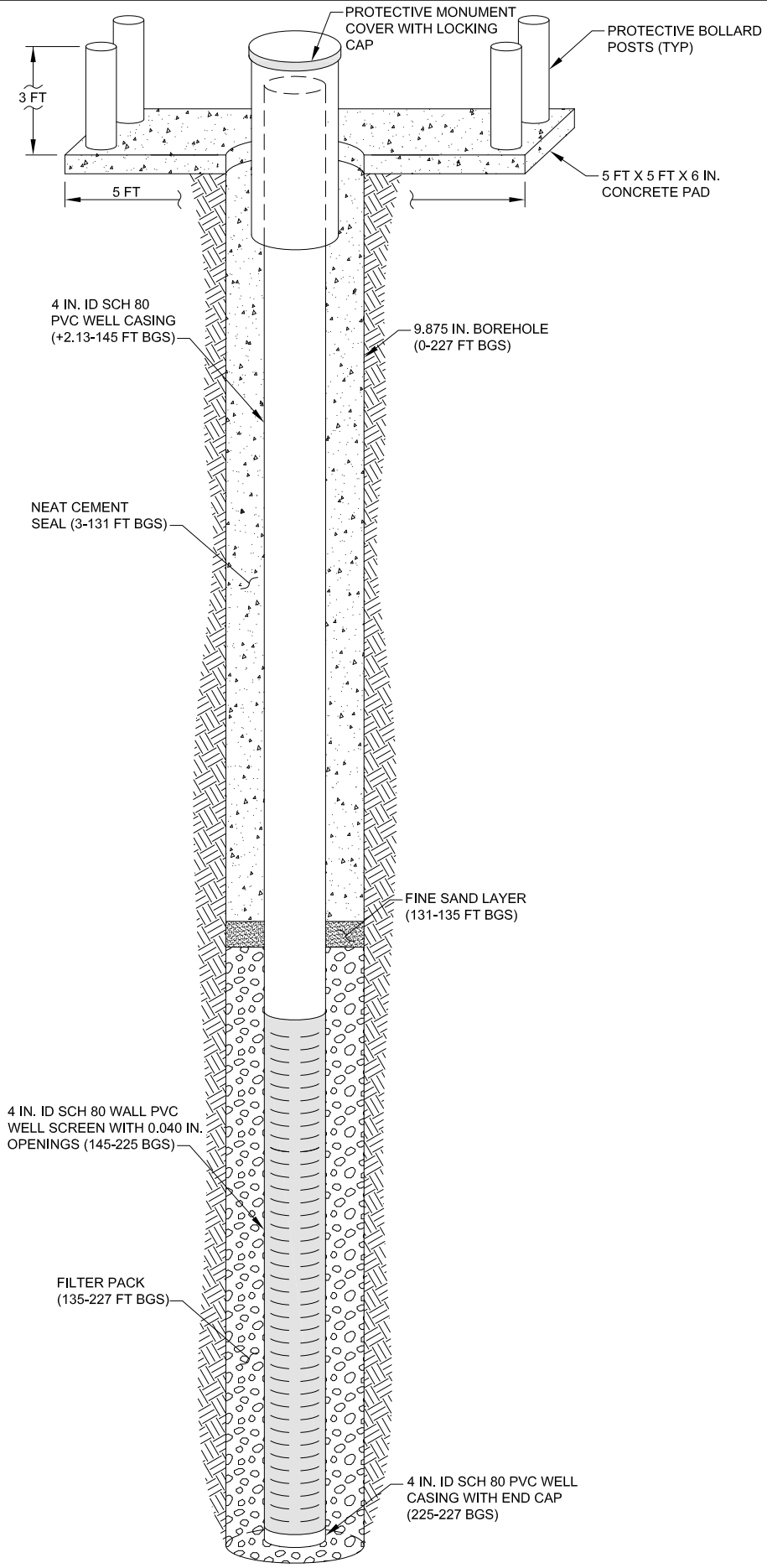
WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
155			SAND (SP): dark greenish gray (5GY 4/1), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; contains quartz, feldspar, and amphibole; unconsolidated.				13
160			GRAVEL WITH SAND (GP): grayish brown (2.5Y 5/2), 65% fine to coarse gravel subangular to subrounded; 20% fine to coarse grained sand, subangular to subrounded, predominately medium to coarse grained sand; 15% cobbles; wet sample; contains quartz, feldspar, and amphibole; contains inclusions of shales and various igneous rocks as gravel; unconsolidated.	160			2.5
165			SAND (SP): grayish brown (2.5Y 5/2), 90% fine to coarse grained sand, subangular to subrounded; 10% fine to coarse gravel rounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.				
165			GRAVEL WITH SAND (GP): olive brown (2.5Y 4/3), 70% fine to coarse gravel rounded; 20% fine to coarse grained sand, subangular to subrounded; 10% cobbles; moist sample; contains quartz, feldspar, mica, and amphibole; contains round cobbles; grading with depth: cobbles increase to 25%, sand to 20% and gravel to 55%.	165			
170			SAND WITH GRAVEL (SP): very dark greenish gray (5GY 3/1), 70% fine to coarse grained sand, subangular to subrounded; 30% fine to coarse gravel rounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	170			
175			SAND (SP): dark grayish brown (2.5Y 4/2), 100% fine to medium grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.				
175			GRAVEL WITH SAND (GP): dark olive brown (2.5Y 3/3), 75% fine to coarse gravel rounded; 20% fine to coarse grained sand, subangular to subrounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole; unconsolidated.	175			
180			SAND (SP): gray (2.5Y 5/1), 100% fine to coarse grained sand, subangular to subrounded; wet sample; contains quartz, feldspar, mica, and amphibole; unconsolidated.	180			
185			GRAVEL WITH SAND (GP): gray (2.5Y 5/1), 70% fine to coarse gravel subrounded to rounded; 15% fine to coarse grained sand, subangular to subrounded; 15% cobbles; wet sample; contains quartz, feldspar, mica, and amphibole; includes Monterey Shale with various igneous and sedimentary rocks; unconsolidated.	185			20
190			SAND WITH GRAVEL (SP): dark grayish brown (2.5Y 4/2), 80% medium to coarse grained sand, subangular to subrounded; 20% fine to coarse gravel rounded; wet sample; contains quartz, feldspar, mica, and amphibole; Includes Monterey Shale and various igneous and sedimentary rocks as gravel; unconsolidated.	190			

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

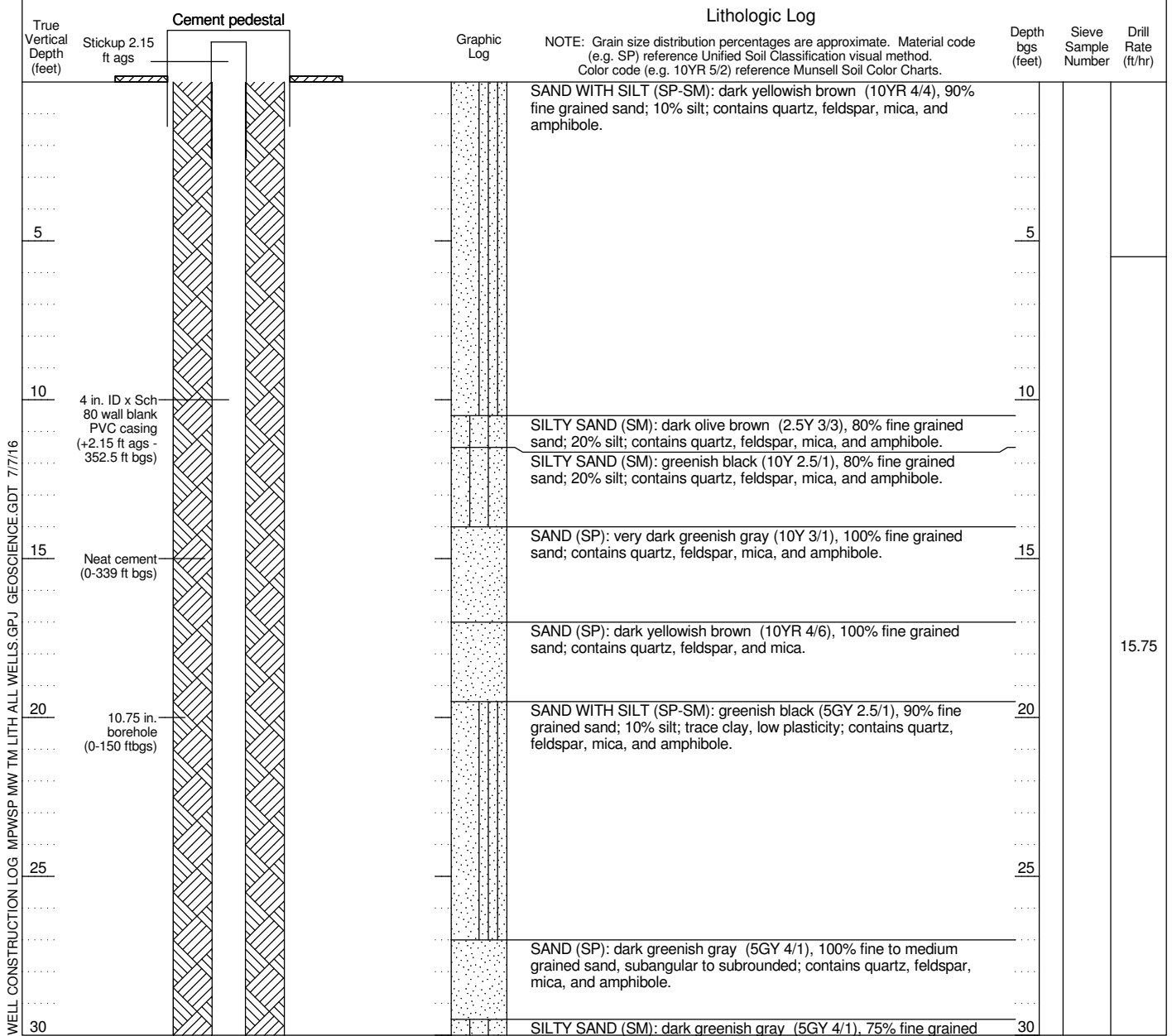
WELL NUMBER MPWSP MW-9M		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
195			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts. GRAVEL (GP): dark grayish brown (2.5Y 4/2), 70% fine to coarse gravel subrounded to rounded, subrounded to rounded; 30% cobbles; subrounded to rounded; wet sample; includes round cobbles and Monterey Shale with various igneous and sedimentary rocks; unconsolidated.	195
200			GRAVEL WITH SAND (GP): dark grayish brown (2.5Y 4/2), 50% fine to coarse gravel subrounded to rounded coarse gravel; 45% medium to coarse grained sand, subangular to subrounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole; contains subrounded and rounded cobbles and Monterey Shale; unconsolidated.	200
205			SAND (SP): dark brown (7.5YR 3/4), 100% fine grained sand; trace fine gravel; wet sample; contains quartz, feldspar, mica, and amphibole; contains weakly cemented clasts; trace gravel at 207 ft; unconsolidated.	205
210			SAND (SP): dark brown (7.5YR 3/4), 100% fine to medium grained sand; contains quartz, feldspar, mica, and amphibole; contains weakly cemented clasts that increase in quantity; unconsolidated.	210
215				215
220				220
225	Blank casing with end cap (225-227 ft bgs)			225
	TD 227 ft bgs			
			Bottom of borehole at 227 feet.	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16



WELL PROFILE
NOT TO SCALE

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG								
CLIENT PROJECT NUMBER Cal Am 14077-15		LOCATION Marina, CA Monte Rd								
REPORT DATE		LOGGED BY A. Khalighi and E. Crow-Willard								
DRILLING CONTRACTOR DRILLER Cascade Drilling D. King										
DRILLING RIG TYPE	SCREEN / BLANK	TOP DEPTH (ft bgs)	BOTTOM DEPTH (ft bgs)	LENGTH (ft)	MATERIAL	WALL THICKNESS (in.)	DIAMETER (in.)	SCREEN TYPE	PERF. SIZE (in.)	
ProSonic 600T	Blank	-2.15	352.5	354.65	PVC	Sch 80	4 / ID			
DRILLING METHOD	Sonic	Blank	352.5	392.5	40	PVC	Sch 80	4 / ID	Slotted	0.04
SAMPLING METHOD	Core	Screen	352.5	392.5	40	PVC	Sch 80	4 / ID	Slotted	0.04
BOREHOLE DIAMETER	10.75, 9.875, 8 in	Blank	392.5	395	2.5	PVC	Sch 80	4 / ID		
SURFACE ELEVATION	16.17 ft NAVD88									
TOC ELEVATION	18.32 ft NAVD88 (RP)									
START DATE	5/15/15									
FINISH DATE	6/03/15									



WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	
			sand; 15% silt; 10% clay, low to medium plasticity; contains quartz, feldspar, mica, and amphibole.	
35			SAND (SP): dark greenish gray (5GY 4/1), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.	35
			SAND (SP): gray (N5), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	
40			SANDY SILT (MH): very dark greenish gray (5G 3/1), 40% silt; 30% fine grained sand; 30% clay, medium to high plasticity; contains quartz, feldspar, mica, and amphibole.	40
45			CLAYEY SAND (SC): very dark greenish gray (5G 3/1), 70% fine grained sand; 15% silt; 15% clay, no to low plasticity; contains quartz, feldspar, mica, and amphibole.	45
			SAND (SP): very dark greenish gray (5G 3/1), 95% fine to coarse grained sand, subangular to subrounded; 5% silt; contains quartz, feldspar, mica, and amphibole; sea shells.	
50			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 75% clay, high plasticity; 20% silt; 5% fine grained sand.	50
			SAND (SP): greenish black (5GY 2.5/1), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.	
55			SILT (MH): black (N2.5), 70% silt; 30% clay, medium to high plasticity; trace sand; black ash spots, more sand with depth.	55
60				60
65				65
			SILT WITH SAND (ML): black (N2.5), 80% silt; 15% fine grained sand; 5% clay, low to medium plasticity.	
70				70

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-9D** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT PROJECT NUMBER Cal Am 14077-15 LOCATION **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			Material Code	Description			
75				SAND WITH SILT (SP-SM): black (N2.5), 90% fine grained sand; 10% silt; contains quartz, feldspar, mica, and amphibole.	75	1	
80					80		
85					85		
90					90	2	
95				SILTY SAND (SM): black (N2.5), 60% fine grained sand; 40% silt; contains quartz, feldspar, mica, and amphibole.	95		
100				SAND (SP): greenish black (5GY 2.5/1), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.	100		
105				SAND (SP): dark olive gray (5Y 3/2), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, and mica.	105		
110				SAND (SP): dark gray (5Y 4/1), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded;	110		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
			contains quartz, feldspar, mica, and amphibole.	
115			FAT CLAY (CH): greenish black (10Y 2.5/1), 85% clay, high plasticity; 5% fine to coarse gravel; 5% fine to coarse grained sand; 5% silt; shale, claystones.	
120			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 100% clay, high plasticity.	
125			SILTY SAND (SM): very dark greenish gray (5GY 3/1), 70% fine grained sand; 30% silt; contains quartz, feldspar, mica, and amphibole.	
130			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 100% clay, high plasticity.	
135			SAND (SP): dark greenish gray (5GY 4/1), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.	4
140			SAND WITH GRAVEL (SP): dark greenish gray (5GY 4/1), 70% fine to coarse grained sand, subrounded to rounded; 20% fine to coarse gravel subrounded to rounded; 10% cobbles; contains quartz, feldspar, mica, and amphibole.	
145			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 100% clay, high plasticity.	5
150			FAT CLAY (CH): very dark greenish gray (5GY 3/1), 100% clay, high plasticity.	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
155	9.875 in. borehole (150-300 ft bgs)		SAND (SP): dark greenish gray (5GY 4/1), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; contains quartz, feldspar, and amphibole.		155		
160			SAND WITH GRAVEL (SP): dark greenish gray (5GY 4/1), 65% fine to coarse grained sand, subangular to rounded; 25% fine to coarse gravel subangular to rounded; 10% cobbles; contains quartz, feldspar, and amphibole; shale.		160	6	
165			GRAVEL WITH SAND (GP): dark greenish gray (5GY 4/1), 70% fine to coarse gravel subangular to subrounded; 15% fine to coarse grained sand, subangular to subrounded; 15% cobbles; contains quartz, feldspar, and amphibole; shale.		165		
170			SAND (SP): grayish brown (2.5Y 5/2), 90% fine to coarse grained sand, subangular to rounded; 10% fine gravel subangular to rounded; contains quartz, feldspar, mica, and amphibole.		170		
175			GRAVEL WITH SAND (GP): olive brown (2.5Y 4/3), 70% fine to coarse gravel subangular to rounded; 20% fine to coarse grained sand, subangular to rounded; 10% cobbles; contains quartz, feldspar, mica, and amphibole.		175	7	
180			SAND WITH GRAVEL (SP): very dark greenish gray (5GY 3/1), 70% fine to coarse grained sand, subangular to rounded; 30% fine to coarse gravel subangular to rounded; contains quartz, feldspar, mica, and amphibole; shale; more gravel with depth.		180		9
185			SAND (SP): dark grayish brown (2.5Y 4/2), 100% fine to medium grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.		185		
190			GRAVEL WITH SAND (GP): dark olive brown (2.5Y 3/3), 75% fine to coarse gravel subangular to rounded; 20% fine to coarse grained sand, subangular to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole.		190	8	
			SAND (SP): gray (2.5Y 5/1), 100% fine to coarse grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.				
			GRAVEL WITH SAND (GP): gray (2.5Y 5/1), 70% fine to coarse gravel subrounded to rounded; 15% fine to coarse grained sand, subrounded to rounded; 15% cobbles; contains quartz, feldspar, mica, and amphibole.				
	SAND WITH GRAVEL (SP): dark grayish brown (2.5Y 4/2), 80% medium to coarse grained sand, subangular to rounded; 20% fine to coarse gravel subangular to rounded; contains quartz, feldspar, mica, and amphibole; shale.				9		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
195			GRAVEL (GP): dark grayish brown (2.5Y 4/2), 70% fine to coarse gravel subrounded to rounded; 30% cobbles; subrounded to rounded; shale.		195	10	
200			GRAVEL WITH SAND (GP): dark grayish brown (2.5Y 4/2), 50% fine to coarse gravel subangular to rounded; 45% medium to coarse grained sand, subangular to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole.		200		
205			SAND (SP): dark brown (7.5YR 3/4), 100% fine grained sand; contains quartz, feldspar, mica, and amphibole.		205	11	
210					210		9
215					215	12	
220					220		
225					225		
230			CLAY (CL): dark grayish brown (2.5Y 4/2), 85% clay, medium plasticity; 15% silt.		230	13	

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth lgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
235			SAND (SP): dark olive brown (2.5Y 3/3), 95% fine grained sand; 5% silt; contains quartz, feldspar, mica, and amphibole.	CLAY (CL): greenish gray (10Y 5/1), 90% clay, low to medium plasticity; 10% silt.	235		
240			SANDY FAT CLAY (CH): grayish brown (2.5Y 5/2), 65% clay, medium plasticity; 30% fine grained sand; 5% silt.		240		
245			CLAYEY SAND (SC): grayish brown (2.5Y 5/2), 80% fine grained sand; 15% clay, low plasticity; 5% silt; contains quartz, feldspar, mica, and amphibole.		245		9 4 4
250			SILTY SAND (SM): light olive brown (2.5Y 5/3), 80% fine grained sand; 15% silt; 5% clay, low plasticity; contains quartz, feldspar, mica, and amphibole.	FAT CLAY WITH SAND (CH): dark greenish gray (10Y 4/1), 70% clay, medium to high plasticity; 25% fine grained sand; 5% silt.	250		
255			SAND WITH SILT (SP-SM): dark olive gray (5Y 3/2), 90% fine to medium grained sand, subangular to subrounded; 10% silt; contains quartz, feldspar, mica, and amphibole.	FAT CLAY (CH): dark greenish gray (10Y 4/1), 100% clay, high plasticity.	255		
260			FAT CLAY WITH SAND (CH): olive brown (2.5Y 4/3), 75% clay, high plasticity; 20% fine grained sand; 5% silt.		260		
265					265		8.5
270					270		

WELL CONSTRUCTION LOG: MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)					
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA				
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.				
			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 75% fine to coarse grained sand, subangular to rounded; 20% fine to coarse gravel subangular to rounded; 5% cobbles; contains quartz, feldspar, mica, and amphibole; shale.				
275			SAND (SW): olive brown (2.5Y 4/4), 95% fine to coarse grained sand, subangular to subrounded; 5% fine gravel subangular to subrounded; contains quartz, feldspar, mica, and amphibole.		275		
			FAT CLAY (CH): light olive brown (2.5Y 5/4), 100% clay, low to medium plasticity; trace sand.				
280					280		
285					285		
			SANDY CLAY (CL): light olive brown (2.5Y 5/4), 60% clay, low to medium plasticity; 35% fine grained sand, subangular to subrounded; 5% fine to coarse gravel subangular to subrounded; sandstone and claystone.				
290					290		
295					295		
			FAT CLAY (CH): light olive brown (2.5Y 5/3), 90% clay, high plasticity; 10% fine grained sand, subangular to subrounded; contains quartz, feldspar, mica, and amphibole.				
300					300		
			CLAYEY SAND (SC): light olive brown (2.5Y 5/3), 85% fine grained sand, subangular to subrounded; 15% clay; well sorted; contains quartz, feldspar, mica, and amphibole.				
305					305		
			FAT CLAY (CH): light olive brown (2.5Y 5/3), 100% clay, high plasticity; trace fine grained sand, subangular to subrounded; strong cementation; contains mica, and amphibole; mudstone.				
310					310		

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

8 in. borehole
(300-395 ft
bgs)

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth bgs (feet)	Sieve Sample Number
				8.5
315			SANDY FAT CLAY (CH): light olive brown (2.5Y 5/3), 60% clay, high plasticity; 40% fine grained sand, subangular to subrounded, predominantly between 315.5-316 ft bgs; moderate cementation; contains quartz, feldspar, mica, and amphibole.	315
320			SANDY FAT CLAY (CH): light olive brown (2.5Y 5/3) and grayish brown (2.5Y 5/2), 60% clay, high plasticity; 40% fine grained sand, subangular to subrounded; moderate cementation.	320
325			CLAYEY SAND (SC): light olive brown (2.5Y 5/3) and grayish brown (2.5Y 5/2), 60% fine grained sand, subangular to subrounded, trace medium grained; 40% clay, high plasticity; well sorted; moderate cementation; contains quartz, feldspar, mica, and amphibole.	325
330			FAT CLAY (CH): greenish gray (10GY 5/1) and (10B 4/1), 100% clay, medium to high plasticity; trace fine grained sand, subangular to subrounded, predominantly 334.4-335 ft bgs; trace silt; strong cementation; contains quartz, feldspar, mica, and amphibole.	330
335			FAT CLAY (CH): olive (5Y 5/3), 90% clay, high plasticity; 10% silt; trace fine grained sand, subangular to subrounded; strong cementation; contains quartz, feldspar, mica, and amphibole.	335
340				340
345	CEMEX Monterey Lapis Lustre #60 fine sand seal (339 - 343 ft bgs)			345
	CEMEX Monterey Lapis Lustre #3 filter pack (343 - 395 ft bgs)			
350			SANDY FAT CLAY (CH): grayish brown (2.5Y 5/2), 60% clay, high plasticity; 40% fine to coarse grained sand, angular to subrounded; trace fine to coarse gravel up to 70 mm, angular to subrounded; moderate cementation; contains quartz, feldspar, mica, and amphibole; petrified wood.	350

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER MPWSP MW-9D		BOREHOLE LITHOLOGIC LOG (continued)		
CLIENT PROJECT NUMBER		Cal Am 14077-15	LOCATION Marina, CA	
True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log	
			Depth (feet)	Sieve Sample Number
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Drill Rate (ft/hr)
355	4 in. ID x Sch 80 wall PVC well screen with 0.040 in. slots (352.5-392.5 ft bgs)		SAND WITH CLAY (SP-SC): light yellowish brown (2.5Y 6/3), 90% fine to coarse grained sand, angular to subrounded; 10% clay; trace fine to coarse gravel up to 65 mm, angular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole. CLAYEY SAND WITH GRAVEL (SC): light yellowish brown (2.5Y 6/3), 60% fine to coarse grained sand, angular to subrounded; 25% clay; 15% fine to coarse gravel up to 25 mm, angular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	355
360			SAND (SP): light yellowish brown (2.5Y 6/3), 90% fine to coarse grained sand, angular to subrounded; 5% fine to coarse gravel up to 35 mm, angular to subrounded; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole.	360
365			SAND (SP): light olive brown (2.5Y 5/3), 90% fine to coarse grained sand, angular to subrounded; 5% fine to coarse gravel up to 35 mm, angular to subrounded; 5% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole. SANDY FAT CLAY WITH GRAVEL (CH): light olive brown (2.5Y 5/3), 50% clay, medium plasticity; 35% fine to coarse grained sand; 15% fine to coarse gravel up to 40 mm; strong cementation; contains quartz, feldspar, mica, and amphibole; red alteration; mudstone.	365
370			FAT CLAY (CH): light olive brown (2.5Y 5/4), 100% clay, high plasticity; strong cementation.	370
375			SAND WITH CLAY (SP-SC): light olive brown (2.5Y 5/3), 90% fine to coarse grained sand, angular to subrounded; 10% clay; trace fine to coarse gravel up to 28 mm, angular to subrounded; poorly sorted; contains quartz, feldspar, mica, and amphibole.	375
380			SAND (SP): light yellowish brown (2.5Y 6/3), 95% fine to coarse grained sand, angular to subrounded; 5% fine to coarse gravel up to 70 mm, angular to subrounded; trace clay; poorly sorted; contains quartz, feldspar, mica, and amphibole; grades finer with depth; mudstone.	380
385			SAND WITH GRAVEL (SP): light yellowish brown (2.5Y 6/3), 80% fine to coarse grained sand, angular to subrounded; 20% fine to coarse gravel up to 45 mm, angular to subrounded; trace clay; poorly sorted; contains quartz, feldspar, mica, and amphibole. SANDY FAT CLAY WITH GRAVEL (CH): light olive brown (2.5Y 5/4), 50% clay; 30% fine to coarse grained sand, angular to subrounded; 20% fine to coarse gravel up to 70 mm, angular to subrounded; strong cementation; contains quartz, feldspar, mica, and amphibole.	385
390			SAND WITH CLAY AND GRAVEL (SP-SC): light yellowish brown (2.5Y 6/3), 70% fine to coarse grained sand, angular to subrounded; 20% fine to coarse gravel up to 65 mm, angular to subrounded; 10% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole; mudstone. SAND WITH CLAY AND GRAVEL (SP-SC): light olive brown (2.5Y 5/3), 70% fine to coarse grained sand, angular to subrounded; 20% fine to coarse gravel up to 60 mm, angular to subrounded; 10% clay; poorly sorted; contains quartz, feldspar, mica, and amphibole; mudstone.	390

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

WELL NUMBER **MPWSP MW-9D** **BOREHOLE LITHOLOGIC LOG (continued)**

CLIENT Cal Am LOCATION
 PROJECT NUMBER 14077-15 **Marina, CA**

True Vertical Depth (feet)	(continued)	Graphic Log	Lithologic Log		
			NOTE: Grain size distribution percentages are approximate. Material code (e.g. SP) reference Unified Soil Classification visual method. Color code (e.g. 10YR 5/2) reference Munsell Soil Color Charts.	Depth bgs (feet)	Sieve Sample Number	Drill Rate (ft/hr)
395	Blank casing with end cap (392.5-395 ft bgs) TD 395 ft bgs		SAND WITH CLAY (SP-SC): light olive brown (2.5Y 5/4), 80% fine to coarse grained sand, angular to subrounded; 10% fine to coarse gravel up to 40 mm, angular to subrounded; 10% clay; medium sorted; contains quartz, feldspar, mica, and amphibole.		
			SAND WITH GRAVEL (SP): light olive brown (2.5Y 5/4), 70% fine to coarse grained sand, angular to subrounded; 30% fine to coarse gravel up to 40 mm, angular to subrounded; trace clay; poorly sorted; contains quartz, feldspar, mica, and amphibole. Bottom of borehole at 395 feet.	395	

WELL CONSTRUCTION LOG MPWSP MW TM LITH ALL WELLS.GPJ GEOSCIENCE.GDT 7/7/16

PACIFIC SURVEYS

**TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY**

Job No. 19633	Company CASCADE DRILLING	Well MW-9D	Field SALINAS	County MONTEREY	State CA
File No.	Other Services: DILGR				

Location
NORTH OF SALINAS RIVER ON MONTE RD.
GPS: N 36o 44.026' W 121o 46.750'

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		K.B. D.F. G.L.
Date	05-28-2015		
Run Number	ONE		
Depth Driller	395'		
Depth Logger	395'		
Bottom Logged Interval	395'		
Top Log Interval	0'		
Open Hole Size	10.75" (65"-149')	9.875" (149"-249')	8" (249"-395')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	22'		
Bentonite Seal	N/A		
Time Well Ready	1300		
Time Logger on Bottom	1330		
Equipment Number	PS-3		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A KHALIGHI		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	10.75"	0'	149'				
TWO	9.875"	149'	249'				
THREE	8"	249'	395'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	10.75" OD	N/A	0'	65'
Prot. String				
Production String	4" PVC	SCH 80	0'	395'
Liner				

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19633.db
 Dataset Pathname tmp
 Dataset Creation Thu May 28 13:17:56 2015

Calibration Report

Temperature Calibration Report

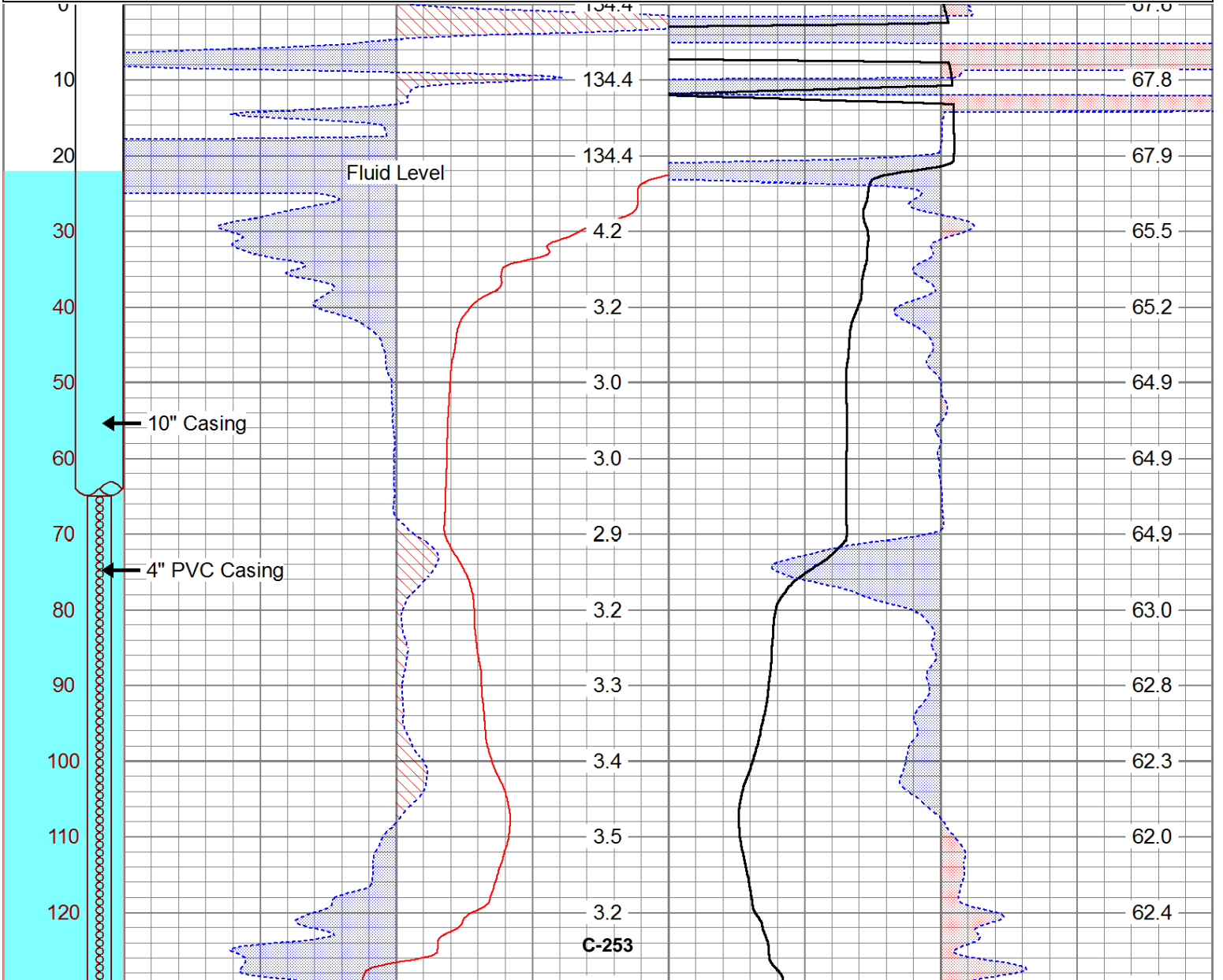
APPENDIX C

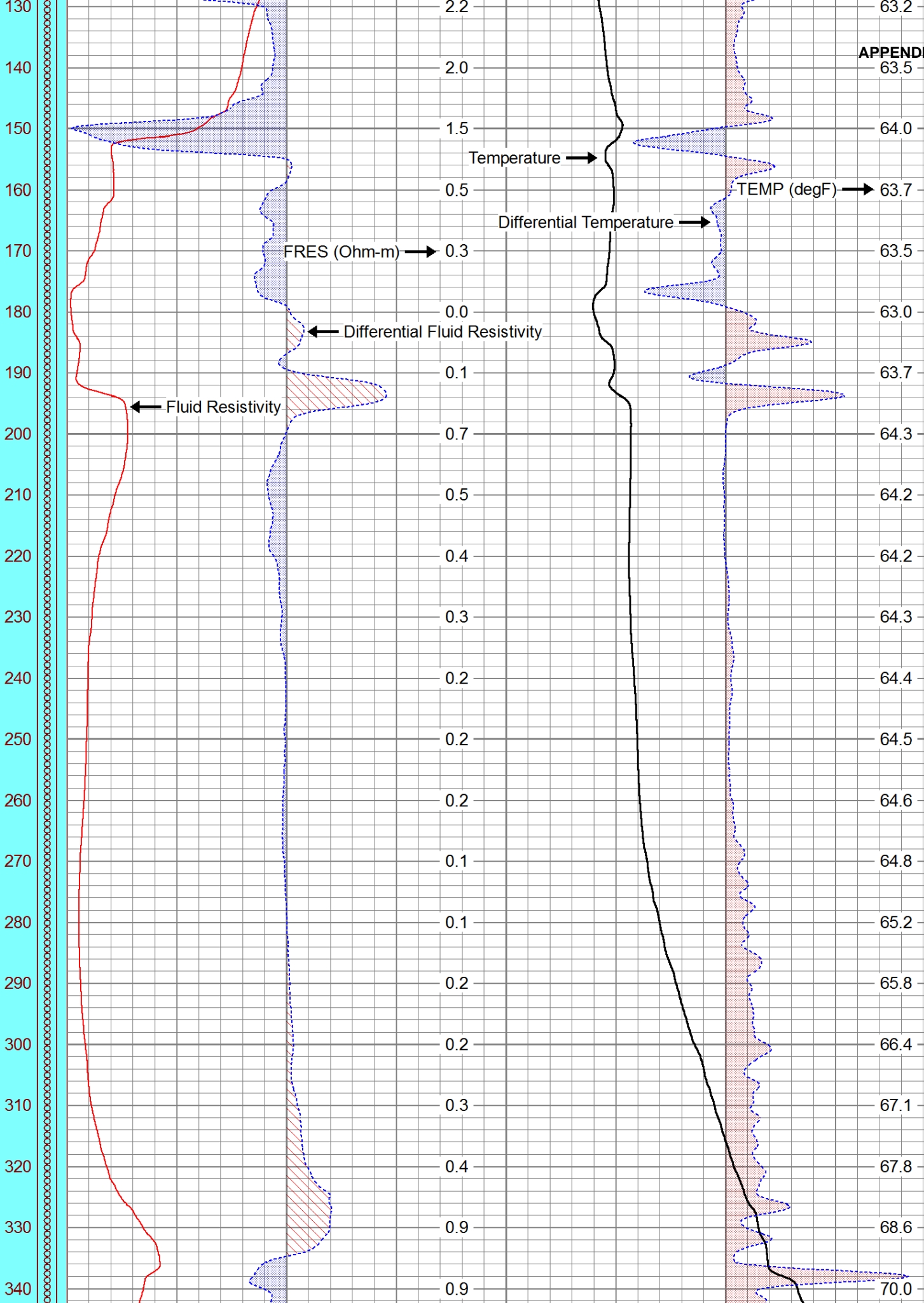
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 Tool Model: MLS
 Performed: Wed Jan 14 15:09:13 2015

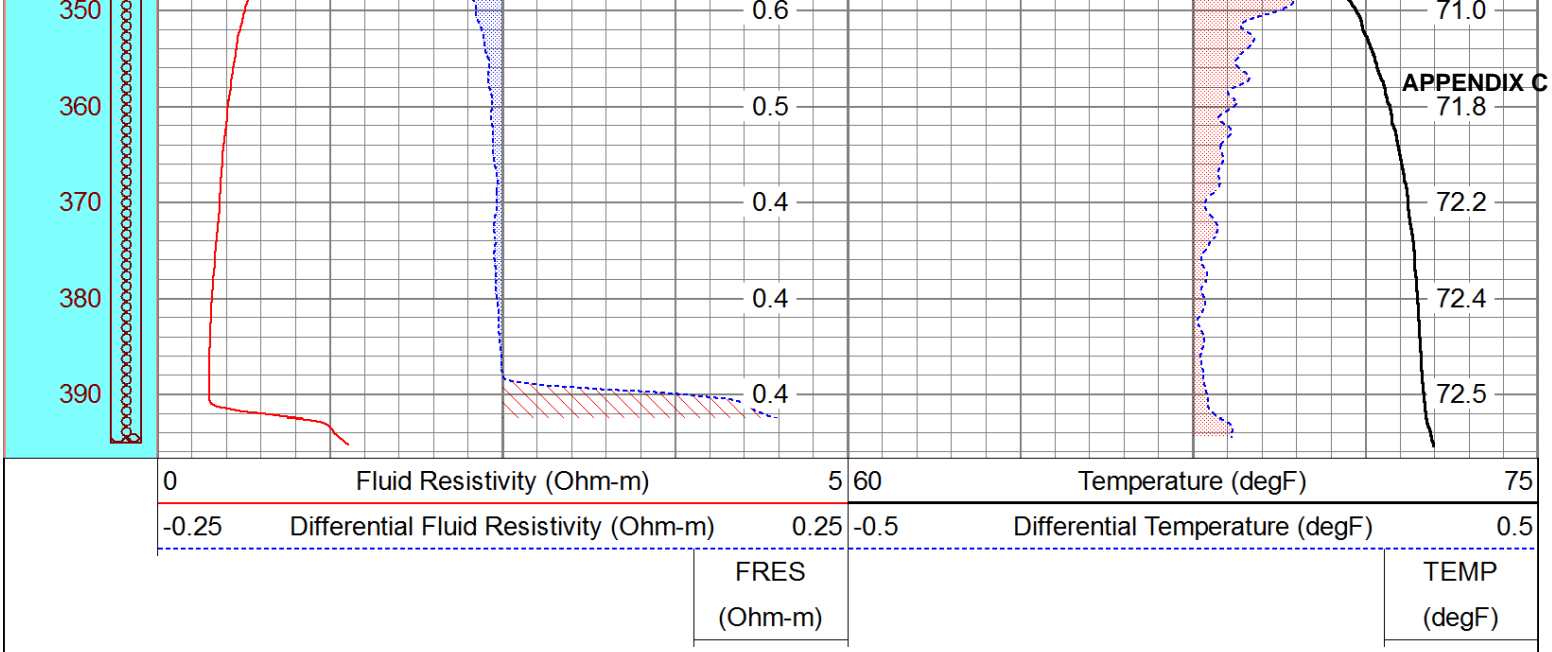
	Reference	Reading
Low Reference:	43.34 degF	1441.00cps
High Reference:	149.00 degF	4545.00cps
Gain:	0.03	
Offset:	-9.71	
Delta Spacing	2	

Database File 19633.db
 Dataset Pathname tmp
 Presentation Format firttemp2
 Dataset Creation Thu May 28 13:17:56 2015
 Charted by Depth in Feet scaled 1:240

	Fluid Resistivity (Ohm-m)	5 60	Temperature (degF)	75
	-0.25 Differential Fluid Resistivity (Ohm-m) 0.25		-0.5 Differential Temperature (degF) 0.5	
	FRES (Ohm-m)		TEMP (degF)	







Job No. 19633	Company CASCADE DRILLING
Well MW-9D	
Field SALINAS	
File No.	County MONTEREY
	State CA

Location
NORTH OF SALINAS RIVER ON MONTE RD.
GPS: N 36o 44.026' W 121o 46.750'

Other Services:
TEMPERATURE
FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		
Date	05-28-2015		
Run Number	ONE		
Depth Driller	395'		
Depth Logger	395'		
Bottom Logged Interval	395'		
Top Log Interval	0'		
Open Hole Size	10.75" (65'-149')	9.875" (149'-249')	8" (249'-395')
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	22'		
Bentonite Seal	N/A		
Time Well Ready	1300		
Time Logger on Bottom	1330		
Equipment Number	PS-3		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	A KHALIGHI		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
ONE	10.75"	0'	149'
TWO	9.875"	149'	249'
THREE	8"	249'	395'
Casing Record	Size	Wgt/Ft	Top
Surface String	10.75" OD	N/A	0'
Prot. String			
Production String	4" PVC	SCH 80	0'
Liner			395'

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Database File 19633.db
 Dataset Pathname DIL
 Dataset Creation Thu May 28 14:22:35 2015

Calibration Report

Serial-Model:
Surface Cal Performed:

0001-ALT
Thu May 28 14:18:00 2015

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	1415.523	3902.666	cps	0.000	612.000	mmho/m	0.246	-348.312
Medium	2127.303	14352.315	cps	0.000	1960.000	mmho/m	0.160	-341.064

Gamma Ray Calibration Report

Serial Number: PS_1
 Tool Model: 01
 Performed: Thu Jul 31 14:56:36 2014

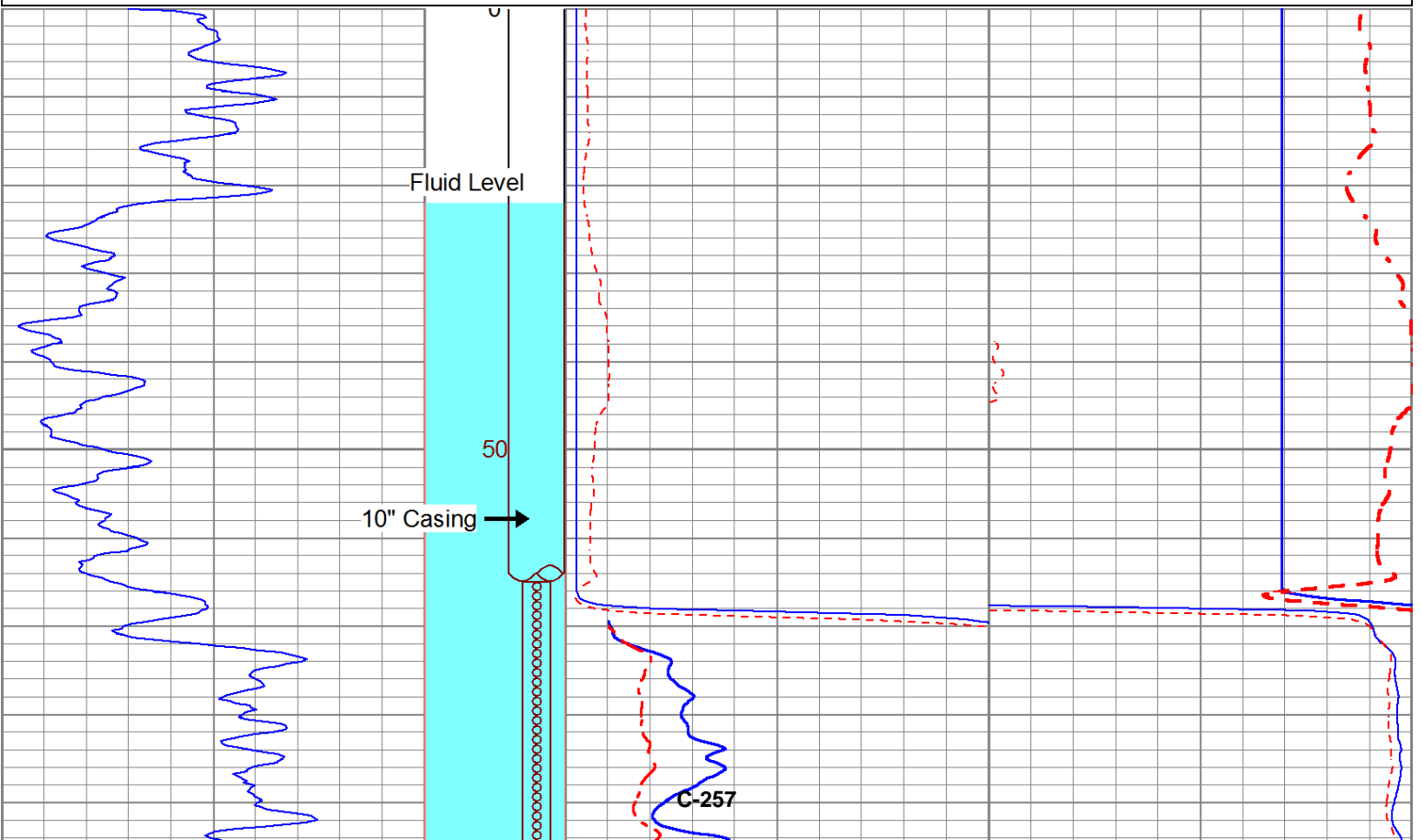
Calibrator Value: 162.0 GAPI

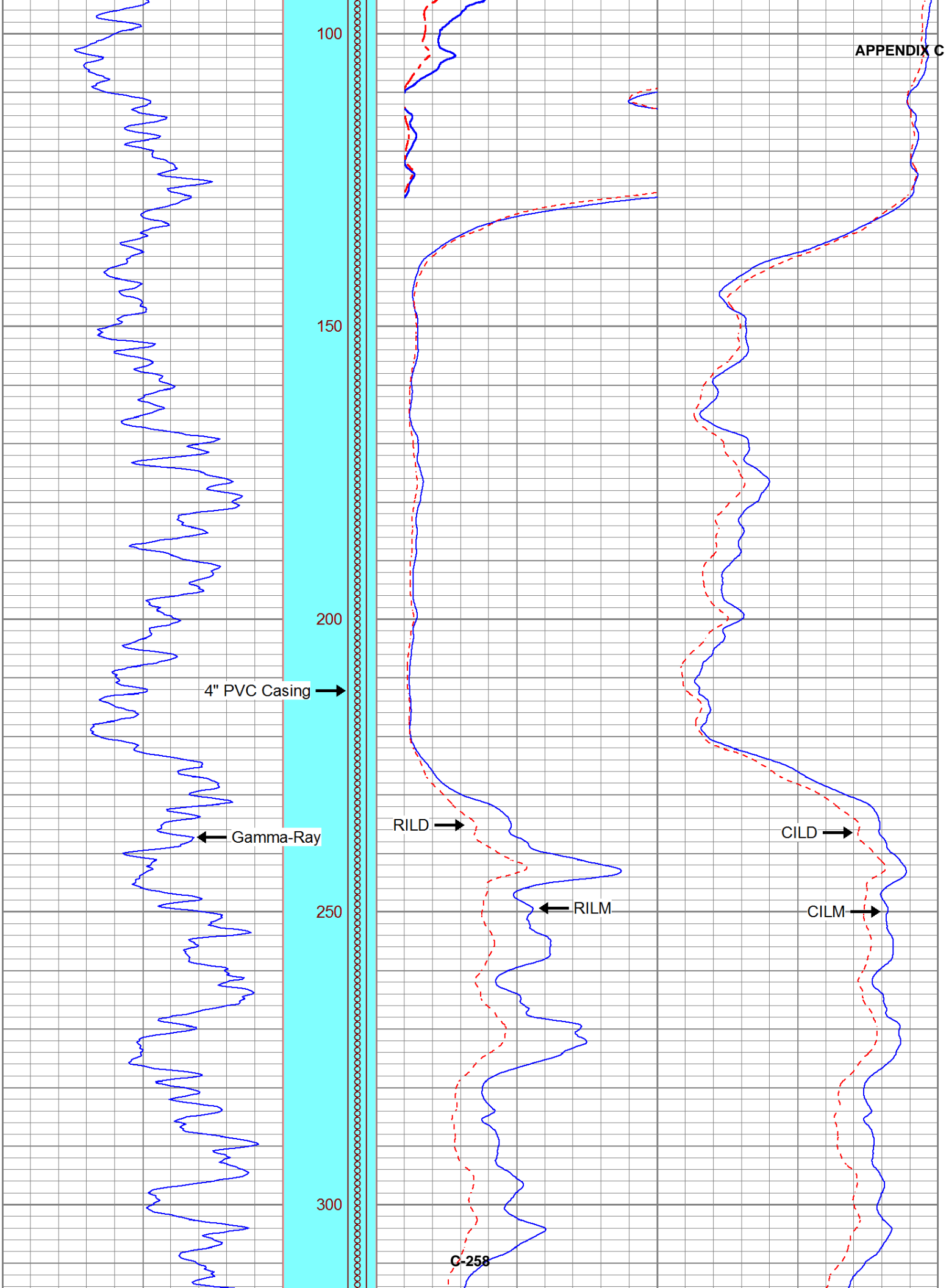
Background Reading: 43.3 cps
 Calibrator Reading: 130.3 cps

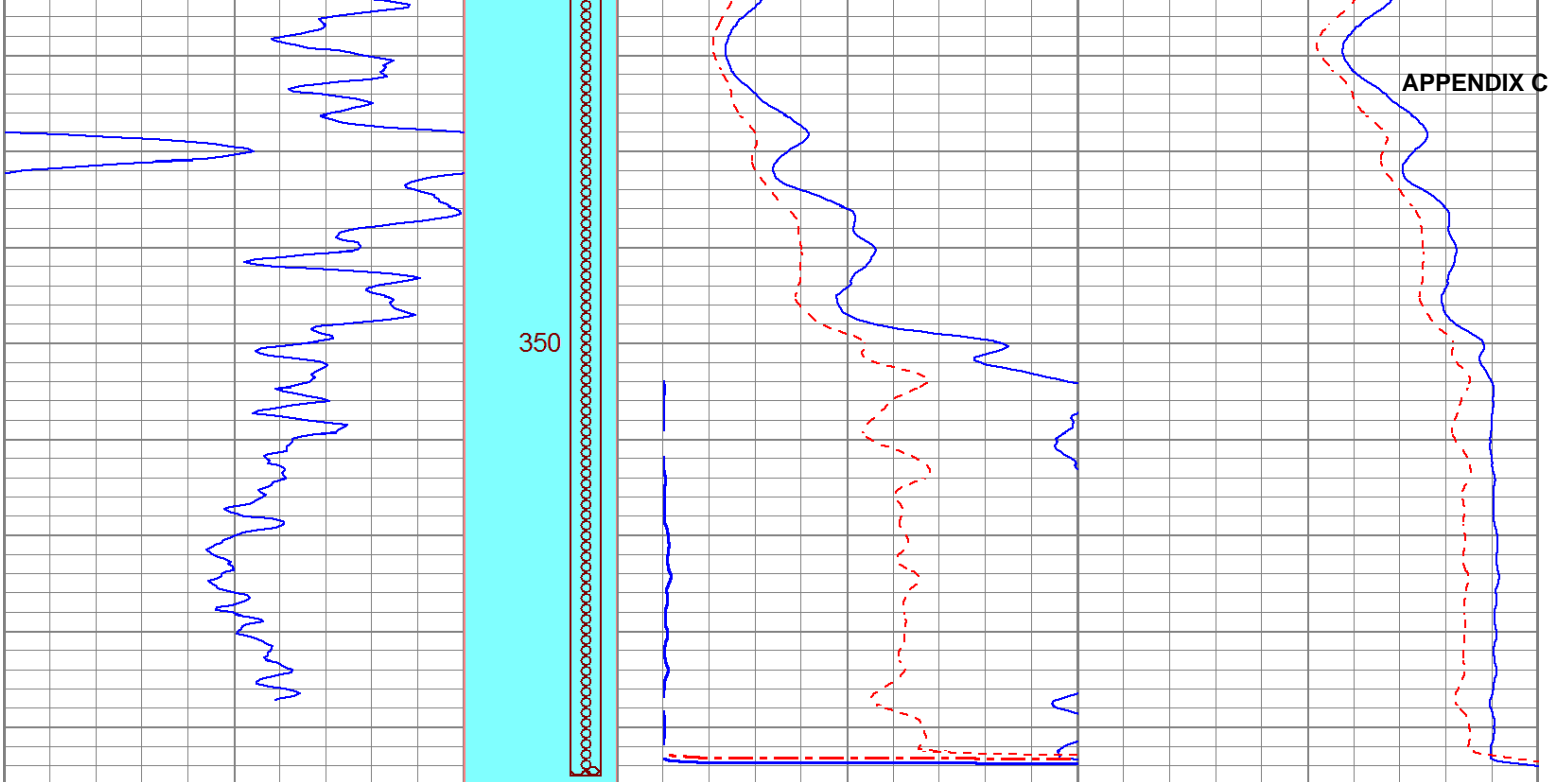
Sensitivity: 1.8626 GAPI/cps

Database File 19633.db
 Dataset Pathname DIL
 Presentation Format dil_ps
 Dataset Creation Thu May 28 14:22:35 2015
 Charted by Depth in Feet scaled 1:240

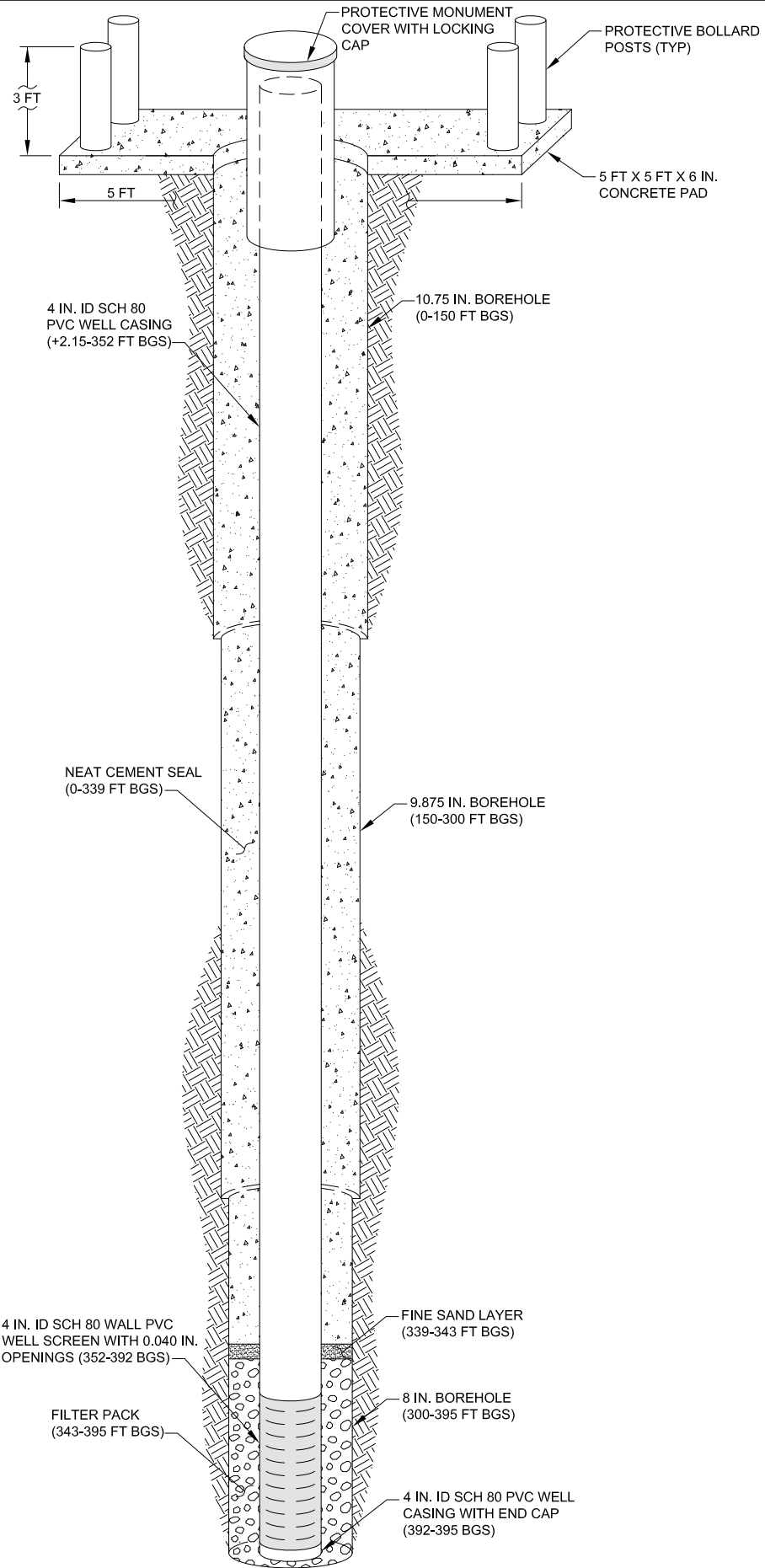
40	Gamma Ray (GAPI)	140	0	RILM (Ohm-m)	10	1000	CILM (mmho/m)	0
			0	RILD (Ohm-m)	10	1000	CILD (mmho/m)	0
			10	RILM backup (Ohm-m)	100	10000	CILM backup (mmho/m)	1000
			10	RILD backup (Ohm-m)	100	10000	CILD backup (mmho/m)	1000







40	Gamma Ray (GAPI)	140	0	RILM (Ohm-m)	10	1000	CILM (mmho/m)	0
			0	RILD (Ohm-m)	10	1000	CILD (mmho/m)	0
			10	RILM backup (Ohm-m)	100	10000	CILM backup (mmho/m)	1000
			10	RILD backup (Ohm-m)	100	10000	CILD backup (mmho/m)	1000



WELL PROFILE
NOT TO SCALE

APPENDIX D
Well Logs Used for Cross-Sections



Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and Marina
Monterey County Water Resources Agency

Cross-Section B-B' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-21F02	263	277	red sand	red sand
14S/2E-21F02	277	280	yellow clay	yellow clay
14S/2E-21F02	280	297	gravel and yellow clay	gravelly clay
14S/2E-21F02	297	300	yellow clay	yellow clay
14S/2E-16G01	0	100	clay	clay
14S/2E-16G01	100	170	coarse sand	coarse sand
14S/2E-16G01	170	220	gravel	gravel
14S/2E-16G01	220	230	gravel/brown clay	gravelly clay
14S/2E-16G01	230	240	gravel/clay	gravelly clay
14S/2E-16G01	240	260	coarse sand/clay	sandy clay
14S/2E-16G01	260	360	clay/sand	sandy clay
14S/2E-16G01	360	370	sand/clay	sandy clay
14S/2E-16G01	370	420	coarse sand	coarse sand
14S/2E-16G01	420	440	clay/sand	sandy clay
14S/2E-16G01	440	470	coarse sand	coarse sand
14S/2E-16G01	470	490	sand/clay	sandy clay
14S/2E-16G01	490	520	sand/clay	sandy clay
14S/2E-16G01	520	540	clay	clay
14S/2E-16G01	540	570	sand	sand
14S/2E-16G01	570	610	coarse sand	coarse sand
14S/2E-16G01	610	630	sand/clay	sandy clay
14S/2E-09D04	0	150	brown clay	brown clay
14S/2E-09D04	150	180	coarse sand	coarse sand
14S/2E-09D04	180	220	coarse sand/gravel	gravel/sand
14S/2E-09D04	220	230	clay/gravel	gravelly clay
14S/2E-09D04	230	260	silt stone/clay	clay
14S/2E-09D04	260	270	clay	clay
14S/2E-09D04	270	280	coarse sand/clay	sandy clay
14S/2E-09D04	280	330	clay	clay
14S/2E-09D04	330	420	sand/clay	sandy clay
14S/2E-09D04	420	430	coarse sand/clay	sandy clay
14S/2E-09D04	430	440	coarse sand	coarse sand
14S/2E-09D04	440	460	coarse sand/clay	sandy clay
14S/2E-09D04	460	490	coars sand	coarse sand
14S/2E-09D04	490	500	coarse sand/clay	sandy clay
14S/2E-09D04	500	540	sand/clay	sandy clay
14S/2E-09D04	540	550	hard clay	clay
14S/2E-09D04	550	570	hard clay/sand	sandy clay
14S/2E-09D04	570	580	coarse sand	coarse sand
14S/2E-09D04	580	610	coarse sand/clay	sandy clay
14S/2E-09D04	610	630	clay/sand	sandy clay

Notes:

* a partial boring log description is provided for this well

145/02E-17K1

TRIPPLICATE
Owner's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 286024

Notice of Intent No. 239439
Local Permit No. or Date 7-28-89 69712

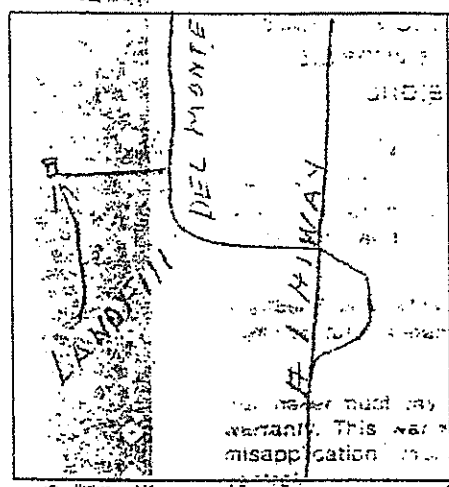
NEW WATER SUPPLY WELL LOCATED
SOUTH OF SCALEHOUSE

State Well No. 145/02E-17K01
Other Well No. PRESSURE - 180 FT.

(1) OWNER: Name: Marina Landfill Mtry Regional
Address: P.O. Box 609 Waste Mgmt. Dist.
City: Marina, CA 93933 ZIP
(2) LOCATION OF WELL (See instructions):
County: Monterey Owner's Well Number
Well address if different from above: Marina Disposal site
Township: Range: Section:
Distance from cities, roads, railroads, fences, etc.

(12) WELL LOG: Total depth 255 ft. Completed depth 250 ft.

From ft.	To ft.	Formation (Describe by color, character, size or material)
0	4	Top soil
4	35	Beach sand
35	56	Brown silt
56	91	Loose red sand
91	126	Green clay & sand
126	152	Red sand water bearing
152	159	Green clay
159	194	Coarse sand
194	205	Sticky green clay
205	255	Coarse gravel



(3) TYPE OF WORK:
New Well Deepening
Reconstruction
Reconditioning
Horizontal Well
Destruction (Describe destruction materials and procedures in Item 12)
(4) PROPOSED USE:
Domestic
Irrigation
Industrial
Test Well
Municipal
Other (Describe)

(5) EQUIPMENT:
Rotary
Cable
Other
Reverse
Air
Bucket

(6) GRAVEL PACK:
Yes No
Diameter of bore: 180
Packed from: 180 to 250

(7) CASING INSTALLED:

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	210	6 pvc	SDR21E	180	250	.030 pvc sand screen

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL: BEYOND THE DURATION OF THE APPLICABLE
Was surface sanitary seal provided? Yes No If yes, to depth 180 ft.
Were struts sealed against pollution? Yes No If yes, to depth 180 ft.
Method of sealing: neat cement

(10) WATER LEVELS:
Depth of first water, if known: 131 ft.
Standing level after well completion: 131 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? Self
Type of test: Pump Bailor Air lift
Depth to water at start of test: 131 ft. At end of test: 136 ft.
Discharge: 33 gal/min after 33 hours. Water temperature: 67
Chemical analysis made? Yes No If yes, by whom? Al Lab
Was electric log made? Yes No If yes, attach copy to this report.

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed: James I. Ash (Well Driller)
NAME: FRED ASH & SONS, INC.
Address: 16339 Castroville Blvd.
City: Salinas, CA 93907 ZIP
License No. 391942 Date of this report: 8-9-89

STA-RITE INDUSTRIES, INC.

DELAVAN, WISCONSIN 53115

Agland Tr. Small Well

14/2-18

p-400

10/4

Do Not Fill In

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

No 126555

State Well No. 145/20-18C1

Other Well No. _____

(1) OWNER:

Name Hugo Totini
Address Castroville, CA

(2) LOCATION OF WELL:

County Monterey Owner's number, if any _____
Township, Range, and Section _____
Distance from cities, roads, railroads, etc. Corner of Highway 1
and Lapis Road

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Other

(6) CASING INSTALLED:

STEEL				OTHER:			If gravel packed	
From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.		
+2	598	16"	1/4	26	0	600		

Size of shoe or well ring: _____ Size of gravel: pea

(7) PERFORATIONS OR SCREEN:

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
330	598			1/8

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth 320 ft.

Were any struts set against pollution? Yes No If yes, note depth of struts _____

Method of casing _____

(9) WATER LEVELS:

Depth at which water was first found, if known _____ ft.
Standing level before perforating, if known _____ ft.
Standing level after perforating and development _____ ft.

(10) WELL TESTS:

Was pump test made? Yes No If yes, by whom? _____
Flow rate _____ gpm _____ ft. drawdown after _____ min.
Temperature of water _____
Was well sealed after test? Yes No
Was electric log used at well? Yes No If yes, attach copy _____

(11) WELL LOG:

Total depth 600 ft. Depth of completed well 600 ft.

Formation: Describe by color, character, size of material, and structure

Material	ft. in	From	To
Top soil		0	2
Clay		2	12
Monterey sand		12	16
Coarse sand		16	41
Grayish clay (sticky)		41	46
Monterey sand & gravel w/ 3/4" rock		46	77
Fine sand		77	81
Gravel & gray clay (sticky)		81	87
Monterey sand		87	89
Cemented sand		89	91
Sandy clay		91	97
Monterey sand & gravel		97	142
Brn cemented sand		142	222
Brn sandy clay w/ gravel mixed		222	232
Brwn sticky clay		232	238
Gray clay		238	243
Cemented sand		243	250
Brown sandy clay w/ gravel mixed		250	251
Sand & gravel		251	254
Gray sandy clay		254	261
Blue sandy clay		261	276
Brown sandy clay		276	281
Yellow sticky clay		281	296
Sand & gravel		296	316
Yellow clay		316	321
Gray clay (sticky, slow)		321	330
Sand & gravel		330	339
Gravel, hard gray clay mixed		339	342
Sand & gravel		342	436
Cemented sand		436	474
Gray sandy clay w/ gravel mixed		474	486
Brown sticky clay		486	493
Yellow clay		493	505

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Ben Barron Co. Inc
(Person, firm, or corporation) (Typed or printed)

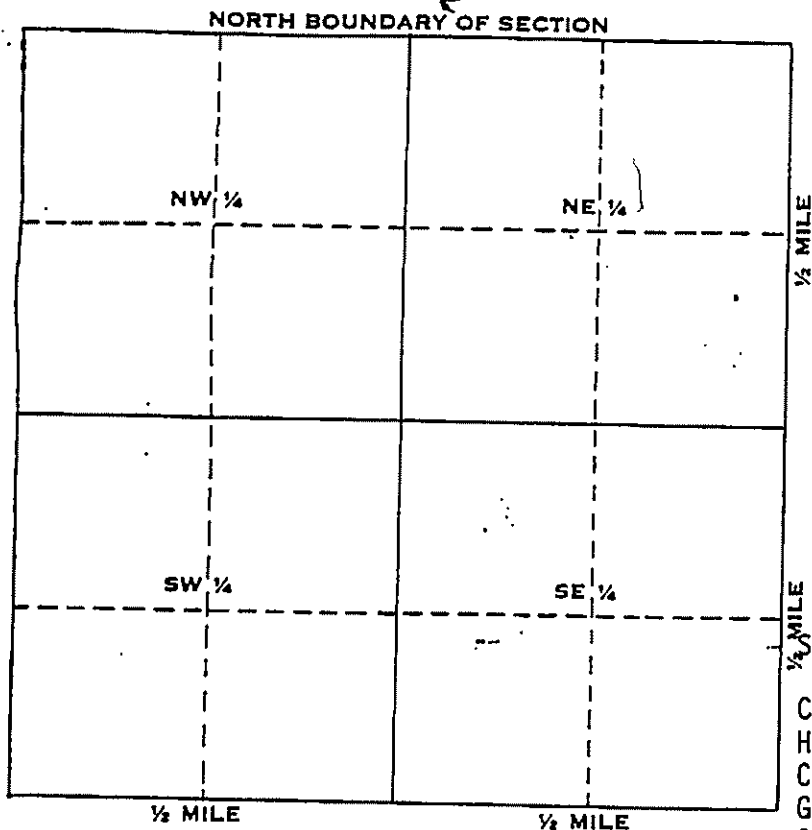
Address P.O. Box 5155
Woodland, CA

(SIGNLD) A B Barron
(Well Driller)

License No. _____ Dated 10/27 1976

SKETCH LOCATION OF WELL ON REVERSE SIDE

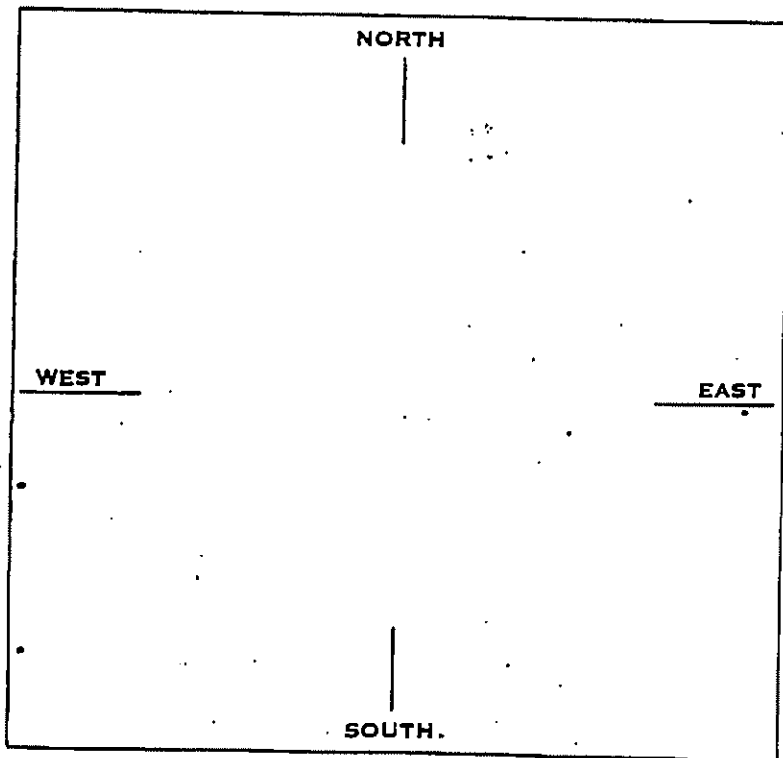
WELL LOCATION SKETCH



Township 14 N/S
 Range 2 E/W
 Section No. 18001

	From	To
Sandy clay & gravel mixed	505	511
Cemented sand	511	513
Hard, gray sticky clay	513	519
Coarse sand & gravel	519	547
Gray clay	547	555
Gravel & coarse sand	555	587
Cemented sand	587	600

A. Location of well in sectionized areas.
 Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
 Sketch roads, railroads, streams, or other features as necessary.
 Indicate distances.

Big Well
Ag Land Trust

1981

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do Not Fill In
No. 121665
State Well No. _____
Other Well No. _____

(1) OWNER: Armstrong
Name c/o M. L. Dubacia, Jr.
Address PO Box P, Davis, Ca. 95616

(11) WELL LOG:

Total depth	ft.	Depth of completed well	870	ft.
Formations: Describe by color, character, size of material, and structure				
0	ft.	75 fine sand		ft.
75	to 100'	coarse gravel		
100		125 gravel-streaks clay		
125		150 clay rock		
150		175 coarse gravel		
175		200 fine sand gravel-clay		
200		225 fine sand streak clay		
225		250 fine sand streak clay		
250		275 gravel		
275		300 fine sand - streak clay		
300		325 white sand		
325		350 sand-clay streaks		
350		375 sand		

(2) LOCATION OF WELL:
County Monterey
Township, Range, and Section Between Marina & Castroville
Distance from cities, roads, railroads, etc. So. of Twin Bridge on Hwy 1, off Lapis Road

(3) TYPE OF WORK (check):
New Well Deepening Reconditioning Destroying
If destruction, describe material and procedure in item 11.

(4) PROPOSED USE (check):
Domestic Industrial Municipal Irrigation Test Well Other
(5) EQUIPMENT:
Rotary Cable Other

(6) CASING INSTALLED:

STEEL:		OTHER:		If gravel packed		
From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	303	14"	1/4	26	0	870
303	306	14"x12" reducer				
306	870	12	1/4			

Size of shoe or well ring: _____
Describe joints: welded
Size of gravel: 1/4 pea

(7) PERFORATIONS OR SCREEN:

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
66	834	8	4 1/2	1/8" std louvre

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes No To what depth: 300 ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata:
From 0 ft. to 300 ft.
Method of sealing: concrete

(9) WATER LEVELS:
Depth at which water was first found, if known _____ ft.
Standing level before perforating, if known _____ ft.
Standing level after perforating and developing _____ ft.

(10) WELL TESTS: to be tested
Was pump test made? Yes No If yes, by whom?
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No

Work started 7-2-74 19 Completed 7-6-74 19
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME Salinas Pump Co.,
(Version, firm, or corporation) (Typed or printed)
Address 1128 Madison Lane, Salinas, Ca. 93901
[SIGNED] *Parsons Shumley* (Well Driller)

ORIGINAL File with DWR

DEPARTMENT OF WATER RESOURCES WATER WELL DRILLERS REPORT

No 52278

State Well No. Other Well No. 45/ZE-3A

51

(1) OWNER: Name Marina County Water District Address 11 Beach Road, Marina, Calif.

(11) WELL LOG: Total depth 588 ft. Depth of completed well 574 ft. Formation: Describe by color, character, size of material, and structure

(2) LOCATION OF WELL: County Monterey Owner's number, if any #7 Township, Range, and Section Distance from cities, roads, railroads, etc. Northeast corner of Water District Boundary

0 to 59' Sandy Top Soil 59 76 Sandy Grey Clay 76 91 Medium Brown Sand 91 98 Soft Brown Clay 98 147 Medium Brown Sand 147 164 Sandy Brown Clay 164 226 Coarse Grey Sand with Cobble 226 289 " " " with Gravel 289 308 Soft Grey Clay 308 361 Coarse Grey Sand with 4" Cobble 361 374 Sandy Brown Clay 374 382 Soft Brown Clay 382 388 Coarse Grey Sand 388 393 Soft Grey Clay 393 401 Coarse Grey Sand 401 420 Soft Grey Clay 420 433 Coarse Grey Sand with Cobble 433 440 Soft Grey Clay 440 453 Coarse Grey Sand with 4" Cobble 453 481 Medium Soft Grey Clay 481 497 Medium Brown Sand 497 508 Medium Grey Clay 508 518 Coarse Grey Sand 518 536 Soft Brown Clay 536 559 Coarse Grey Sand 559 565 Fine Brown Sand 565 583 Medium Brown Clay

(3) TYPE OF WORK (check): New Well [X] Deepening [] Reconditioning [] Destroying [] If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check): Domestic [] Industrial [] Municipal [X] Irrigation [] Test Well [] Other []

(5) EQUIPMENT: Rotary [X] Cable [] Other []

(6) CASING INSTALLED: STEEL: SINGLE [X] DOUBLE [] OTHER: [] If gravel packed Diameter of Bore From ft. To ft. 0 392 14" 3/16 28" 72 574 392 574 12" 3/16 28" 0 80 23" 3/16 36"

Size of shoe or well ring: none Describe joint: gravel

(7) PERFORATIONS OR SCREEN: Type of perforation or name of screen factory-milled

Table with columns: From ft., To ft., Perf. per row, Rows per ft., Size in. x in. 392 402 1/16 S.S. Screen w/.050 opening 418 452 471 497 511 519 546 562

(8) CONSTRUCTION: Was a surface sanitary seal provided? Yes [X] No [] To what depth 80 ft. Were any strata sealed against pollution? Yes [] No [] If yes, note depth of strata

From ft. to ft. Method of sealing

Work started 1/27 19 71 Completed 2/23/ 19 71 WELL DRILLER'S STATEMENT: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

(9) WATER LEVELS: Depth at which water was first found, if known ft. Standing level before perforating, if known ft. Standing level after perforating and developing ft.

NAME Western Well Drilling Co., Ltd. (Person, firm, or corporation) (Typed or printed) Address P.O. Box 109, San Jose, Calif. 95103

(10) WELL TESTS: Was pump test made? Yes [X] No [] If yes, by whom? driller Yield: 1445 gal./min. with 107 ft. drawdown after hrs. Temperature of water Was a chemical analysis made? Yes [] No [] Was electric log made of well? Yes [] No [] If yes, attach copy

[SIGNED] (Well Driller) License No. 25132 Dated Mar. 23 19 71

SKETCH LOCATION OF WELL ON REVERSE SIDE

ORIGINAL

MS/E-2081

STATE OF CALIFORNIA
THE RESOURCES AGENCY

MRVNF-1

Do no.

File with DWR

DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

No. 19817

Notice of Intent No. _____

Local Permit No. or Date W3816

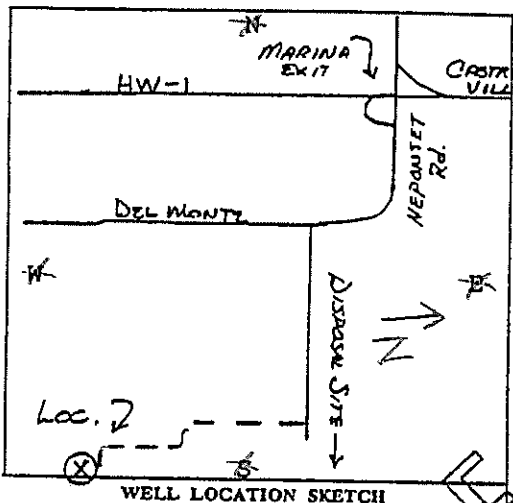
State Well No. _____
Other Well No. 8614-4022
Well #/1

(1) OWNER: Name Mty. Reg. Water Poll. Control
Address 220 Country Club Gate #34
City Pacific Grove, CA. Zip 93950

(2) LOCATION OF WELL (See instructions):
County Monterey Owner's Well Number _____
Well address if different from above Marina Landfill
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. HW-1 & Del Monte,
then 1/4 mi east, left on Marina dump rd.,
right at scale house & 1/4 mi to right

(12) WELL LOG: Total depth 370 ft. Depth of completed well _____

from ft.	to ft.	Formation (Describe by color, character, size or water)
0	20	Fine Sand
20	65	Sand
65	85	Fine Sand
85	110	Brown & Gray Clay
110	130	Gray Clay
130	140	Brown & Gray Clay
140	150	Blue Clay & Trace Sand
150	155	Fine & Coarse Sand
155	185	Coarse Sand
185	230	Fine Sand & Gvl.
230	240	Coarse Sand & Gvl.
240	245	Gravel & Brown Clay
245	250	Clay & Fine Sand
250	290	Fine Sand & Sand
290	340	Coarse Sand
340	350	Brown Clay & Trace Sand



(3) TYPE OF WORK:

- New Well Deepening
 - Reconstruction
 - Reconditioning
 - Horizontal Well
 - Destruction (Describe destruction materials and procedures in Item 12)
- (4) PROPOSED USE:
- Domestic
 - Irrigation
 - Industrial
 - Test Well
 - Stock
 - Municipal
 - Other

(5) EQUIPMENT:
Rotary Reverse
Cable Air
Other Bucket

(6) GRAVEL PACK:
Yes No Size #8 sand
Diameter of bore 18"
Packed from 246 to 370 ft.

(7) CASING INSTALLED:
Steel Plastic Concrete

(8) PERFORATIONS: Screen
Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gate or Wall	From ft.	To ft.	Slot size
0	260	10	.25	260	340	.045
340	350	10	.25			

(9) WELL SEAL:
Was surface sanitary seal provided? Yes No If yes, to depth 246 ft.
Were strata sealed against pollution? Yes No Interval 0-246 ft.
Method of sealing Cement

(10) WATER LEVELS:
Depth of first water, if known 107 ft.
Standing level after well completion 107 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? Maggiore
Type of test Pump Bailer Air lift
Depth to water at start of test 107 ft. At end of test 112 ft.
Discharge 408 gal/min after 12 hours Water temperature 52
Chemical analysis made? Yes No If yes, by whom? Soil Cont. Lab.
Was electric log made? Yes No If yes, attach copy to this report

Work started 2/26 1986 Completed 2/26/86

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best knowledge and belief.
SIGNED Maggiore Bros. Drilling, Inc.
NAME Maggiore Bros. Drilling, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 595 Airport Blvd
City Watsonville, CA Zip 95076
License No. 249957 Date of this report 5/12/86

DWR 18B (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Note: E-logs in files under
Spec. Section covering wells.

COPY

115/2E-7082

STATE OF CALIFORNIA THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES WATER WELL DRILLERS REPORT

MRWWP-2 Do not fill No. 198178

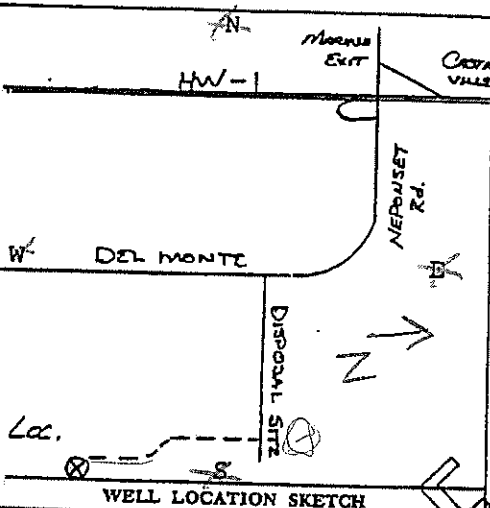
Notice of Intent No. Local Permit No. or Date W3817

State Well No. Other Well No. 8614-4022 Well #2

(1) OWNER: Name Mtry. Reg. Water Poll. Control Address 220 Country Club Gate #34 City Pacific Grove, CA Zip 93950

(2) LOCATION OF WELL (See instructions): County Monterey Owner's Well Number Well address if different from above Township Range Section Distance from cities, roads, railroads, fences, etc. HW-1 & Del Monte, Then 1/4 mi east, left on Marina Dump Rd., right at scale house & 1/4 mi to the right.

(12) WELL LOG: Total depth 350 ft. Depth of completed well 350 from ft. to ft. Formation (Describe by color, character, size or material) 0 - 85 Fine Sand 85 - 110 Brown Clay 110 - 130 Gray Clay 130 - 140 Brown Clay 140 - 150 Blue Clay 150 - 185 Coarse Sand & Gravel 185 - 215 Fine Sand & Gravel 215 - 240 Coarse Sand & Gravel 240 - 250 Brown Clay 250 - 290 Fine Sand 290 - 340 Coarse Sand 340 - 350 Brown Clay



(3) TYPE OF WORK: New Well Deepening Reconstruction Reconditioning Horizontal Well Destruction (Describe destruction materials and procedures in Item 12) (4) PROPOSED USE: Domestic Irrigation Industrial Test Well Stock Municipal Other

(5) EQUIPMENT: Rotary Reverse Cable Air Other Bucket

(6) GRAVEL PACK: Yes No Size # 8 Sand Diameter of bore 18 Packed from 245 to 350 ft.

(7) CASING INSTALLED: Steel Plastic Concrete Table with columns: From ft, To ft, Dia. in., Gage or Wall, Front ft, To ft, Slot size

(8) PERFORATIONS: Screen Type of perforation or size of screen

(9) WELL SEAL: Was surface sanitary seal provided? Yes No If yes, to depth 245 ft. Were strata sealed against pollution? Yes No Interval 0-245 ft. Method of sealing Cement

(10) WATER LEVELS: Depth of first water, if known 123 Standing level after well completion 123

(11) WELL TESTS: Was well test made? Yes No If yes, by whom? Maggiora Type of test Pump Bailer Air lift Depth to water at start of test 123 At end of test 130 Discharge 457 gal/min after 48 hours Water temperature 52 Chemical analysis made? Yes No If yes, by whom? Soil Cont. Lab Was electric log made? Yes No If yes, attach copy to this report

Work started 3/31 1986 Completed 4/2 1986 WELL DRILLER'S STATEMENT: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SIGNED [Signature] (Well Driller) NAME Maggiora Brgs. Drilling, Inc. (Person, firm, or corporation) (Typed or printed) Address 595 Airport Blvd City Watsonville, CA Zip 95076 License No. 249957 Date of this report 5/12/86

COPY

145/2E-2083

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

Page 1 of 2

Owner's Well No. 701471

No. 419777

Date Work Began 06/18/97, Ended 06/26/97

Local Permit Agency MONTEREY COUNTY DEPARTMENT OF HEALTH

Permit No. WSA 97-067 Permit Date 01-07-97

DWR USE ONLY - DO NOT FILL IN -
STATE WELL NO./STATION NO.
LATITUDE
LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

WELL OWNER

ORIENTATION (Z) VERTICAL HORIZONTAL ANGLE (SPECIFY)

Name WETTER
Mailing Address 5 HARRIS COURT
MONTEREY, CA. 93940
CITY STATE ZIP
Address 14211 DEL MONTE AVE.
City MONTEREY
County MONTEREY
APN Book 175 Page 011 Parcel 041
Township Range Section
Latitude NORTH Longitude DEG. MIN. SEC. WE

DEPTH FROM SURFACE		DEPTH TO FIRST WATER (FL) BELOW SURFACE	DESCRIPTION <i>Describe material, grain size, color, etc.</i>
Fl.	to Ft.		
3	3		TOP SOIL
3	60		CLEAN HOLE
60	90		SAND
90	100		SANDY CLAY AND CLAY
100	120		BLUE CLAY AND SANDY CLAY
120	155		CLAY
155	160		SANDY CLAY AND SAND
160	180		SAND AND GRAVEL
180	200		SAND
200	220		CLAY
220	230		CLAY AND SAND
230	240		SAND AND GRAVEL
240	245		SAND
245	255		CLAY
255	260		SAND
260	300		SAND AND LITTLE CLAY
300	345		SAND AND GRAVEL
345	360		CLAY
360	380		CLAY AND SAND
380	400		BROWN AND BLUE CLAY
400	480		CLAY
480	520		CLAY AND SANDY CLAY
520	540		CLAY AND GRAVEL
540	560		CLAY AND SAND
560	562		SAND
562	600		SANDY CLAY
600	640		CLAY AND FINE SANDY CLAY
640	655		CLAY
655	660		SAND

LOCATION SKETCH NORTH SOUTH
SEE ATTACHED
WEST EAST
Dell Monte Rd.
Well
ACTIVITY (Z)
 NEW WELL
 MODIFICATION/REPAIR
— Deepen
— Other (Specify)
— DESTROY (Describe Procedures and Meter Under "GEOLOGIC LOG")
PLANNED USE (Z)
 MONITORING
WATER SUPPLY
 Domestic
 Public
 Irrigation
 Industrial
 "TEST WELL"
 CATHODIC PROTECTION
 OTHER (Specify)

DRILLING METHOD REVERSE ROTARY FLUID WATER
WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL 162.25 (Fl.) & DATE MEASURED 08/18/97
ESTIMATED YIELD* 250 (GPM) & TEST TYPE PUMP
TEST LENGTH (Hrs)⁵ TOTAL DRAWDOWN 19.33 (Fl.)
* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 840 (Feet)
TOTAL DEPTH OF COMPLETED WELL 825 (Feet)

DEPTH FROM SURFACE Fl. to Ft.	BORE-HOLE DIA. (Inches)	CASING(S)					MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	ANNULAR MATERIAL			
		TYPE (Z)									TYPE			
		BLANK	SCREEN	CONDUIT	DUCTOR	FILL PIPE				CE- MENT (Z)	BEN- TONITE (Z)	FILL (Z)	FILTER PACK (TYPE/SIZE)	
0	50	32				X	STEEL	.250		STAINLESS .040				
0	670	22	X				STEEL	.250		STAINLESS				
670	730	22	X				STEEL	.250		STAINLESS .040				
730	785	22	X				STEEL	.250		STAINLESS				
785	805	22		X			STEEL	.250		STAINLESS .040				
805	825	22	X				STEEL	.250		STAINLESS				

ATTACHMENTS (Z)
— Geologic Log
— Well Construction Diagram
— Geophysical Log(s)
— Soil/Water Chemical Analyses
— Other
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
NAME MAGGIORA BROS. DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
595 AIRPORT BLVD. WATSONVILLE, CA 95076
ADDRESS CITY 11/14/97 STATE 243857
Signed WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

DWR USE ONLY - DO NOT FILL IN -

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Owner's Well No. 201471 No. **419779**
Date Work Began 05/18/97, Ended 05/26/97
Local Permit Agency MONTEREY COUNTY DEPARTMENT OF HEALTH
Permit No. 'WSAL 97-067 Permit Date 04/07/97

GEOLOGIC LOG

WELL OWNER

DEPTH FROM SURFACE		DESCRIPTION <i>Describe material, grain size, color, etc.</i>
Fl.	to Fl.	
660	680	COARSE SAND AND GRAVEL
680	700	COARSE SAND
700	715	HARD SAND
715	720	SAND AND GRAVEL
720	730	SAND AND GRAVEL
730	740	CLAY
740	780	HARD CLAY
780	785	CLAY
785	790	SAND AND GRAVEL
790	800	HARD SAND
800	840	CLAY

Name MHWPC
Mailing Address 5 HARRIS COURT
MONTEREY, CA. 93940
CITY STATE ZIP
WELL LOCATION
Address 14811 DEL MONTE AVE.
City MONTEREY
County MONTEREY
APN Book 175 Page 011 Parcel 041
Township Range Section
Latitude North Longitude WE

LOCATION SKETCH
NORTH
SEE ATTACHED

WEST EAST

SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
 NEW WELL
 MODIFICATION/REPAIR
— Deepen
— Other (Specify)
 DESTROY (Describe Procedures and Material Under "GEOLOGIC LOG")
PLANNED USE(S)
(✓)
 MONITORING
WATER SUPPLY
 Domestic
 Public
 Irrigation
 Industrial
 "TEST WELL"
 CATHODIC PROTECTION
 OTHER (Specify)

DRILLING METHOD REVERSE ROTARY FLUID WATER
WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL 162.25 (Feet) & DATE MEASURED 08/18/97
ESTIMATED YIELD* 250 (GPM) & TEST TYPE PUMP
TEST LENGTH 5.5 (Hrs.) TOTAL DRAWDOWN 19.33 (Feet)
* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 840 (Feet)
TOTAL DEPTH OF COMPLETED WELL 825 (Feet)

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING(S)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	DEPTH FROM SURFACE	ANNULAR MATERIAL						
		TYPE (✓)	BLANK	SCREEN	CONV. DUCTOR						FILL PIPE	DEPTH FROM SURFACE	TYPE	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	32					STEEL	.250	STAINLESS	.040	0	650	XX				
0	670	22	X				STEEL	.250	STAINLESS		650	840			XX	8X15	
670	730	22		X			STEEL	.250	STAINLESS	.040							
730	785	22		X			STEEL	.250	STAINLESS								
785	805	22		X			STEEL	.250	STAINLESS	.040							
805	825	22		X			STEEL	.250	STAINLESS								

ATTACHMENTS (✓)

Geologic Log
 Well Construction Diagram
 Geophysical Log(s)
 Soil/Water Chemical Analyses
 Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME MAGGIORA BROS. DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
595 AIRPORT BLVD. WATSONVILLE, CA 95076
ADDRESS CITY STATE ZIP
11/14/97 DATE SIGNED
Signed [Signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE

Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and Marina
Monterey County Water Resources Agency

Cross-Section B-B' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-32D04	1670	1680	white clay, sand and small gravel	snd/grvl/clay
14S/2E-32D04	1680	1700	hard conglomerates	gravel
Airfield	0	2	sand	sand
Airfield	2	6	black silt	clay
Airfield	6	62	yellow sand	yellow sand
Airfield	62	104	sandy clay	sandy clay
Airfield	104	117	gray clay	clay
Airfield	117	132	blue clay	blue clay
Airfield	132	148	white medium sand	white sand
Airfield	148	151	brown clay	brown clay
Airfield	151	156	medium gray sand	sand
Airfield	156	167	blue clay	blue clay
Airfield	167	191	sand	sand
Airfield	191	196	sand and pebbles	sand
Airfield	196	197	gray clay	clay
Airfield	197	215	sand and small gravel	gravel/sand
Airfield	215	226	dry sand and clay	sandy clay
Airfield	226	228	gray clay	clay
Airfield	228	244	yellow sandy clay	yellow clay
Airfield	244	270	yellow dirty sand	yellow sand
Airfield	270	298	brown clay	brown clay
Airfield	298	311	muddy sand	sand
Airfield	311	318	sandy clay	sandy clay
Airfield	318	347	sand and gravel, well graded	gravel/sand
Airfield	347	358	light brown clay	brown clay
Airfield	358	379	sand and gravel	gravel/sand
Airfield	379	383	clay	clay
Airfield	383	386	sand and gravel	gravel/sand
Airfield	386	389	yellow clay	yellow clay
Airfield	389	395	sand and gravel	gravel/sand
Airfield	395	402	yellow clay	yellow clay
14S/2E-21N01	0	124	yellow sand (dry)	yellow sand
14S/2E-21N01	124	142	sandy clay	sandy clay
14S/2E-21N01	142	162	yellow clay	yellow clay
14S/2E-21N01	162	170	sandy clay	sandy clay
14S/2E-21N01	170	182	sand	sand
14S/2E-21N01	182	190	blue clay	blue clay
14S/2E-21N01	190	214	sand and gravel, fine	gravel/sand
14S/2E-21N01	214	242	fine sand	fine sand
14S/2E-21N01	242	256	yellow	yellow clay
14S/2E-21N01	256	262	sand fine	fine sand
14S/2E-21N01	262	290	sand and gravel (2-3" rocks)	gravel/sand
14S/2E-21N01	290	294	sandstone, red sand	red sand
14S/2E-21N01	294	308	yellow clay	yellow clay
14S/2E-21N01	308	352	sand and gravel	gravel/sand
14S/2E-21N01	352	374	hard blue clay	blue clay
14S/2E-21N01	374	398	sand and gravel (1-4" rocks)	gravel/sand
14S/2E-21N01	398	408	sand and small gravel	gravel/sand
14S/2E-21N01	408	412	gravelly yellow clay	gravelly clay
14S/2E-21N01	412	430	sand and small gravel	gravel/sand
14S/2E-21N01	430	438	yellow clay	yellow clay

Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and Marina
Monterey County Water Resources Agency

Cross-Section B-B' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-21N01	438	498	sand and gravel (pea to 1") clay at top-streaks	snd/grvl/clay
14S/2E-21N01	498	510	yellow brown clay	yellow clay
14S/2E-21N01	510	534	sand and gravel (1-3" rocks)	gravel/sand
14S/2E-21N01	534	564	sand	sand
14S/2E-21N01	564	580	sand and gravel (1-4" rocks)	gravel/sand
14S/2E-21N01	580	596	red sand	red sand
14S/2E-21N01	596	600	red sandstone	red sand
14S/2E-21E01	0	128	yellow dry sand	yellow sand
14S/2E-21E01	128	130	yellow clay w/streaks of red	yellow clay
14S/2E-21E01	130	144	blue clay - hard	blue clay
14S/2E-21E01	144	156	hard yellow clay	yellow clay
14S/2E-21E01	156	180	fine yellow clay	yellow sand
14S/2E-21E01	180	188	blue clay	blue clay
14S/2E-21E01	188	196	blue sand	blue sand
14S/2E-21E01	196	218	coarse sand w/some gravel	gravel/sand
14S/2E-21E01	218	242	brown sand - fine/some gravel	gravel/sand
14S/2E-21E01	242	272	hard yellow clay w/some sand	sandy clay
14S/2E-21E01	272	280	sand w/some rock	gravel/sand
14S/2E-21E01	280	396	sand/gravel rock (3-6")	gravel/sand
14S/2E-21E01	396	408	yellow clay	yellow clay
14S/2E-21E01	408	428	sand and some gravel	gravel/sand
14S/2E-21E01	428	442	sand and heavy gravel/rock (1-3")	gravel/sand
14S/2E-21E01	442	450	sand and heavy gravel/clay streaks	snd/grvl/clay
14S/2E-21E01	450	456	sand and gravel (1-3")	gravel/sand
14S/2E-21E01	456	460	yellow clay	yellow clay
14S/2E-21E01	460	466	sand	sand
14S/2E-21E01	466	470	yellow clay	yellow clay
14S/2E-21E01	470	484	fine sand and some gravel	gravel/sand
14S/2E-21E01	484	492	coarse sand and heavy gravel	gravel/sand
14S/2E-21E01	492	508	coarse sand and some gravel	gravel/sand
14S/2E-21E01	508	514	hard yellow clay	yellow clay
14S/2E-21E01	514	518	white sandstone w/yellow clay	sandy clay
14S/2E-21E01	518	532	fine sand	fine sand
14S/2E-21E01	532	542	coarse sand and gravel/rocks (1-4")	gravel/sand
14S/2E-21E01	542	550	sandy clay	sandy clay
14S/2E-21E01	550	562	sand and gravel w/clay streaks	gravel/sand
14S/2E-21E01	562	576	sand and heavy gravel	gravel/sand
14S/2E-21E01	576	592	fine sand	fine sand
14S/2E-21E01	592	612	sand and gravel (1-5" rock)	gravel/sand
14S/2E-21E01	612	614	red sandstone	red sand
14S/2E-21F02	0	8	top soil	topsoil
14S/2E-21F02	8	65	sediment	sediment
14S/2E-21F02	65	90	blue sandy clay	blue clay
14S/2E-21F02	90	116	yellow clay	yellow clay
14S/2E-21F02	116	130	mucky sand	sand
14S/2E-21F02	130	134	sandy yellow clay	yellow clay
14S/2E-21F02	134	140	river gravel	gravel
14S/2E-21F02	140	166	yellow clay	yellow clay
14S/2E-21F02	166	186	sand and gravel	gravel/sand
14S/2E-21F02	186	194	sand and fine gravel	gravel/sand
14S/2E-21F02	194	263	heavy gravel	gravel

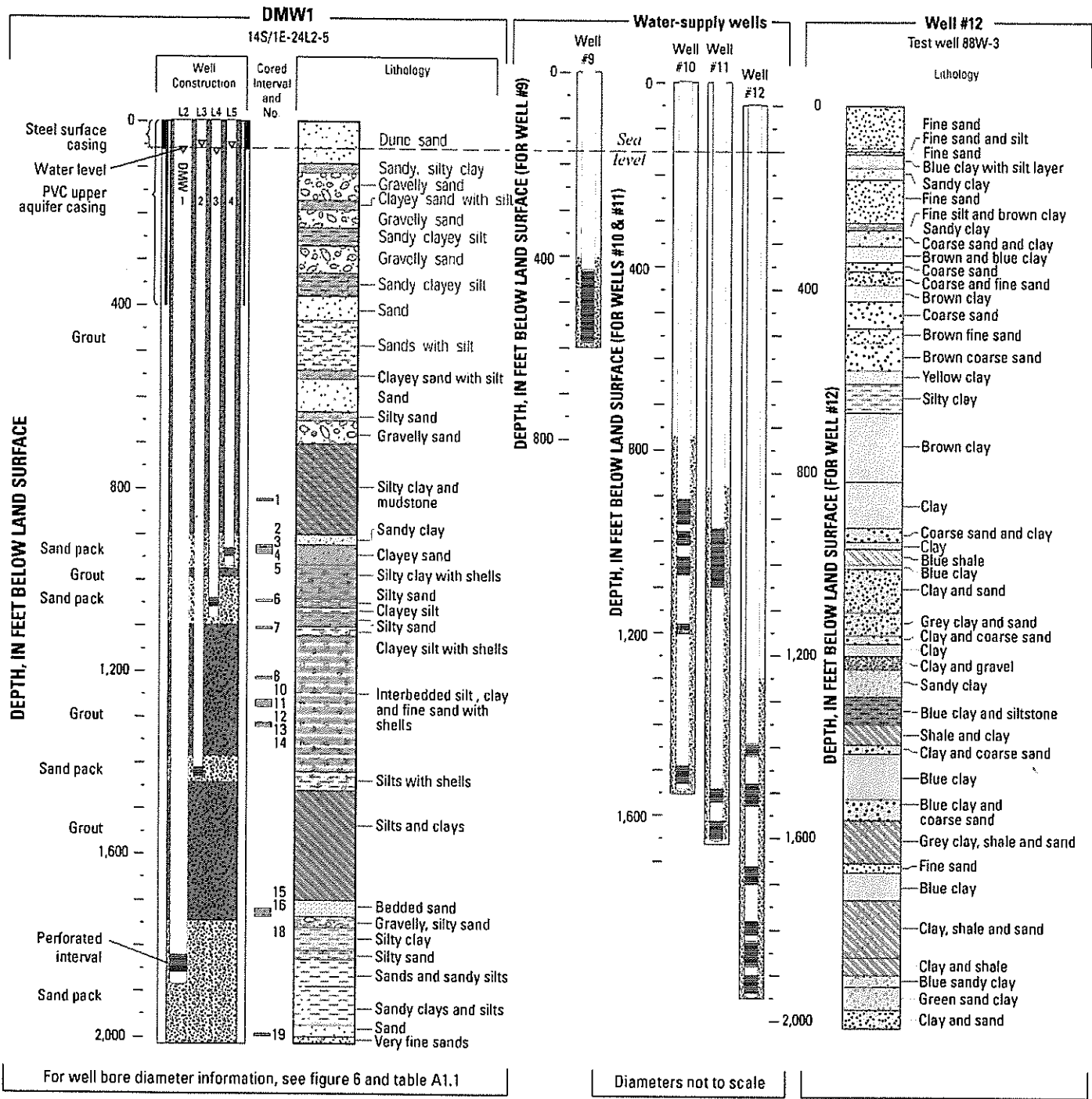
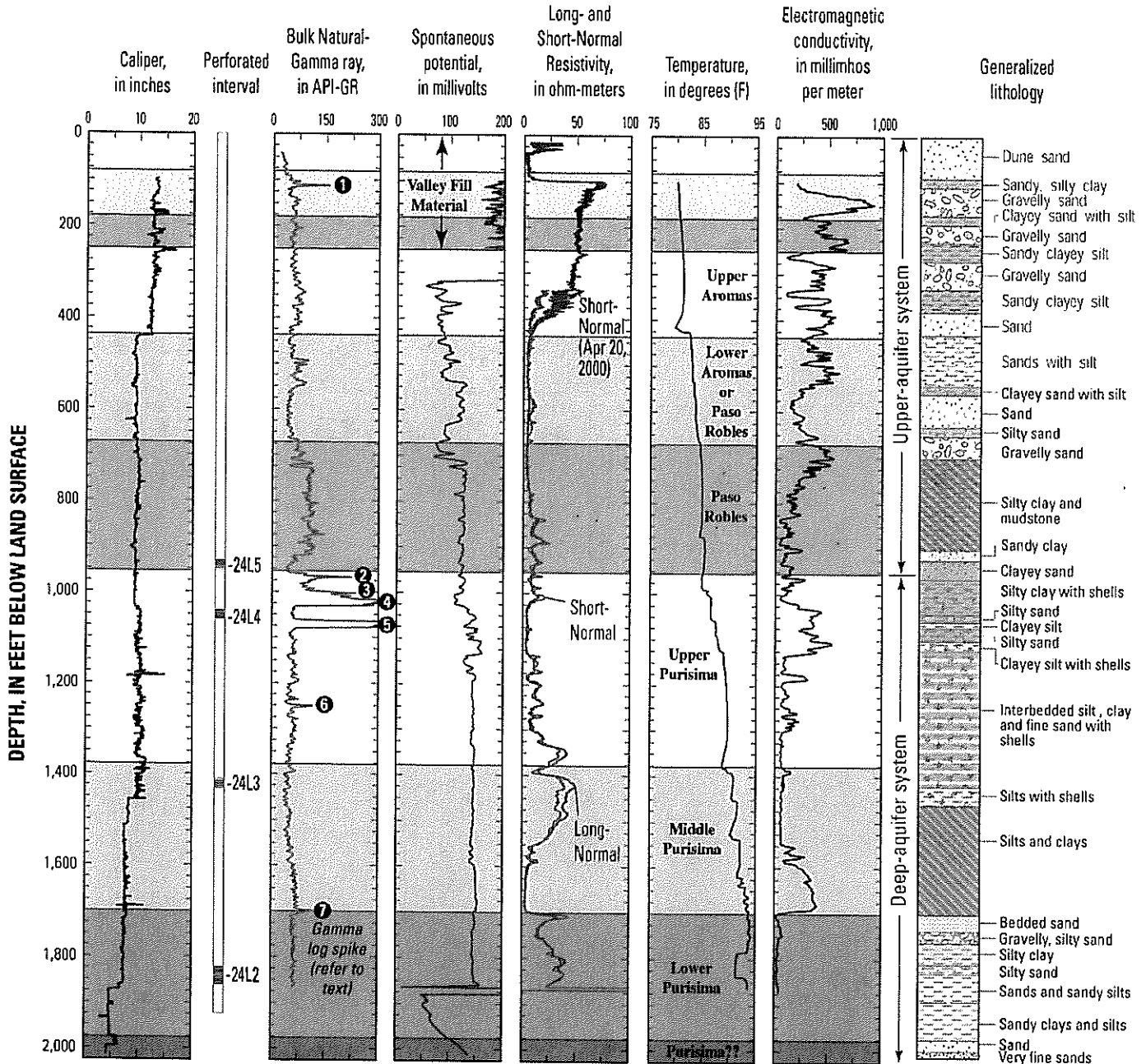


Figure 3. Well construction and lithology for the deep-aquifer monitoring well and selected nearby water-supply wells, Marina, California.

DMW1



TD = 2010 ft bgs = 1,974 ft AMSL

Figure 5. Lithology and geophysical logs for the deep-aquifer system monitoring-well site, Marina, California.

**Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and
Marina
Monterey County Water Resources Agency**

Cross-Section D-D' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-30G03	0	80	fine sand	fine sand
14S/2E-30G03	80	100	fine sand/silt	fine sand
14S/2E-30G03	100	110	fine sand	fine sand
14S/2E-30G03	100	130	blue clay	fine sand
14S/2E-30G03	130	160	sandy clay	blue clay
14S/2E-30G03	160	250	fine sand	fine sand
14S/2E-30G03	250	270	sandy clay	sandy clay
14S/2E-30G03	270	310	coarse sand and clay	sandy clay
14S/2E-30G03	310	390	brown clay, coarse fine sands	brown clay
14S/2E-30G03	390	430	brown clay	brown clay
14S/2E-30G03	430	490	coarse sand	coarse sand
14S/2E-30G03	490	520	fine sand	fine sand
14S/2E-30G03	520	580	coarse sand/ yellow clay	sandy clay
14S/2E-30G03	580	610	yellow clay	yellow clay
14S/2E-30G03	610	670	silty brown clay	brown clay
14S/2E-30G03	670	920	borwn clay silty clay	brown clay
14S/2E-30G03	920	950	coarse sand and clay	sandy clay
14S/2E-30G03	950	965	clay	clay
14S/2E-30G03	965	1000	blue shale	blue clay
14S/2E-30G03	1000	1110	clay and sand	sandy clay
14S/2E-30G03	1110	1200	clay and sand	sandy clay
14S/2E-30G03	1200	1230	clay and gray clay and sand	sandy clay
14S/2E-30G03	1230	1300	sandy clay	sandy clay
14S/2E-30G03	1300	1350	blue sandy clay	blue clay
14S/2E-30G03	1350	1400	shale and clay	clay
14S/2E-30G03	1400	1420	clay and coarse sand	sandy clay
14S/2E-30G03	1420	1520	blue clay, coarse sand	sandy clay
14S/2E-30G03	1520	1570	blue clay some shale	blue clay
14S/2E-30G03	1570	1650	gray clay, sand and shale	sandy clay
14S/2E-30G03	1650	1680	fine sand	fine sand
14S/2E-30G03	1680	1740	blue clay	blue clay
14S/2E-30G03	1740	1860	clay, shale and sand	sandy clay
14S/2E-30G03	1860	1900	clay and shale	clay
14S/2E-30G03	1900	1980	sand and clay	sandy clay
14S/2E-30G03	1980	2020	clay and sandy clay	sandy clay
14S/2E-28C01	0	10	hill clay	clay
14S/2E-28C01	10	40	red sand	red sand
14S/2E-28C01	40	58	yellow sand	sand

**Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and
Marina
Monterey County Water Resources Agency**

Cross-Section D-D' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-28C01	58	60	blue-yellow sandy clay	blue clay
14S/2E-28C01	60	70	red-yellow sand	red sand
14S/2E-28C01	70	94	sand - tight gravel	gravel/sand
14S/2E-28C01	94	118	fine brown sand	fine sand
14S/2E-28C01	118	140	hard yellow clay	yellow clay
14S/2E-28C01	140	150	fine sand	fine sand
14S/2E-28C01	150	164	gravel, sand, layers of clay	snd/grvl/cly
14S/2E-28C01	164	184	sand-gravel (2" rocks)	gravel/sand
14S/2E-28C01	184	200	hard brown clay	brown clay
14S/2E-28C01	200	212	sand- fine gravel	gravel/sand
14S/2E-28C01	212	218	brown clay, layers of sand	sandy clay
14S/2E-28C01	218	238	sand - fine gravel	gravel/sand
14S/2E-28C01	238	248	hard yellow clay	yellow clay
14S/2E-28C01	248	280	sand - fine gravel	gravel/sand
14S/2E-28C01	280	288	white gravel, sand, clay (2" rock)	snd/grvl/cly
14S/2E-28C01	288	290	hard yellow clay	yellow clay
14S/2E-28C01	290	308	hard blue clay	blue clay
14S/2E-28C01	308	312	yellow clay	yellow clay
14S/2E-28C01	312	340	sand, gravel, yellow clay (1-2" rock)	snd/grvl/cly
14S/2E-28C01	340	371	sand, gravel (3" rock)	gravel/sand
14S/2E-28C01	371	375	hard red clay	red clay
14S/2E-28C01	375	378	sand red clay	sand
14S/2E-28C01	378	392	red-yellow clay	red clay
14S/2E-28C01	392	402	sand, gravel, layers of clay	snd/grvl/cly
14S/2E-28C01	402	412	sand, gravel (3" rock)	gravel/sand
14S/2E-28C01	412	430	yellow clay	yellow clay
14S/2E-28C01	430	435	sand, gravel (1" gravel)	gravel/sand
14S/2E-28C01	435	450	yellw clay and sand	yellow clay
14S/2E-28C01	450	464	gravel and sand (6" rock)	gravel/sand
14S/2E-28C01	464	472	sand	sand
14S/2E-28C01	472	478	gravel and sand (3" rock)	gravel/sand
14S/2E-28C01	478	480	red sand	red sand
14S/2E-28C01	480	494	red sand - thin layers of sandstone	red sand
14S/2E-28C01	494	502	yellow brown clay	yellow clay
14S/2E-28C01	502	511	fine sand and gravel	gravel/sand
14S/2E-28C01	511	520	brown clay	brown clay
14S/2E-28C01	520	526	sand and pea gravel	gravel/sand
14S/2E-28C01	526	542	sand and some pea gravel	gravel/sand

Appendix A. Summary of Lithology Recorded on Cross-Section Well Logs
Hydrogeologic Investigation of the Salinas Valley Basin in the Vicinity of Fort Ord and
Marina
Monterey County Water Resources Agency

Cross-Section D-D' Well Names	Top (feet bgs)	Bottom (feet bgs)	Boring log record	GEOBASE Code
14S/2E-28C01	542	550	sand - fine gravel	gravel/sand
14S/2E-28C01	550	555	white gravel (3" rock)	gravel
14S/2E-28C01	555	574	red-yellow clay	red clay
14S/2E-28C01	574	582	sand	sand
14S/2E-28C01	582	590	brown-white sandy clay	sandy clay
14S/2E-28C01	590	604	gravel (3" rock)	gravel
14S/2E-28C01	604	607	fine red sand	red sand
14S/2E-28C01	607	608	white sandstone	white sand
14S/2E-27C02	0	2	soil	topsoil
14S/2E-27C02	2	31	sandy yellow clay	sandy clay
14S/2E-27C02	31	147	blue clay	blue clay
14S/2E-27C02	147	173	sand and gravel, mostly sand	gravel/sand
14S/2E-27C02	173	187	sand and gravel, rocks to 3"	gravel/sand
14S/2E-27C02	187	199	sand and fine gravel	gravel/sand
14S/2E-27C02	199	215	sand and gravel, rocks to 3"	gravel/sand
14S/2E-27C02	215	239	sand and gravel, rocks to 4"	gravel/sand
14S/2E-27C02	239	241	sand, clay, and gravel	snd/grvl/clay
14S/2E-27C02	241	276	sand	sand
14S/2E-27C02	276	309	sand and gravel, rocks to 4"	gravel/sand
14S/2E-27C02	309	325	yellow clay	yellow clay
14S/2E-27C02	325	330	blue clay	blue clay
14S/2E-27C02	330	352	yellow clay	yellow clay
14S/2E-27C02	352	357	yellow clay streaked with sand and gravel	snd/grvl/clay
14S/2E-27C02	357	375	sand	sand
14S/2E-27C02	375	383	clay, sand, gravel	snd/grvl/clay
14S/2E-27C02	383	405	sand	sand
14S/2E-27C02	405	411	yellow clay	yellow clay
14S/2E-27C02	411	433	yellow clay, sand and gravel	snd/grvl/clay
14S/2E-27C02	433	450	yellow clay, sand and fine gravel, mostly sand	snd/grvl/clay
14S/2E-27C02	450	454	sand and gravel	gravel/sand
14S/2E-27C02	454	477	yellow clay	yellow clay
14S/2E-27C02	477	479	sand and gravel	gravel/sand
14S/2E-27C02	479	483	yellow clay	yellow clay
14S/2E-27G03	0	3	soil	topsoil
14S/2E-27G03	3	34	sandy yellow clay	sandy clay
14S/2E-27G03	34	130	blue clay	blue clay
14S/2E-27G03	130	141	sand	sand
14S/2E-27G03	141	149	sand and gravel	gravel/sand

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

State Well No. _____
Other Well No. 14/11-12

OWNER:

Name Pacific Cement & Aggragets
Address 400 Alabama St.,
San Francisco, Cal.

(2) LOCATION OF WELL:

County Monterey Owner's number, if any _____
Township, Range, and Section Lapis Plant, 2 miles N of
Distance from cities, roads, railroads, etc. Marina and 1 mile ~~XX~~
W. of Highway #1.

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Other

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE DOUBLE

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	240	14"	1/4			
240	242	14X12	1/4	26"	0	506
242	506	12	1/4			

of shoe or well ring:

Size of gravel: 1/8" X 1/4"

Describe joint Collars welded

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen Factory Punched louvre

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
242 400	506	8	4-1/2	1-1/2 X 1/8"

CONFIDENTIAL
Water Code Sec. 13752

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth 200 ft.

Were any struts sealed against pollution? Yes No If yes, bore depth of struts _____

From 0 ft. to 200 ft.

From _____ ft. to _____ ft.

Method of sealing Cement between bore and casing

(9) WATER LEVELS:

Depth at which water was first found, if known _____ ft.

Standing level before perforating, if known _____ ft.

Standing level after perforating and developing _____ ft.

(10) WELL TESTS:

Was pump test made? Yes No If yes, by whom? to be later _____

_____ gal./min with _____ ft. drawdown after _____ hrs.

Temperature of water _____ Was a chemical analysis made? Yes No

Was electric log made of well? Yes No If yes, attach copy _____

e-log on file SJD
26 Nov 68 CPH

(11) WELL LOG:

Total depth 611 ft. Depth of completed well 506 ft.

Formation: Describe by color, character, size of material, and structure

0 fill 8' Sand ft. to 20', sandy yellow ft. clay 28', fine red sand 48', colored sand 71', red sand, colored sand coarse 93', white and colored sand 116', White sand, streaks of yellow & blue sandy clay 138', White & colored coarse sand, blue sandy clay 161', Yellow sandy clay, colored sand, coarse 206', Red & brown crumbly sand, colored sand, coarse 228', Red & brown crumbly sand, light blue clay, white sand 251', Coarse white sand, thin streaks white sandy clay 318' Coarse colored sand, gravel, brown & grey sandy clay 341', Hard grey & blue clay, sandy 363', Hard grey & blue clay shale streaks 386', Grey shaley clay streaks of sand 408', Colored sand, gravel, hard shell 431', Colored sand, gravel, streaks of grey sandy clay 453' same to 476', Blue & grey shaley clay, streaks of sand 521', Grey & yellow sandy clay, sand, blue shaley clay 566', Yellow sandy clay, colored sand, 588', Coarse colored sand, brown shaley clay 611'.

Work started 7 8 19 68, Completed 8 2 19 68

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Valley Pump & Drilling Co.,

(Person, firm, or corporation) (Typed or printed)

Address 1128 Madison Lane,

Salinas, Cal. 93901

[SIGNED] [Signature]
(Well Driller)

License No. 206267 Dated 8 6, 19 68

SKETCH LOCATION OF WELL ON REVERSE SIDE

Annis' Hargan
 PLICATE *Gene Taylor*
 rain copy

STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 WATER WELL DRILLERS REPORT

Do Not Fill In
 No 141763
 State Well No. 195 ZE-641
 Other Well No. _____

OWNER:
 Name Monterey County Flood Control District
 Address County Courthouse
 Salinas, Ca. 93901

LOCATION OF WELL:
 City Monterey
 Owner's number, if any _____
 Township, Range, and Section Mulligan Hill
 Distance from cities, roads, railroads, etc. See attached map

TYPE OF WORK (check):
 New Well Deepening Reconditioning Destroying
 destruction, describe material and procedure in Item 11.

PROPOSED USE (check):
 Domestic Industrial Municipal
 Irrigation Test Well Other

EQUIPMENT:
 Rotary
 Cable
 Other

CASING INSTALLED:
 STEEL: OTHER
 SINGLE DOUBLE

From ft.	To ft.	Diarr.	Gage or Wall	Diameter of Bore	From ft.	To ft.
	600'	16	3/8	28-1/2	0	600
600	603	16	reducer	26	600	603
603	1563	12"	3/16	26	603	1563

Size of hole in well casing: _____
 Describe casing: Weld
 If gravel packed: _____
 Diameter of Bore: _____
 From ft.: _____ To ft.: _____
 Size of gravel: Spec sand

PERFORATIONS OR SCREEN:

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
850	1540			3/32 Horiz. Louvre Full Flo

Type of perforation or name of screen: *chump*

CONSTRUCTION:
 Was a surface sanitary seal provided? Yes No To what depth 800 ft.
 Were any strata sealed against pollution? Yes No If yes, note depth of strata
 Method of sealing: Concrete and 30" steel conductor

WATER LEVELS:
 Depth at which water was first found, if known 100 ft.
 Standing level before perforating, if known _____ ft.
 Standing level after perforating and developing _____ ft.

WELL TESTS:
 Was pump test made? Yes No If yes, by whom?
 gal./min with _____ ft. drawdown after _____ hrs.
 Temperature of water _____ Was a chemical analysis made? Yes No
 Was electric log made of well? Yes No If yes, attach copy

(11) WELL LOG:
 Total depth 1809 ft. Depth of completed well 1560 ft.
 Formation, Describe by color, character, size of material, and structure
 0 ft to 6 Top Soil ft.

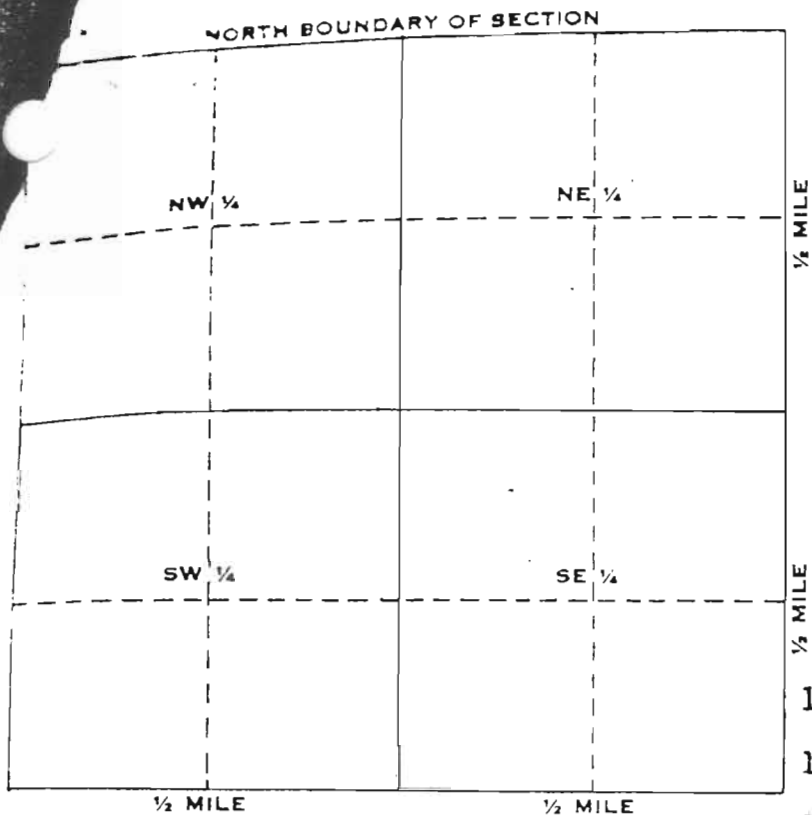
6' - 15' Blue sandy clay
 15' - 32' Fine blue sand
 32' - 60' Blue clay w/sea shell
 60' - 75' Blue soft sand
 75' - 100' Blue clay
 100' - 184' Blue clay & sand streak
 184' - 278' Coarse sand & gravel
 278' - 300' Yellow Clay
 300' - 330' Blue clay
 330' - 360' Coarse yellow sand, streak of clay
 360' - 434' Yellow clay, streaks blue & brown shale
 434' - 440' Yellow clay, streaks blue & brown shale
 440' - 490' White coarse sand
 490' - 528' Blue clay
 528' - 590' Sand & gravel, streak clay
 590' - 610' Yellow Clay
 610' - 621' Sand & gravel
 621' - 715' Yellow clay w/streak of sand

715' - 747' Yellow clay w/streak gravel
 747' - 778' Yellow clay w/streak gravel
 778' - 795' yellow clay w/streak gravel blue clay
 795' - 840' Yellow clay w/streak gravel blue clay
 840' - 872' Blue clay
 872' - 903' Blue clay
 903' - 934' Brown clay
 934' - 965' Hard brown clay & shale
 965' - 997' Hard brown clay & shale
 997' - 1028' Hard brown clay & shale
 1028' - 1059' Blue clay
 1059' - 1090' Blue & brown clay

Work started 9/20 19 76 Completed 11/12 19 78

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME Salinas Pump Co.
 Address 1128 Madison Lane Salinas, Ca. 93901
 (Signed) *Gene Taylor* (Well Driller)
 License No. 273053 Dated _____ 19____

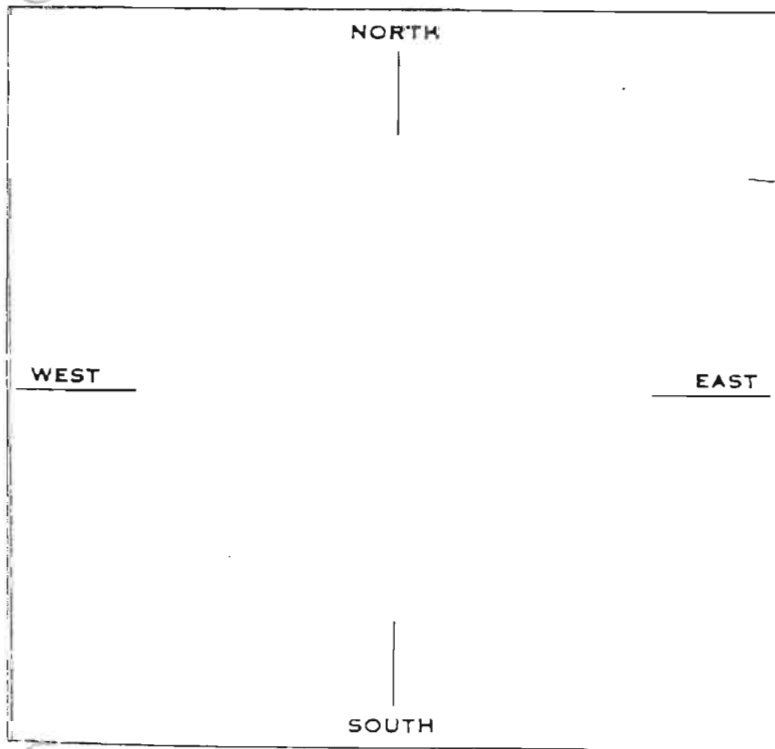
14S/2E-661



Township 14 N/S
 Range 2 E/W
 Section No. 661

A. Location of well in sectionized areas.
 Sketch roads, railroads, streams, or other features as necessary.

- 1090' - 1122' Blue & brown shaley clay
- 1122' - 1153' Blue & brown shaley clay
- 1153' - 1184' Blue shaley clay with streak hard sandstone
- 1184' - 1247' Blue shale streak sand
- 1247' - 1300' Blue clay, streak sand
- 1300' - 1340' Blue clay streak sand
- 1340' - 1372' blue clay & shale
- 1372' - 1403' Blue clay, strk gravel & sand
- 1403' - 1435' Strk gravel & sand
- 1435' - 1456' Strk gravel & sand
- 1466' - 1498' Strk gravel & sand
- 1498' - 1529' Strk gravel & sand
- 1529' - 1561' Strk gravel & sand
- 1561' - 1592' Strk gravel & sand
- 1592' - 1600' Strk gravel & sand
- 1600' - 1630' ~~Strk~~ Blue clay
- 1630' - 1645' Blue clay & sand
- 1645' - 1660' Brown clay & Blue clay
- 1660' - 1675' Shale, blue clay
- 1675' - 1690' Shale, blue clay
- 1690' - 1705' Brown clay, blue clay
- 1705' - 1720' Brown clay, sand streak
- 1720' - 1735' Blue clay
- 1735' - 1750' Blue clay
- 1750' - 1809' Blue shale



Location of well in areas not sectionized.
 Sketch roads, railroads, streams, or other features as necessary.
 Indicate distances.

February 25, 1948

1/2-6A2

Log of Elmer Struve Well No. 2

From	To	
0	2	Surface Soil
2	6	Black Soil
6	20	Sandy Blue Clay
20	40	Sandy Blue Clay
40	61	Blue Clay and Thin Streaks of Sand
61	82	Blue Clay and Thin Streaks of Sand
62	103	Blue Clay and Thin Streaks of Sand
103	145	Blue Clay
145	228	Blue Clay and Sand
228	249	Coarse Sand and Yellow Clay
249	291	Coarse Sand and Yellow Clay
291	312	Coarse Gravel and Sand and Yellow Clay
312	351	Coarse Gravel and Sand and Yellow Clay
351	374	Coarse Sand and Streaks of Yellow Clay
374	394	Coarse Sand and Streaks of Yellow Clay
394	415	Coarse Gravel and Sand and Streaks of Yellow Clay
415	460	Coarse Gravel and Sand and Streaks of Yellow Clay
460	483	Coarse Gravel and Sand
483	503	Coarse Gravel and Sand and Rocks
503	524	Coarse Gravel and Sand and Streaks of Yellow Clay
524	544	Coarse Gravel and Sand and Streaks of Yellow Clay
544	565	Sand and Thin Streaks of Yellow Clay
565	603	Coarse Sand
603	604	Yellow Clay

CASING DETAIL

351.90 Feet of 16" x 1/4" Blank Casing. Cemented outside of casing with 300 sacks of construction cement.

252.97 Feet of 10" x 3/16" perforated casing. Perforations 1/8" x 3" clean cut slots. 20 Feet of Blank 10" x 3/16" 20 Feet of Blank on top of Perforated Casing. Bottom joint Bullnosed.

WALKER DRILLING CO.

By _____

ORIGINAL
with DWR

STATE OF CALIFORNIA
THE RESOURCE AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 247188

14/2-7

at No. _____

No or Date 3081

State Well No. _____
Other Well No. 145/2E-7H

OWNER: Name Bill Baillee
Address Twin Bridges,
Castroville, CA 95012 Zip _____
LOCATION OF WELL (See instructions):
City Monterey Owner's Well Number _____
Address if different from above: _____
Ship 145 Range 2E Section 7H
Distance from cities, roads, railroads, fences, etc. _____

(12) WELL LOG: Total depth 410 ft. Depth of completed well 392 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	2	Top soil
2	4	Clay
4	47	Sand
47	52	Clay
52	95	Coarse sand
95	103	Blue clay
103	220	Sand, gravel & sea shell-salt water area
220	290	Yellow to brown clay-some thin layers of sand
290	330	Yellow clay
330	392	Coarse sand & gravel-good water sands
392	410	Red clay



(3) TYPE OF WORK:
 New Well Deepening
 Reconstruction
 Reconditioning
 Horizontal Well
 Destruction (Describe destruction materials and procedures in Item 12)
 (4) PROPOSED USE:
 Domestic
 Irrigation
 Industrial
 Test Well
 Stock
 Municipal
 Other

from ft.	to ft.	Formation (Describe by color, character, size or material)
290	330	Yellow clay
330	392	Coarse sand & gravel-good water sands
392	410	Red clay

EQUIPMENT:
 Reverse
 Air
 Bucket

(6) GRAVEL PACK:
 Yes No Size 6 5/8 steel
 Diameter of bore 13 5/8 to 292
 Packed from 8" to 292-392 ft.

CASING INSTALLED:
 Plastic Concrete

From ft.	To ft.	Dia. in.	Gage or Wall	Slot size
352	392	6 5/8	1188	1/16 x 3
			.188	

(8) PERFORATIONS:
 Type of perforation or size of screen

WELL SEAL: Packer set at 292-cemented to surface sanitary seal provided? Yes No If yes, to depth surface
 strata sealed against pollution? Yes No Interval solid ft.
 Kind of sealing neat cement pumped from 292

Work started 4-7-83 19 _____ Completed 4-8-83 19 _____

WATER LEVELS:
 Depth of first water, if known 16 ft.
 Rising level after well completion 330' when released return

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

WELL TESTS: to 24 feet
 Well test made? Yes No If yes, by whom? Self
 Method of test: Pump Bailor Air lift
 Depth to water at start of test 24 ft. At end of test 32 ft.
 Flow 18 gal/min after 48 hours. Water temperature 68°
 Chemical analysis made? Yes No If yes, by whom? A-1 Lab
 Electric log made? Yes No If yes, attach copy to this report

SIGNED: James I. Ash
 NAME: FRED ASH & SONS, INC.
 (Person, firm, or corporation) (Typed or printed)
 Address: 1225 Castroville Blvd.
 City: Salinas Zip: 93907
 License No. 391942 Date of this report 4-17-83

BMJ
1-C-8
14S/2E-8M

RAYMOND ALSOP

Jefferson

Twin Bridges

0 - 4	top soil
4 - 89	clay
89 - 99	gravel
99 - 129	clay
129 - 134	gravel
134 - 147	clay
147 - 151	gravel
151 - 155	sand
155 - 202	gravel
202 - 208	red sand

180' Aquifer SEALED
OFF BY DOUBLE CASING

Surface water 9 feet - water level 21 feet - 15 inch well

(August, 1935)

Continued on deepened well

8M2

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
No. 71883

DUPLICATE

File Original, Duplicate and Triplicate with the

REGIONAL WATER POLLUTION

STATE OF CALIFORNIA

State Well No.

Other Well No. 145/2E-8M

CONTROL BOARD No. 3

(Insert appropriate number)

1) OWNER:

Name Walter Jefferson
Address 473 Monterey Highway
Salinas, California

(2) LOCATION OF WELL:

County Monterey Owner's number, if any—
R. F. D. or Street No. 1 C Well over bank from house

(3) TYPE OF WORK (check):

New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal Rotary
Irrigation Test Well Other Cable
Dug Well

(5) EQUIPMENT:

(6) CASING INSTALLED:

SINGLE DOUBLE
From 208 ft. to 500 ft. Diam. 12 Gage or Wall 10

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring

Describe joint

(7) PERFORATIONS:

Type of perforator used Mills

Size of perforations	From ft.	to ft.	in., length, by	Perf. per row	Rows per ft.
<u>3/4</u>	<u>314</u>	<u>325</u>	<u>6</u>	<u>1</u>	<u>1</u>
	<u>367</u>	<u>399</u>	<u>6</u>	<u>1</u>	<u>1</u>
	<u>426</u>	<u>456</u>	<u>6</u>	<u>1</u>	<u>1</u>

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata
From _____ ft. to _____ ft.
Method of Sealing _____

(9) WATER LEVELS:

Depth at which water was first found _____ ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.

(10) WELL TESTS:

Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. draw down after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No

(11) WELL LOG:

Total depth	500	ft.	Depth of completed well	500
Formation: Describe by color, character, size of material, and structure.				
208	ft. to	211	ft.	Red sandstone
211		213		Red sandy clay
213		219		Sandstone ledge
219		225		Hard yellow clay
225		231		Sandy yellow clay
231		243		Soft sandy clay
243		274		Sandy yellow clay
274		307		Hard yellow clay
307		309		Gravelly yellow clay
309		314		Mucky yellow clay
314		325		Sand & gravel
325		339		Sandy yellow clay
339		343		Hard yellow clay
343		346		Sandy yellow clay
346		362		Mucky sand
362		367		Yellow clay
367		379		Gravelly yellow clay
379		388		Sand & gravel
388		399		Gravelly yellow clay
399		426		Hard yellow clay
426		437		Gravelly yellow clay
437		456		Sand & gravel
456		458		Red sandy clay
458		475		Fine red sand & gravel
475		477		Sandstone ledge
477		491		Red sand
491		492		Yellow sandy clay
492		500		Yellow clay

Deepened from 208' well originally drilled in 1935.

Work started _____ 19 _____ Completed _____ 19 _____

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Roy V. Alsop & Son
(Person, firm, or corporation) (Typed or printed)

Address 1508 Abbott Street
Salinas, California

[SIGNED] Roy V. Alsop Well Driller

License No. 132870 Dated December 22, 1961

Section 7076.1 Code

Destroyed Nov/Dec 1997

14S/2E-17B2

1-C-20A

514

R

July 23, 1947

Log of Jake Jefferson

From

To

0	3	Surface Soil
3	10	Black Soil
10	25	Sandy Yellow Clay
25	40	Sandy Blue Clay and Blue Sand
40	60	Sandy Blue Clay and Blue Sand
60	81	Sandy Blue Clay and Blue Sand
81	101	Blue Clay and blue Sand
101	122	Blue Clay and streaks of Course Sand
122	143	Sand and Streaks of Blue Clay Good
143	164	Course Sand and streaks of Blue Clay good
164	185	Course Sand and Streaks of Blue Clay Good
185	206	Hard Packed Red and Good
206	227	Hard Packed Red Sand Good
227	248	Course Sand and Streaks of Yellow Clay Very Good
248	269	Course Gravel and Sand Streaks of Yellow Clay Very g
269	290	Course Gravel and Sand and Streaks of Blue Clay Very Good
290	311	Course Gravel and Sand and Streaks of Blue Clay Very Good
311	332	Course Gravel & Sand & Streaks of Yellow Clay Good
332	352	Course Gravel & Sand & Streaks of Yellow Clay Good
352	374	Course Gravel & Sand & Streaks of Yellow Clay very Good
374	397	Course Gravel & Sand Very good
397	420	Course Gravel & Sand streaks of Yellow Clay Very Good
420	442	Course Gravel & Streaks of Yellow Clay very good
442	464	Course Gravel and Sand
464	486	Course Gravel and Sand Very good
486	505	Course Gravel and Sand Tough Blue Clay on Bottom

Casing Detail

303.58' of 14" x 1/4" Perforated Casing Perforation 3/16" x 1" Clean Cut Slots Button Joint Bullied nosed 201.61 feet of blank 14" x 1/4" Casing. Well washed and Gravel packed with 30 tons of 1/8" to 1/2" Gravel.

WALKER WELL COMPANY

By _____

$$\frac{\pi}{4} \left(\frac{14}{12}\right)^2 (505 \text{ ft}) = 539 \text{ ft}^3$$

$$\times 1.20$$

$$= 648 \text{ ft}^3 = 24 \text{ yd}^3$$

Attachment C

DUPLICATE
Owner's Copy
Page 1 of 2

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

Owner's Well No. 3 C.S.I.D # 3
Work Began _____, Ended _____
Permit Agency Monterey County Health Dept.
Permit No. WSAL 96-051 Permit Date 4/5/96

No. **542922**

NEW WELL #3

DWR USE ONLY - DO NOT FILL IN

14 S / 2 E - 17 B 3
STATE WELL NO./STATION NO

LATITUDE _____ LONGITUDE _____

14 S / 2 E - 17 B 3
APN/TRS/OTHER

GEOLOGIC LOG

WELL OWNER PRESSURE-40

DEPTH FROM SURFACE		DESCRIPTION <i>Describe material, grain size, color, etc.</i>
Fl.	to Fl.	
5	90	Clay
90	120	Coarse sand
120	130	Clay
130	150	Sand and clay
150	154	Gravel
154	220	Coarse sand - gravel
220	240	Sand
240	280	Sand and clay
280	330	Clay
330	340	Sand - Clay
340	420	Coarse sand
420	440	Sand
440	450	Sand Clay
450	550	Sand
550	610	Coarse Sand
610	635	Sand and tan clay

Name Opal Nielson
Mailing Address c/o M.C.W.R.A. P.O. Box 930
Salinas Ca 93902
CITY STATE ZIP

Address _____
City _____
County _____

APN Book 229 Page 011 Parcel 003
Township _____ Range _____ Section _____
Latitude _____ Longitude _____

LOCATION SKETCH NORTH

ACTIVITY ()
 NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify) _____

DESTROY (Describe Procedures and Mater Under "GEOLOGIC LOG")
PLANNED USE(S)
()
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
 Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify) _____

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

TOTAL DEPTH OF BORING 635 (Feet)
TOTAL DEPTH OF COMPLETED WELL 615 (Feet)

DRILLING METHOD Rotary FLUID Bentonite

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Fl.) & DATE MEASURED _____
ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____
TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Fl.)
* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE Fl. to Fl.	BORE-HOLE DIA. (Inches)	CASING(S)				
		TYPE ()	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 : 70	42"	X	A139	34"	.250	
0 : 330	32"	X	A139	22"	.375	
330 : 410	"	X	304 S.S.	22"	.070	
410 : 440	"	X	A139	"	.375	
440 : 540	"	X	304 S.S.	"	.070	
540 : 560	"	X	A139	"	.375	

DEPTH FROM SURFACE Fl. to Fl.	ANNULAR MATERIAL TYPE			
	CE-MENT ()	BEN-TONITE ()	FILL ()	FILTER PACK (TYPE / SIZE)
0 : 70	X			10sk
0 : 330	X			50/50
330 : 615			X	#4/#12

- ATTACHMENTS ()
- Geologic Log
 - Well Construction Diagram
 - Geophysical Log(s)
 - Soil / Water Chemical Analyses
 - Other _____

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Farm Pump and Irrigation
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS P. O. Bx 1477, Shafter, Ca. 93263 CITY STATE ZIP

*IN COMPLETE
560-600 section
600-610 clean*

ROY V. ALSOP & SON

SINCE 1873
Well Drilling

FAIRBANKS-MORSE PUMPS AND PRESSURE SYSTEMS P O M O N A

INDUSTRIAL PUMPS

SALES AND SERVICE

SALINAS, CALIFORNIA 93901

Dia. 14" #10 ga.

LOG OF WELL
for

June 3, 1972

Monterey Peninsula Garbage & Refuse Disposal District

0 ft.	to	108 ft.	Sand
108	"	132	Blue clay
132	"	144	Yellow sandy-sediment
144	"	148	Blue clay
148	"	162	Sandy yellow sediment
162	"	176	Fine packed sand
176	"	188	Yellow clay
188	"	200	Sand & fine gravel
200	"	206	Fine silty sand
206	"	214	Fine sand & float rock
214	"	226	Blue clay
226	"	236	Yellow clay
-146 → 236	"	240	Fine gravel
240 I	"	303	Sand & gravel
303	"	305	Yellow clay
305	"	320	Mucky sand
320 I	"	351	Sand & gravel
351	"	354	Soft sand stone

145/25-1721

Perforations: 244 ft. to 303 ft.
328 " 338

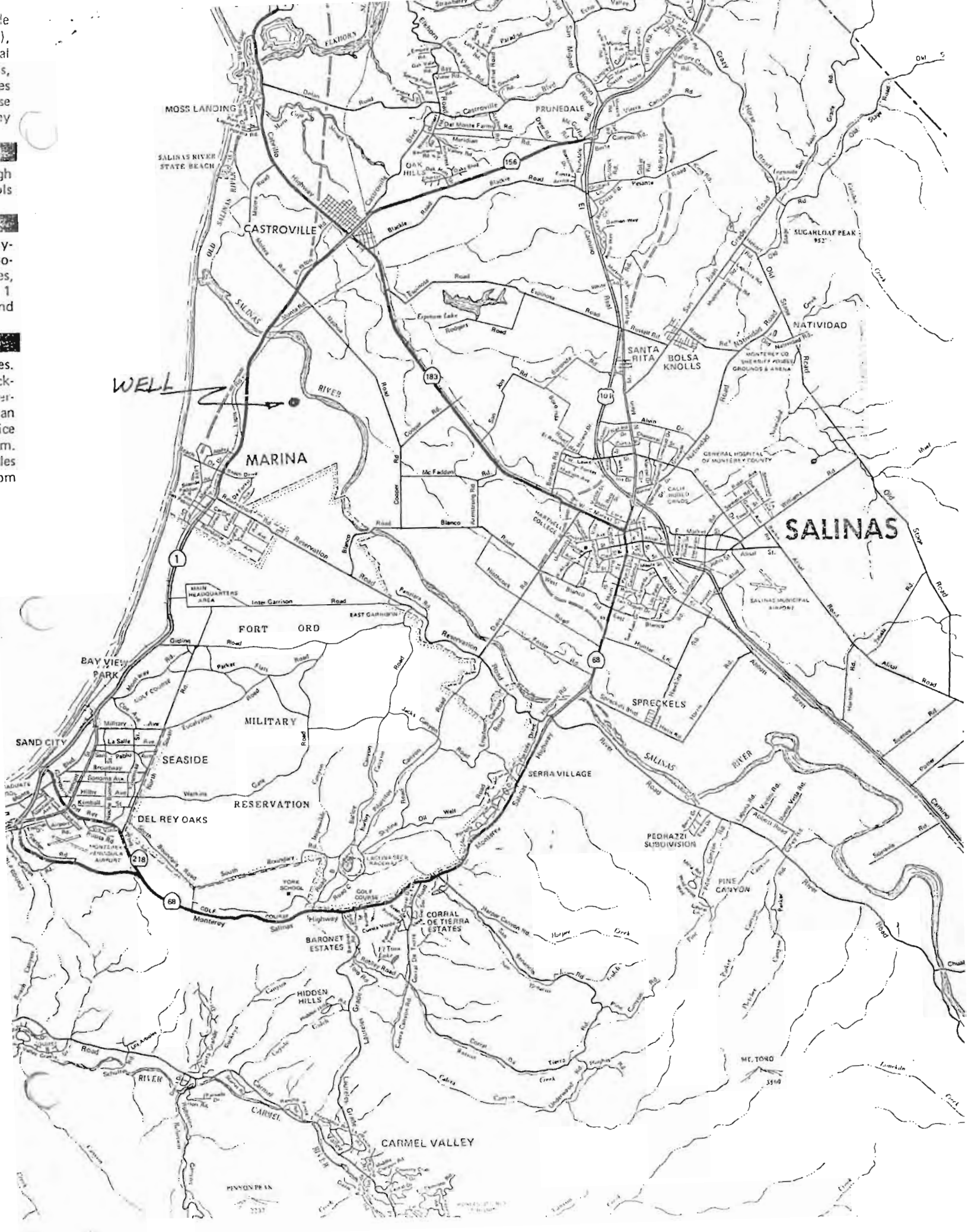
Concrete Plug - 6 ft.

Static Water Level - 139½ ft.

= = = gallons per minute =
⇒ H₂O ⇒

Pumps 1090 gal per minute

Ground elev. approx 90 feet



MOSS LANDING
SALINAS RIVER STATE BEACH

CASTROVILLE

PRUNEDALE

SALINAS

MARINA

FORT ORD

SAND CITY

SEASIDE

DEL REY OAKS

RESERVATION

MILITARY

SERRA VILLAGE

PEDRAZZI SUBDIVISION

PINE CANYON

BARONET ESTATES

CORRAL DE TIERRA ESTATES

HIDDEN HILLS

CARMEL VALLEY

RIVER

PENNON PARK

WELL

14/2-18E1

STATE OF CALIFORNIA
THE RESOURCES AGENCY

Do Not Fill In

ORIGINAL

File with DWK

CONFIDENTIAL LOG

DEPARTMENT OF WATER RESOURCES

Water Code Sec. 15 WATER WELL DRILLERS REPORT

No 121665

State Well No. 145/2E-18E1

Other Well No. _____

(1) OWNER: Armstrong Ranch
Name c/o M. L. Dubach, Inc.
Address PO Box P, Davis, Ca. 95516

(11) WELL LOG:
Total depth _____ ft. Depth of completed well 870 ft.

(2) LOCATION OF WELL:
County Monterey
Township, Range, and Section Between Marina & Castroville
Distance from cities, roads, railroads, etc. 1/2 mi. Bridges on Hwy 1, off Louis Road

Formation: Describe by color, character, size of material, and structure
0 to 75 fine sand
75 to 100 coarse gravel
100 to 125 gravel-streaks clay
125 to 150 clay rock
150 to 175 coarse gravel
175 to 200 ~~fine sand streak clay~~
200 to 225 fine sand streak clay
225 to 250 fine sand streak clay
250 to 275 gravel
275 to 300 fine sand streak clay
300 to 325 white sand
325 to 350 sand-clay streaks
350 to 375 sand
375 to 400 fine sand
400 to 425 sand gravel
425 to 450 sand gravel
450 to 475 sand streaks clay
475 to 500 coarse gravel-clay
500 to 525 sand clay
525 to 550 sand clay
550 to 575 sandy clay
575 to 600 fine sand clay
600 to 625 sand
625 to 650 Red clay gravel
650 to 675 yellow clay
675 to 700 yellow clay
700 to 725 fine gravel
725 to 750 coarse gravel
750 to 775 coarse gravel
775 to 800 fine gravel
800 to 825 coarse gravel
825 to 850 coarse gravel
850 to 875 yellow clay
875 to 900 yellow clay
900 to 913 yellow clay

(3) TYPE OF WORK (check):
New Well Deepening Reconditioning Destroying
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic Industrial Municipal Irrigation Test Well Other
(5) EQUIPMENT:
Rotary Cable Other

(6) CASING INSTALLED:

STEEL:		OTHER:		If gravel packed			
From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.	
303	306	14"	1/4"	26"	300	870	
306	870	12"	1/4"				

Size of shoe or well ring: _____ Size of gravel: 1/4 pea
Describe joint: welded

(7) PERFORATIONS OR SCREEN:

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
666	834	8	4 1/2	1/8" std louvre

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes No To what depth 300 ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata

From 0 ft. to 300 ft.
Method of sealing concrete

(9) WATER LEVELS:
Depth at which water was first found, if known _____ ft.
Standing level before perforating, if known _____ ft.
Standing level after perforating and developing _____ ft.

(10) WELL TESTS: 20 Gals tested
Was pump test made? Yes No If yes, by whom?
Yield _____ gal./min. with _____ ft. drawdown after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No
Was electric log made of well? Yes No If yes, attach copy

Work started 7-2-74 19 _____ Completed 7-2-74 19 _____
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME Salinas Pump Co.,
(Person, firm, or corporation) (Typed or printed)
Address 1128 Madison Lane, Salinas, Ca. 93901
(SIGNED) *[Signature]*
License No. 273053 Dated 7-15-74 19 _____

SKETCH LOCATION OF WELL ON REVERSE SIDE

ORIGINAL
File with DWR

DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

No 52278

State Well No. _____
Other Well No. 45/ZE-3A

51

(1) OWNER:
 Name Marina County Water District
 Address 11 Beach Road, Marina, Calif.

(2) LOCATION OF WELL:
 County Monterey Owner's number, if any #7
 Township, Range, and Section _____
 Distance from cities, roads, railroads, etc. Northeast corner of Water District Boundary

(3) TYPE OF WORK (check):
 New Well Deepening Reconditioning Destroying
 If destruction, describe material and procedure in Item 11.

(11) WELL LOG:
 Total depth 588 ft. Depth of completed well 574 ft.
 Formation: Describe by color, character, size of material, and structure

ft. to		ft.
0 to	59'	Sandy Top Soil
59	76	Sandy Grey Clay
76	91	Medium Brown Sand
91	98	Soft Brown Clay
98	147	Medium Brown Sand
147	164	Sandy Brown Clay
164	226	Coarse Grey Sand with Cobble
226	289	" " " with Gravel
289	308	Soft Grey Clay
308	361	Coarse Grey Sand with 4" Cobble
361	374	Sandy Brown Clay
374	382	Soft Brown Clay
382	388	Coarse Grey Sand
388	393	Soft Grey Clay
393	401	Coarse Grey Sand
401	420	Soft Grey Clay
420	433	Coarse Grey Sand with Cobble
433	440	Soft Grey Clay
440	453	Coarse Grey Sand with 4" Cobble
453	481	Medium Soft Grey Clay
481	497	Medium Brown Sand
497	508	Medium Grey Clay
508	518	Coarse Grey Sand
518	536	Soft Brown Clay
536	559	Coarse Grey Sand
559	565	Fine Brown Sand
565	588	Medium Brown Clay

(4) PROPOSED USE (check):
 Domestic Industrial Municipal Irrigation Test Well Other
 (5) EQUIPMENT:
 Rotary Cable Other

(6) CASING INSTALLED:
 STEEL: SINGLE DOUBLE OTHER: _____
 If gravel packed _____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	392	14"	3/16	28"	72	574
392	574	12"	3/16	28"		
0	80	23"	3/16	36"		

Size of shoe or well ring: none Size of gravel: birdseye pea gravel

(7) PERFORATIONS OR SCREEN:
 Type of perforation or name of screen factory-milled

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
392	402	1/16		S.S. Screen w/.050 opening
402	452			
452	471			
471	483			
483	497			
497	511			
511	519			
519	546			

(8) CONSTRUCTION:
 Was a surface sanitary seal provided? Yes No To what depth 80 ft.
 Were any strata sealed against pollution? Yes No If yes, note depth of strata _____
 From _____ ft. to _____ ft.
 From _____ ft. to _____ ft.
 Method of sealing _____

(9) WATER LEVELS:
 Depth at which water was first found, if known _____ ft.
 Standing level before perforating, if known _____ ft.
 Standing level after perforating and developing _____ ft.

(10) WELL TESTS:
 Was pump test made? Yes No If yes, by whom? driller
 Yield: 1445 gal./min. with 107 ft. drawdown after _____ hrs.
 Temperature of water _____ Was a chemical analysis made? Yes No
 Was electric log made of well? Yes No If yes, attach copy _____

Work started 1/27 19 71 Completed 2/23 19 71
 WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME Western Well Drilling Co., Ltd.
 (Person, firm, or corporation) (Typed or printed)
 Address P.O. Box 109, San Jose, Calif. 95103
 [SIGNED] _____ (Well Driller)
 License No. 25132 Dated Mar. 23 19 71

SKETCH LOCATION OF WELL ON REVERSE SIDE

Destroyed Nov/Dec 1997

14S/2E-17B2

1-C-20A

514

R

July 23, 1947

Log of Jake Jefferson

From

To

0	3	Surface Soil
3	10	Black Soil
10	25	Sandy Yellow Clay
25	40	Sandy Blue Clay and Blue Sand
40	60	Sandy Blue Clay and Blue Sand
60	81	Sandy Blue Clay and Blue Sand
81	101	Blue Clay and blue Sand
101	122	Blue Clay and streaks of Course Sand
122	143	Sand and Streaks of Blue Clay Good
143	164	Course Sand and streaks of Blue Clay good
164	185	Course Sand and Streaks of Blue Clay Good
185	206	Hard Packed Red and Good
206	227	Hard Packed Red Sand Good
227	248	Course Sand and Streaks of Yellow Clay Very Good
248	269	Course Gravel and Sand Streaks of Yellow Clay Very g
269	290	Course Gravel and Sand and Streaks of Blue Clay Very Good
290	311	Course Gravel and Sand and Streaks of Blue Clay Very Good
311	332	Course Gravel & Sand & Streaks of Yellow Clay Good
332	352	Course Gravel & Sand & Streaks of Yellow Clay Good
352	374	Course Gravel & Sand & Streaks of Yellow Clay very Good
374	397	Course Gravel & Sand Very good
397	420	Course Gravel & Sand streaks of Yellow Clay Very Good
420	442	Course Gravel & Streaks of Yellow Clay very good
442	464	Course Gravel and Sand
464	486	Course Gravel and Sand Very good
486	505	Course Gravel and Sand Tough Blue Clay on Bottom

Casing Detail

303.58' of 14" x 1/4" Perforated Casing Perforation 3/16" x 1" Clean Cut Slots Button Joint Bullied nosed 201.61 feet of blank 14" x 1/4" Casing. Well washed and Gravel packed with 30 tons of 1/8" to 1/2" Gravel.

WALKER WELL COMPANY

By _____

$$\frac{\pi}{4} \left(\frac{14}{12}\right)^2 (505 \text{ ft}) = 539 \text{ ft}^3$$

$$\times 1.20$$

$$= 648 \text{ ft}^3 = 24 \text{ yd}^3$$

Attachment C

DUPLICATE
Owner's Copy
Page 1 of 2

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

NEW WELL #3

DWR USE ONLY - DO NOT FILL IN -
14 S / 2 E - 17 B 3
STATE WELL NO. / STATION NO
LATTITUDE LONGITUDE
14 S / 2 E - 17 B 3
APN/TRS/OTHER

Owner's Well No. 3 C.S.I.D # 3 No. 542922
Work Began _____ Ended _____
Permit Agency Monterey County Health Dept.
Permit No. WSAL 96-051 Permit Date 4/5/96

GEOLOGIC LOG

DEPTH FROM SURFACE		DESCRIPTION <i>Describe material, grain size, color, etc.</i>
Fl.	to Fl.	
5	90	Clay
90	120	Coarse sand
120	130	Clay
130	150	Sand and clay
150	154	Gravel
154	220	Coarse sand - gravel
220	240	Sand
240	280	Sand and clay
280	330	Clay
330	340	Sand - Clay
340	420	Coarse sand
420	440	Sand
440	450	Sand Clay
450	550	Sand
550	610	Coarse Sand
610	635	Sand and tan clay

Name Opal Nielson
Mailing Address c/o M.C.W.R.A. P.O. Box 930
Salinas Ca 93902
CITY STATE ZIP

WELL LOCATION
Address _____
City _____
County _____
APN Book 229 Page 011 Parcel 003
Township _____ Range _____ Section _____
Latitude _____ North Longitude _____ WE

LOCATION SKETCH NORTH SOUTH
WEST EAST
ACTIVITY ()
 NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Mater Under "GEOLOGIC LOG")
PLANNED USE(S)
()
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
 Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Rotary FLUID Bentonite
WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL _____ (Fl.) & DATE MEASURED _____
ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____
TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Fl.)
* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE Fl. to Fl.	BORE-HOLE DIA. (Inches)	CASING(S)				
		TYPE ()	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 : 70	42"	X	A139	34"	.250	
0 : 330	32"	X	A139	22"	.375	
330 : 410	"	X	304 S.S.	22"	.070	
410 : 440	"	X	A139	"	.375	
440 : 540	"	X	304 S.S.	"	.070	
540 : 560	"	X	A139	"	.375	

DEPTH FROM SURFACE Fl. to Fl.	ANNULAR MATERIAL TYPE			
	CE-MENT ()	BEN-TONITE ()	FILL ()	FILTER PACK (TYPE / SIZE)
0 : 70	X			10sk
0 : 330	X			50/50
330 : 615			X	#4/#12

- ATTACHMENTS ()
- Geologic Log
 - Well Construction Diagram
 - Geophysical Log(s)
 - Soil / Water Chemical Analyses
 - Other _____

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Farm Pump and Irrigation
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS P. O. Bx 1477, Shafter, Ca. 93263 CITY STATE ZIP

*IN COMPLETE
560-600 section
600-610 clean*

ROY V. ALSOP & SON

SINCE 1873
Well Drilling

FAIRBANKS-MORSE PUMPS AND PRESSURE SYSTEMS P O M O N A

INDUSTRIAL PUMPS

SALES AND SERVICE

SALINAS, CALIFORNIA 93901

Dia. 14" #10 ga.

LOG OF WELL
for

June 3, 1972

Monterey Peninsula Garbage & Refuse Disposal District

0 ft.	to	108 ft.	Sand
108	"	132	Blue clay
132	"	144	Yellow sandy-sediment
144	"	148	Blue clay
148	"	162	Sandy yellow sediment
162	"	176	Fine packed sand
176	"	188	Yellow clay
188	"	200	Sand & fine gravel
200	"	206	Fine silty sand
206	"	214	Fine sand & float rock
214	"	226	Blue clay
226	"	236	Yellow clay
-146 → 236	"	240	Fine gravel
240 I	"	303	Sand & gravel
303	"	305	Yellow clay
305	"	320	Mucky sand
320 I	"	351	Sand & gravel
351	"	354	Soft sand stone

145/25-1721

Perforations: 244 ft. to 303 ft.
328 " 338

Concrete Plug - 6 ft.

Static Water Level - 139½ ft.

= = = gallons per minute =
⇒ H₂O ⇒

Pumps 1090 gal per minute

Ground elev. approx 90 feet



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FORT ORD OU-2 EXPANSIONAL		
BORING NUMBER: EW-002-03-180	COORDINATES:		DATE: 13 MARCH 2000
ELEVATION: 240? 200?	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: Jim Anderson	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY			PAGE 1 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0	GRAB 0843	SP			
5	GRAB				SILT DECREASING
10	GRAB 0850 0851	SP			← CASING STRAP
15	GRAB				← CEMENT/BENTONITE GROUT 5'-186'
20	GRAB 0905 0911	SP			
25	GRAB				
30	GRAB 0917	SP			← CASING STRAP

NOTES: **Done 13 MARCH 2000**

Drilling Contractor: **KELLY JACOBS WATER DEVELOPMENT CORP.**

Drilling Equipment: **DRESSER T70W**

Driller: **KEITH JACOBS**

1 1/2" I.D. BLANK SCH 40 PIPER CASING
10" I.D. BLANK SCH 40 PIPER WELL CASING
1" I.D. BLANK SCH 40 PIPER SAND TUBE



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: Fort Ord OJ-2 Expansion		
BORING NUMBER: EW-002-03-180	COORDINATES:		DATE: 13 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: J. M. ANDERSON	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY			PAGE 2 OF 9

DEPTH (FT.)	SAMPLE TYPE & NO.	LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
30	GRAB 0924	FROM ABOVE:	POORLY GRADED SAND (SP), DARK YELLOWISH BROWN (10YR 4/6), MOIST, LOOSE, 95-100% FINE TO MEDIUM SAND (80-90% FINE SAND, 10-20% MEDIUM SAND), FINE SAND ANGULAR, MEDIUM SAND SUBANGULAR TO SUBROUND, 0-5% SILT, 05-15% QUARTZ, 5-15% FELDSPAR, 5-10% LITHIC & MAFIC.	SP			<p>POOR CUTTINGS RECOVERY DRILL ADDS WATER @ 35'. FROM THIS POINT ON UNABLE TO DETERMINE MOISTURE CONTENT. SILT INCREASES DUE TO ADDITION OF WATER WASHING THE INTERIOR OF THE CASING.</p> <p>SILT DECREASES GRAIN SIZE DECREASING</p> <p>CENTRALIZER CASING STRAP CEMENT/BENTONITE GROUT 5'-186'</p>
35							
40	GRAB 0934 0951		LIGHT OLIVE BROWN (2.5Y 5/4) (COLOR CHANGE AFFECTED BY THE ADDITION OF WATER), (10-20% FINE TO MEDIUM SAND 20-30% SILT - SEE REMARKS)	SP			
45	GRAB		(90-95% FINE SAND, 5-10% MEDIUM SAND)				
50	GRAB 0959 1007		100% FINE TO MEDIUM GRAIN SAND (80-90% FINE SAND, 10-20% MEDIUM SAND)	SP			
55	GRAB		S.A.A.				
60	GRAB 1014		LIGHT YELLOWISH BROWN (2.5Y 6/3)	SP			

NOTES:

Drilling Contractor: WATER DEVELOPMENT CORP.

Drilling Equipment: DRESSER T10W

Driller: KEITH JACOBS

1 1/2" I.D. BLANK SCH 40X
PIEZOMETER CASING

10" I.D. BLANK SCH 40X
WELL CASING

1" I.D. BLANK SCH 40X
SAND TUBE



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751		PROJECT NAME: FORT ORD OU-2 EXPANSION	
BORING NUMBER: EW-OUZ-03-180		COORDINATES:	DATE: 13 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY			PAGE 3 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	FLOW LOG GAL/MIN FEET	DRILLING RATE FEET PER MINUTE	LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
60	GRAB	1025			POORLY GRADED SAND (SP), LIGHT YELLOWISH BROWN (2.5Y6/1), MOIST (?) LOOSE, 100% FINE TO MEDIUM SAND (80-90% FINE SAND, 10-20% MEDIUM SAND), FINE SAND ANGULAR, MEDIUM SAND, SUBANGULAR TO SUBROUND, 75-85% QUARTZ, 10-15% FELDSPAR, 5-10% LITHIC MARL.	SP			
65	GRAB				80-90% QUARTZ, 5-10% FELDSPAR, 5-10% LITHIC MARL.				
70	GRAB	1036 1045			(2.5Y6/4).	SP			← CEMENT/BENTONITE GROUT 5'-186' ← CASING STRAP
75	GRAB				S.A.A.				
80	GRAB	1056 1106			90-95% FINE TO MEDIUM SAND (90-95% FINE SAND, 5-10% MEDIUM SAND, 5-10% SILT)	SP			DRILLER INFORMS ME BORING IS MAKING WATER. GRAIN SIZE DECREASING
85	GRAB				LOOSE TO MEDIUM DENSE (10Y6/4) 95-100% FINE SAND, 0-5% MEDIUM SAND.				DRILLING RATE SLOWS SILT DECREASING
90	GRAB	1120			95-100% FINE TO MEDIUM SAND, 0-5% SILT.	SP			← CENTRALIZER

NOTES:

Drilling Contractor WATER DEVELOPMENT CORP.

Drilling Equipment DRESSER T70H

Driller: KEITH JACOBS

1 1/2" BLANK SCH 80 PVC PIEZOMETER CASING
10" BLANK SCH 80 PVC WELL CASING
1" I.D. BLANK SCH 80 PVC SAND TUBE

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FORT ORD OU-2 EXPANSION		
BORING NUMBER: EW-OU2-03-180	COORDINATES:		DATE: 13 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASINO HAMMER / MUD ROTARY			PAGE 4 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	DRILLING RATE GALLONS PER MINUTE FOOT PER MINUTE LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
90	GRAB 1128		POORLY GRADED SAND (SP), LIGHT YELLOWISH BROWN (2.5Y6/1) SATURATED, LOOSE TO MEDIUM DENSE, 95-100% FINE TO MEDIUM SAND (95-100% FINE SAND, 0-5% MEDIUM SAND), FINE SAND ANGULAR, MEDIUM SAND SUB-ANGULAR TO SUBROUNDED, 0-5% SILT, 80-90% QUARTZ, 5-10% FELDSPAR, 5-10% LITHIC & MARL.	SP			CASING STRAP DRILLING RATE SLOWS
95	GRAB		MEDIUM DENSE WELL GRADED SAND (SW), 95-100% FINE TO COARSE SAND (70-80% FINE SAND, 10-20% MEDIUM SAND, 5-10% COARSE SAND), COARSE SAND SUBANGULAR TO SUBROUNDED, 0-5% SILT	SW			GRAIN SIZE INCREASING ← 16" BOREHOLE 0-100'
100	GRAB 1148 0130						STOP DRILLING 13 MARCH SWITCH TO MUD ROTARY RESUME DRILLING 14 MARCH 7' OF HEAVE IN CASING
105	GRAB 0741 0745		FAT CLAY (CH), DARK GREENISH GRAY (10GY4/1), MOST STIFF, HIGH PLASTICITY POORLY GRADED SAND (SP), LIGHT OLIVE BROWN (2.5Y6/3) SATURATED, MEDIUM DENSE, 95-100% FINE TO MEDIUM SAND (80-90% FINE SAND, 10-20% MEDIUM SAND) FINE SAND ANGULAR, MEDIUM SAND SUBANGULAR TO SUBROUNDED, 0-5% SILT, 70-80% QUARTZ, 15-25% FELDSPAR, 5-10% LITHIC & MARL, TRACE < 1/2% MICA.	CH SP			← 14" BOREHOLE 100'-270'
110	GRAB		S.A.A.				← CASING STRAP GRAIN SIZE DECREASING
115	GRAB GRAB		POORLY GRADED SAND/SILTY SAND (SP/SM), 80-90% FINE SAND, 10-20% SILT, 65-75% QUARTZ, 15-25% FELDSPAR, 10-15% LITHIC & MARL, TRACE 1-2% MICA.	SP, SP/SM			← CEMENT/BENTONITE GROUT 5'-186'
120	GRAB		S.A.A.				

NOTES:

 Drilling Contractor WATER DEVELOPMENT CORP.

 Drilling Equipment DESSER T70W

 Driller: KEITH JACOBS

 1 1/2" I.D. BLANK SCH 80 PVC
PIEZOMETER CASING
10" I.D. BLANK SCH 80 PVC
WELL CASING
1" I.D. BLANK SCH 80 PVC
SAND TUBE



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FORT ORD OU-2 EXPANSION		
BORING NUMBER: EW-002-03-180	COORDINATES:		DATE: 14 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASING HAMMER / MUD ROTARY			PAGE 5 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER DRILLING RATE LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
120	GRAB		FROM ABOVE: POORLY GRADED SAND / SILTY SAND (SP/SM), LIGHT OLIVE BROWN (2.5Y5/1), SATURATED, MEDIUM DENSE, 80-90% FINE SAND, FINE SAND ANGULAR, 10-20% SILT, 65-75% QUARTZ, 15-25% FELDSPAR, 10-15% LITHIC & MAFIC, 1-2% MICA.	SP/SM			
125		OB15 OB17					
130	GRAB		S. A. A.	SP/SM		← CENTRALIZER ← CASING STRAP	
135							
140	GRAB		S. A. A.	SP/SM		← 14 1/4" BOREHOLE 100'-270'	
145		OB47 OB50				← CEMENT/BENTONITE GROUT 5'-186'	
150	GRAB		FAT CLAY (CH) OLIVE GRAY (5Y5/2), MOIST, VERY STIFF, MEDIUM TO HIGH PLASTICITY.	CH		← DRILLING RATE CHANGES ← CASING STRAP	

NOTES:

Drilling Contractor WATER DEVELOPMENT CORP.
 Drilling Equipment DRESSER T70W
 Driller: KEITH JACOBS

← 1 1/2" I.D. BLANK SCH 80 PVC PIEZOMETER CASING
 ← 10" I.D. BLANK SCH 80 PVC WELL CASING
 ← 1" I.D. BLANK SCH 80 PVC SAND TUBE



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FORT ORD OZ-2 EXPANSION		
BORING NUMBER: EW-OZ-03-180	COORDINATES:		DATE: 14 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth	Date/Time	DATE COMPLETED:
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY			PAGE 6 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	DRILLING RATE	LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
150	GRAB			FAT CLAY (CH) OLIVE GRAY (5Y5/2), MOIST VERY STIFF, MEDIUM TO HIGH PLASTICITY, HIGH DRY STRENGTH.	CH			
155	GRAB			DARK GREENISH GRAY (10GY4/1)				
160	GRAB			S. A. A.	CH			
165		1130 1240			CH			
170	GRAB			POORLY GRADED SAND / SILTY SAND (SP/SM) OLIVE GRAY (5Y5/2), SATURATED, MEDIUM DENSE, 80-90% FINE SAND FINE SAND ANGULAR, 18-20% SILT, 75-85% QUARTZ, 0-5% FELDSPAR, 10-20% LITHIC & MAFIC, 2-5% MICA	SP/SM			DRILLING RATE CHANGES ← CENTRALIZER WAIT 2-3' FOR CUTTINGS TO SURFACE. ← CASING STEP
175	GRAB			S. A. A.				
180	GRAB			80-90% FINE SAND, 10-20% MEDIUM SAND	SP/SM			GRAIN SIZE INCREASING

NOTES: SAND COLOR OBLURRED BY DRILLING MUD / CLAY IN SOLUTION

Drilling Contractor WATER DEVELOPMENT CORP.
 Drilling Equipment DRESSER T70W
 Driller: KEITH JACOBS

← 1 1/2" I.D. BLANK SCH 80 PVC
PIEZOMETER CASING
 ← 10" I.D. BLANK SCH 80 PVC
WELL CASING
 ← 1" I.D. BLANK SCH 80 PVC
SAND TUBE

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751		PROJECT NAME: Fort Ord OU-2 Expansion	
BORING NUMBER: EW-OUZ-03-180		COORDINATES:	
ELEVATION:		GWL: Depth	Date/Time
ENGINEER/GEOLOGIST: JIM ANDERSON		Depth	Date/Time
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY		PAGE 7 OF 9	

DEPTH (ft)	SAMPLE TYPE & NO.	QUANTITY OF SAMPLES PER FOOT DRILLING RATE	LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
180	GRAB			FROM ABOVE: POORLY GRADED SAND/SILTY SAND (SP/SM), OLIVE GRAY (5Y5/2), SATURATED, MEDIUM DENSE, 80-90% FINE TO MEDIUM SAND (60-90% FINE SAND, 10-20% MEDIUM SAND), FINE SAND ANGULAR, MEDIUM SAND SUB-ROUNDED, 10-20% SILT, 75-85% QUARTZ, 5-10% FELDSPAR, 10-15% LITHIC & MICA, 2-5% MICA.	SP/SM			
185	GRAB	1324 1330		FAT CLAY (CH), DARK GREENISH GRAY (5GY4), MOIST, HARD, HIGH PLASTICITY, HIGH DRY STRENGTH	CH			DRILLING RATE SLOWS BACK INTO CLAY ← CEMENT/BENTONITE GROUT 5'-186'
190	GRAB			S.A.A.	CH			← CASING STEP
195	GRAB			S.A.A.				← BENTONITE SEAL 186'-199'
200	GRAB			S.A.A.				← 1 1/4" BOREHOLE 100'-270'
205	GRAB	1500 1504		SEE BELOW AT 204' FAT CLAY (AS ABOVE)	SP CH SP			← TRANSITION SAND 199'-202'
210				POORLY GRADED SAND (SP), OLIVE GRAY (5Y5/2), SATURATED, MEDIUM DENSE, 90-95% FINE TO MEDIUM SAND (90-95% FINE SAND, 5-10% MEDIUM SAND), FINE SAND ANGULAR, MEDIUM SAND SUB-ANGULAR TO SUB-ROUNDED, 5-10% SILT, 70-80% QUARTZ, 5-15% FELDSPAR, 10-15% LITHIC & MICA, TRAILS (25%) MICA, (COLOR THOUGHT TO BE OBSCURED BY CLAY CUTTINGS - OLIVE BROWN?)	SP			205'-203.5' DRILLING RATE INCREASES FOR ONE HALF FOOT 204' DRILLING RATE INCREASES ← #8/16 FILTER PACK FROM 202'-270'
				WELL GRADED SAND (SW) (SEE BELOW)	SW			← CENTRALIZER ← BEAN SIZE INCREASING - PIEZOMETER ABOVE

NOTES: SAND COLOR OBSCURED BY DRILLING MUD/CLAY IN SOLUTION

Drilling Contractor WATER DEVELOPMENT CORP.
 Drilling Equipment DRESSER T70W
 Driller: KEITH JACOBS

1 1/2" I.D. BLANK SCH 80 PVC
PIEZOMETER CASING
 10" I.D. BLANK SCH 80 PVC
WELL CASING
 1" I.D. BLANK SCH 80 PVC
SAND TUBE



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FORT OGD DU-2 EXPANSION	
BORING NUMBER: EW-002-03-180	COORDINATES:	DATE: 14 MARCH 2000
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth Date/Time	DATE COMPLETED: 16 MARCH 2000
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY		PAGE 8 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	RECORDS ON SAMPLER DRILLING RATE % EFFICIENCY % LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
210	GRAB		WELL GRADED SAND (SW) OLIVE GRAY (5Y5/2), SATURATED, MEDIUM DENSE, 90-95% FINE TO COARSE SAND, (40-50% FINE SAND, 20-30% MEDIUM SAND, 30-40% COARSE SAND), FINE SAND ANGULAR MEDIUM & COARSE SAND, ANGULAR TO SUB ROUNDED 5-10% SILT 60-70% QUARTZ, 20-30% FELDSPAR, 10-20% LITHIC & MAFIC, 5-10% FINE GRAVEL TO 3/8".	SW			1" I.D. BLANK SCH 80 PVC SAND TUBE 0-212'
215	GRAB		S.A.A.				
220	GRAB		QWA 95-100% FINE TO COARSE SAND S.A.A. 20-30% FINE SAND, 20-30% MEDIUM SAND HAMMER 50-60% COARSE SAND, 0-5% FINE GRAVEL TO 3/8", TRACE SILT <2%.	SW			GRAIN SIZE INCREASING PIEZOMETER SPACER
225	GRAB	1527 1532	S.A.A.				8/16 FILTER PACK 202'-270'
230	GRAB		S.A.A.	SW			14 1/4" BOREHOLE 100'-270' PIEZOMETER SPACER
235	GRAB		S.A.A.				
240	GRAB		S.A.A.	SW			GRAIN SIZE DECREASING

NOTES: SAND COLOR OBTAINED BY DRILLING MUD / CLAY IN SOLUTION

Drilling Contractor WATER DEVELOPMENT CORP.

Drilling Equipment DRESSER T10W

Driller: KEITH JACOBS

14" I.D. 0.020" SCREENED SCH 80 PVC 212'-260' PIEZOMETER CASING

10" I.D. 0.045" CONTINUOUS WIRE WRAPPED STAINLESS STEEL SCREEN 210'-260'



VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 783751	PROJECT NAME: FOOT ORD OU-2 EXPANSION		
BORING NUMBER: EW-002-03-180	COORDINATES:		DATE: 14 MARCH 2000
ELEVATION:	GWL: Depth	Date/Time	DATE STARTED: 13 MARCH 2000
ENGINEER/GEOLOGIST: JIM ANDERSON	Depth	Date/Time	DATE COMPLETED: 16 MARCH 2000
DRILLING METHODS: AIR ROTARY CASING HAMMER & MUD ROTARY			PAGE 9 OF 9

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOW-COUNT PER FEET OF SAMPLING	DRILLING RATE	RECOVERY	LITHOLOGY	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
240	GRAB									
245	GRAB	1603 1607				WELL GRADED SAND (SW), OLIVE GRAY (5Y5/2), SATURATED, MEDIUM DENSE, 95-100% FINE TO COARSE SAND (40-50% FINE SAND, 20-30% MEDIUM SAND, 25-35% COARSE SAND), FINE SAND ANGULAR, MEDIUM AND COARSE SAND, ANGULAR TO SUB-ROUNDED 0-5% SILT (2%), 0-5% FINE GRAVEL TO 3/8", FINE GRAVEL ROUNDED, 60-70% QUARTZ, 20-30% FELDSPAR, 10-20% LITHIC & MAFIC, GRAVEL FROM FELDSPAR, LITHIC & MAFIC. SAME AS QUINCY (MARCH 2000) SAND LITHOLOGY.	SW			PIEZOMETER SPACER
250	GRAB					S.A.A.	SW			PIEZOMETER SPACER 1 1/4" BOREHOLE 100' - 270'
255	GRAB					POORLY GRADED SAND (SP), LIGHT OLIVE BROWN (2.5Y5/3), 90-95% FINE SAND, 5-10% SILT, 50-60% QUARTZ, 15-25% FELDSPAR, 20-30% LITHIC & MAFIC, TRACE 2% MICA.	SP			GRAIN SIZE DECREASING 10" I.D. 0.045" CONTINUOUS WIRE WRAPPED STAINLESS STEEL SCREEN 210' - 260'
260	GRAB					S.A.A.				1 1/2" I.D. 0.020" SCREENED SCH 80 PVC 212' - 262' PIEZOMETER CASING
265	GRAB					WELL GRADED SAND (SW), 95-100% FINE TO COARSE SAND (50-60% FINE SAND, 20-30% MEDIUM SAND, 20-30% COARSE SAND), 0-5% SILT, 0-5% FINE GRAVEL TO 3/4" (SUBROUNDED).	SW			CENTRALIZER PIEZOMETER SPACE 1 1/2" I.D. BLANK SCH 80 PVC PIEZOMETER SILT TRAP 263' - 265' 10" I.D. BLANK SCH 80 PVC SILT TRAP 260' - 265' GRAIN SIZE INCREASING
270	GRAB	1640				S.A.A. BOTTOM OF BORING AT 270'	SW			BOTTOM OF WELL 265' 10" WELL CAP FASTENED TO BLANK CASING VIA MACHINE SCREWS.

NOTES: SAND COLOR OBTAINED BY DRILLING MUD/CLAY IN SOLUTION

Drilling Contractor WATER DEVELOPMENT CORP.
 Drilling Equipment DRESSER T70W
 Driller: KEITH JACOBS

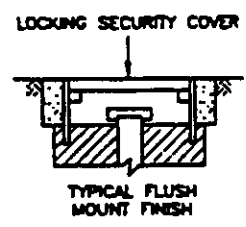
ATTACHMENT 6.3

EXAMPLE WELL COMPLETION FORM

Well EW-002-03-180

SURFACE COMPLETION
 ABOVE GROUND _____
 FLUSHMOUNT _____
 OTHER

TRAFFIC BOLLARDS YES
 (3) 3" HF NO



TOP OF CASING ?

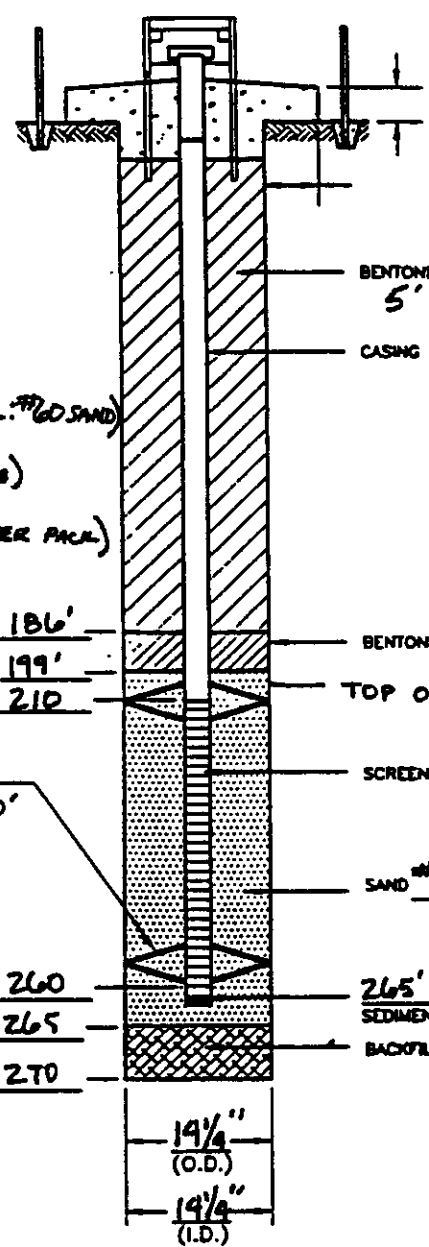
GROUND LEVEL _____

AMOUNT OF MATERIALS :
 CEMENT: 60
 (BAGS)
 GEL: 6
 (BAGS)
 BENTONITE: 2:1 (BIN SEAL: #20 SAND)
 (BUCKETS/BAGS)
 SAND PACK: 1 (3000lbs)
 (BAGS)
 BACKFILL: N.A. (FILTER PACK)
 (BUCKETS/BAGS)

TOP OF BENTONITE SEAL 186'
 TOP OF TRANSITION SAND 199'
 TOP OF SCREEN 210'

CENTRALIZER(S)
 DEPTH(S) 90' / 150'
130'
170'
209'
261'

BOTTOM OF SCREEN 260'
 TOP OF BACKFILL 265'
 TOTAL DEPTH 270'



BENTONITE/CEMENT GROUT
5' - 186'
 CASING 10" PVC SCH 80
 (DIA. TYPE SCH.)
 BENTONITE SEAL
 TOP OF FILTER PACK 202'
 SCREEN 10" 0.045" S.S. SCH 40
 (DIA. SLOT, TYPE SCH.)
 SAND #8/16 COLORADO SILICA SAND
 (TYPE)
265' (5') (FEET)
 SEDIMENT TRAP WITH BOTTOM CAP
 BACKFILL #8/16 SILICA SAND
 (TYPE)

NOT TO SCALE

IT-MCF(WDB)

MONITORING WELL COMPLETION FORM



ORIGINAL File with DWR

STATE OF CALIFORNIA THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES WATER WELL DRILLERS REPORT

Do not fill in

No. 289272

Notice of Intent No. Local Permit No. or Date April 4, 1989

State Well No. Other Well No.

(1) OWNER: Name MARINA COUNTY WATER DIST. Address 11 Reservation Road City Marina, Calif. ZIP 93933

(12) WELL LOG: Total depth 2020 ft. Completed depth 1950 ft. Table with columns: from ft., to ft., Formation (Describe by color, character, size or material). Rows include: 0-80 ft. fine sand, 80-100 ft. fine sand/silt, 100-110 ft. fine sand, 110-130 ft. blue clay, 130-160 ft. sandy clay, 160-250 ft. fine sand, 250-270 ft. sandy clay, 270-310 ft. coarse sand and clay, 310-390 ft. brown clay, coarse fine sand, 390-430 ft. brown clay, 430-490 ft. coarse sand, 490-520 ft. fine sand, 520-580 ft. coarse sand/yellow clay, 580-610 ft. yellow clay, 610-670 ft. silty brown clay, 670-920 ft. brown clay, silty clay, 920-950 ft. coarse sand and clay, 950-965 ft. clay, 965-1000 ft. blue shale, 1000-1110 ft. clay and sand, 1110-1200 ft. clay and sand, 1200-1230 ft. clay and gray clay and sand, 1230-1300 ft. sandy clay, 1300-1350 ft. blue sandy clay, 1350-1400 ft. shale and clay, 1400-1420 ft. clay and coarse sand, 1420-1520 ft. blue clay, coarse sand, 1520-1570 ft. blue clay some shale, 1570-1650 ft. gray clay, sand and shale, 1650-1680 ft. fine sand, 1680-1740 ft. blue clay, 1740-1860 ft. clay, shale and sand, 1860-1900 ft. clay and shale, 1900-1980 ft. sand and clay, 1980-2020 ft. clay and sandy clay.

(2) LOCATION OF WELL (See instructions): County Monterey Owner's Well Number #12 Well address if different from above Assessors Parcel No. (175-011-37) Township Range Section Distance from cities, roads, railroads, fences, etc.

See attached map



(3) TYPE OF WORK: New Well [X] Deepening [] Reconstruction [] Reconditioning [] Horizontal Well [] Destruction [] (Describe destruction materials and procedures in Item 12) (4) PROPOSED USE: Domestic [X] Irrigation [] Industrial [] Test Well [] Municipal [X] Other [X] (Describe)

WELL LOCATION SKETCH

(5) EQUIPMENT: Rotary [] Cable [] Other [] Reverse [X] Air [] Bucket []

(6) GRAVEL PACK: Monterey Sand Yes [X] No [] Size 12 x 20 Diameter of bore 26" Paused from 1250 to T.D.

(7) CASING INSTALLED: Steel [] Plastic [] Concrete []

(8) PERFORATIONS: Moss Full-Flo Type of perforation or size of screen

Table with columns: From ft., To ft., Dia. in., Gauge or Wall, From ft., To ft., Slot size. Rows: 0-600 (28", .312, 1390-1420, .040), 600-1390 (16", .312, 1480-1530, .040), 1940-1950 (16", .312, 1660-1700, .040).

Continuation of well log table with columns: from ft., to ft., Formation. Rows include: 1400-1420 ft. clay and coarse sand, 1420-1520 ft. blue clay, coarse sand, 1520-1570 ft. blue clay some shale, 1570-1650 ft. gray clay, sand and shale, 1650-1680 ft. fine sand, 1680-1740 ft. blue clay, 1740-1860 ft. clay, shale and sand, 1860-1900 ft. clay and shale, 1900-1980 ft. sand and clay, 1980-2020 ft. clay and sandy clay.

(9) WELL SEAL: 1780-1810 ft. and 1830-1880 ft. and 1900-1940 ft. Was surface sanitary seal provided? Yes [X] No [] If yes, to depth 87 ft. Were strata sealed against pollution? Yes [X] No [] Interval 0-1250 ft. Method of sealing cement grout seal

(10) WATER LEVELS: Depth of first water, if known 100 ft. Standing level after well completion 100 ft.

(11) WELL TESTS: Is well test made? Yes [X] No [] If yes, by whom? Bevlk Drilling Co. Type of test Pump [X] Baller [] Air lift [] Depth to water at start of test 100 ft. At end of test 100 ft. Discharge 1800 gal/min after 72 hours Water temperature Chemical analysis made? Yes [X] No [] If yes, by whom? Marina C.W.D. Was electric log made? Yes [X] No [] If yes, attach copy to this report

Work started April 11, 1989 Completed May 5, 1989

WELL DRILLER'S STATEMENT: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. Signed Dean Marshall (Well Driller) NAME BEYLIK DRILLING, INC. (Person, firm, or corporation) (Typed or printed) Address 591 S. Walnut Street City La Habra, Calif ZIP 90631 License No. 306291-C57&C-61 Date of this report Aug. 28, 1989

SAMPLE LOG - WELL NO. 12
MARINA COUNTY WATER DISTRICT

<u>Interval (Feet)</u>	<u>Description</u>
5 - 15	Fine grained sand
15 - 75	Fine to medium grained sands
75 - 85	Fine to medium grained sand with clay, organics
85 - 90	Fine sand
90 - 110	Fine sand with organics (grass)
110 - 115	Clay, brown-gray
115 - 140	Clay, grey
140 - 150	Fine sandy clay
150 - 155	Silty clay
155 - 185	Clayey sand
185 - 200	Sandy clay
200 - 240	Clayey sand
240 - 255	Slightly clayey sand
255 - 260	Sandy clay
260 - 265	Clayey sand
265 - 280	Silty clay
280 - 290	Sub-rounded coarse sand
290 - 310	Clayey, sub-rounded coarse sand
310 - 335	Slightly silty clay
335 - 400	Clayey coarse sand
400 - 415	Coarse sand with some clay
415 - 420	Sandy clay
420 - 425	Clay

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

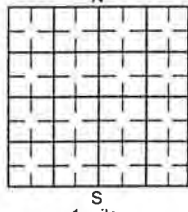
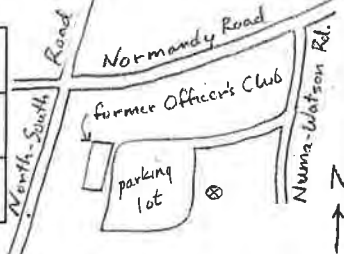
MPWMD # FO-08

15S1E-12Qa (Shallow)
15S1E-12Qb (Deep)

1/4

Mo. Co. Health Dept. Permit # 94-101

WELL AND PUMP DATA

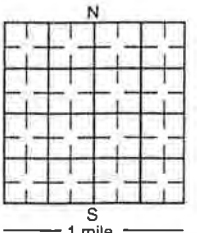
Location of Well <u>Former Ferguson Hall Officer's Club parking lot</u>					Property owner's name and address <u>U.S. Army Corps of Engineers Management and Disposal Branch, Real Estate Division 1325 J Street Sacramento, CA 95814-2922</u>																																																																
County <u>Monterey</u>	Township Number	Range Number	Section No.	Fraction																																																																	
Township	N or S	E or W	4	1/4 1/4 1/4																																																																	
Street Address and City or Distance and Direction from Road Intersections <u>~2500' E of N-S Rd., first rt. turn off Numa-Watson Rd.</u>					Well depth Hole <u>1110'</u> Datum point from which all measurements are taken <u>ground surface</u>																																																																
Show exact location of well in section grid with an 'x'					Method of Drilling																																																																
		<table border="1" style="width:100%;"> <tr><td>Addition Name</td></tr> <tr><td>Block Number</td></tr> <tr><td>Lot Number</td></tr> </table>			Addition Name	Block Number	Lot Number			<input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Direct rotary <input type="checkbox"/> Reverse rotary <input type="checkbox"/> Hollow rod <input type="checkbox"/> Air rotary <input type="checkbox"/> Jetted <input type="checkbox"/> Driven <input type="checkbox"/> Bucket auger <input type="checkbox"/> Flight auger <input checked="" type="checkbox"/> Dug <input checked="" type="checkbox"/> Quicksand <input type="checkbox"/> Drilling fluid																																																											
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Lot Number																																																																					
Remarks, Elevation, Source of Data, etc. <u>Ground surface elevation ~ 377' (Paulin altimeter)</u>					Use <input type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test Well <input type="checkbox"/> Public supply <input type="checkbox"/> Municipal <input type="checkbox"/> Heating or cooling <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Monitoring																																																																
Borehole data					Casing Type (flush thread)																																																																
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Development					Static Water Level																																																																
Method <u>air-lift</u> Duration <u>~ 3 hrs each</u>					"shallow" <u>364.51</u> ft <input type="checkbox"/> below <input checked="" type="checkbox"/> above grade "deep" <u>372.96</u> ft Dates <u>7/29 and 8/1/94</u> Sand content after _____ hrs Chemicals used _____																																																																
Pumping Water Level					Specific Capacity																																																																
After _____ ft <input type="checkbox"/> below <input type="checkbox"/> above grade Date _____					_____ gpm _____ gpm/ft of drawdown at _____ hours Date _____																																																																
Pump					Well Head Completion																																																																
Date installed _____ Type _____					<input type="checkbox"/> Pitless adaptor <input type="checkbox"/> Basement offset Distance above grade _____																																																																
Manufacturer _____ Model No. _____					Nearest Sources of Possible Contamination																																																																
H.P. _____ Volts _____ Capacity _____					_____ ft Direction _____ Type _____ Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																
Depth of pump intake setting _____ No. of stages _____					Geophysical Logs Run																																																																
<input type="checkbox"/> Oil <input type="checkbox"/> Water lubrication. Power source _____ Material of drop pipe _____, bowls _____ shafting _____, impellers _____ Bowl dia. _____ Column pipe dia _____ Length _____ Modifications _____					<u>SP + resistivity - WELNCO on 7/23/94</u> <u>(C. Newman, Santa Cruz office)</u>																																																																
Well Head Completion					Water Quality																																																																
<input type="checkbox"/> Pitless adaptor <input type="checkbox"/> Basement offset Distance above grade _____					Sample taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Where analyzed <u>MCHD Lab, Salinas</u>																																																																
Nearest Sources of Possible Contamination					Date well started <u>7/18/94</u>																																																																
_____ ft Direction _____ Type _____ Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No					Date well completed <u>7/25/94</u> Recorded by: <u>J. Oliver</u>																																																																
Geophysical Logs Run					Contractor Name and Address																																																																
<u>SP + resistivity - WELNCO on 7/23/94</u> <u>(C. Newman, Santa Cruz office)</u>					<u>Chappell Pump & Supply</u> <u>585 Las Animas Ave.</u> <u>Gilroy, CA 95020</u>																																																																
Water Quality					Name of Driller <u>Drillers: Jim Brundage, John Gibbs</u>																																																																
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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

MPWMD #FO-08

2/4

WELL AND PUMP DATA

Location of Well <u>former Ferguson Hall Officer's Club Parking Lot</u>					Property owner's name and address																																																																					
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clay cuttings are either blue or tan, minor shell fragments	[driller reports streaky chert layer at 422']																																																																									
CLAY, silty, vry minor sand	dkk blu/gry-olive	med	430	450																																																																						
soft, plastic, abundant shell fragments, vry minor chert																																																																										
SANDY CLAY, sand is fine to vry fine, common shell frags & light tan angular chert	blue-gry	med	450	470																																																																						
SANDY CLAY, as above w/vry minor frags of vry fine, well sorted calcareous cemented sand	tan-gry	med	470	503																																																																						
CLAY, silty, vry minor sand	vry drk steel gry	med	503	520																																																																						
smeary, sticky, minor gry, angular porcelenous chert	[driller reports hard drilling 503-506 -- clay zone?]																																																																									
SAND & CLAY, sand is vry fine, well sorted w/ occasional med clasts of granitic sand, clay is med gry to tan-gry, silty, gritty, soft	med tan-gry	med	520	540																																																																						
CLAY, silty, vry minor med sand	med steel gry	med	540	570																																																																						
smeary, sticky, w/common shell frags & minor hard, brittle, dk gry to black, tabular clay																																																																										
Development					Static Water Level																																																																					
Method _____ Duration _____ Dates _____ Sand content after _____ hrs _____ Chemicals used _____					_____ ft <input type="checkbox"/> below <input type="checkbox"/> above grade Date measured _____																																																																					
Pumping Water Level					Specific Capacity																																																																					
_____ ft <input type="checkbox"/> below <input type="checkbox"/> above grade Date _____ After _____ hrs pumping at _____ gpm					_____ gpm/ft of drawdown at _____ hours Date _____																																																																					
Pump					Well Head Completion																																																																					
Date installed _____ Type _____ Manufacturer _____ Model No. _____ H.P. _____ Volts _____ Capacity _____ Depth of pump intake setting _____ No. of stages _____ <input type="checkbox"/> Oil <input type="checkbox"/> Water lubrication- Power source _____ Material of drop pipe _____, bowls _____ shafting _____, impellers _____ Bowl dia. _____ Column pipe dia. _____ Length _____ Modifications _____					<input type="checkbox"/> Pitless adaptor <input type="checkbox"/> Basement offset Distance above grade _____																																																																					
Nearest Sources of Possible Contamination					Geophysical Logs Run																																																																					
_____ ft Direction _____ Type _____ Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																										
Contractor Name and Address					Water Quality																																																																					
Name of Driller _____ State License Number _____					Sample taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Where analyzed _____ Date well completed _____																																																																					

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

MPWMD #FO-08

3/4

WELL AND PUMP DATA

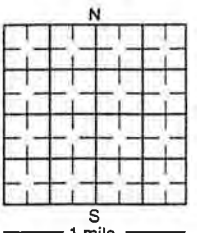
Location of Well <i>former Ferguson Hall Office's Club parking lot</i>					Property owner's name and address				
County	Township Number	Range Number	Section No.	Fraction					
Township	N or S	E or W			1/4	1/4	1/4	1/4	
Street Address and City or Distance and Direction from Road Intersections									
Show exact location of well in section grid with an 'x'					Sketch map of well location				
N									
S									
1 mile									
Addition Name									
Block Number									
Lot Number									
Remarks, Elevation, Source of Data, etc.					Well depth				
					Datum point from which all measurements are taken				
					Method of Drilling				
					<input type="checkbox"/> Cable tool <input type="checkbox"/> Hollow rod <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Direct rotary <input type="checkbox"/> Air rotary <input type="checkbox"/> Bucket auger <input type="checkbox"/> Reverse rotary <input type="checkbox"/> Jetted <input type="checkbox"/> Flight auger				
					Use				
					<input type="checkbox"/> Domestic <input type="checkbox"/> Public supply <input type="checkbox"/> Industrial <input type="checkbox"/> _____ <input type="checkbox"/> Irrigation <input type="checkbox"/> Municipal <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/> Heating or cooling <input type="checkbox"/> Monitoring				
					Casing Type				
					<input type="checkbox"/> Steel <input type="checkbox"/> Threaded Height above/below surface _____ <input type="checkbox"/> Galv. <input type="checkbox"/> Welded Drive shoe? Yes _____ No _____ <input type="checkbox"/> PVC <input type="checkbox"/> Solvent welded <input type="checkbox"/> SS				
					Hole diameter				
					_____ in to _____ ft Wgt _____ lb/ft Sch. No. _____ _____ in to _____ ft Wgt _____ lb/ft Sch. No. _____ _____ in to _____ ft Wgt _____ lb/ft Sch. No. _____				
Borehole data					Intake Portion of Well				
Formation Log					Screen type _____ or open hole from _____ ft to _____ ft				
Bulk Color		Hardness		From		To		Manufacturer _____	
<i>SAND, fine to med, moderately sorted, clayey, mostly granitic grains, also common angular to rounded chert frags. Minor calcareous shell frags, very minor wht, friable clay</i>		<i>med gry-tan</i>		<i>med</i>		<i>570</i>		<i>640</i>	
<i>SAND as above except bulk color change and occurrence of light tan, gritty clay</i>		<i>med brn</i>				<i>640</i>		<i>660</i>	
<i>SANDY CLAY, common platy cuttings of light olive clay, minor whitish clay</i>		<i>med brn</i>				<i>660</i>		<i>695</i>	
<i>CLAY, minor sand, minor blk platy clay very minor wht clay</i>		<i>med olive-gry</i>				<i>695</i>		<i>720</i>	
<i>SAND, fine to very fine, well sorted, mostly wht to brn grtz. grains, w/minor chert, minor blue-gry, sticky clay</i>		<i>med gry-brn</i>				<i>720</i>		<i>740</i>	
<i>SANDY CLAY, sand is mostly med, whitish to grn-beige, angular to rounded chert, clay is mostly light green to grey, stiff, common wht silty, gritty clay, very minor blk platy clay, many clay grains are rounded</i>		<i>grnsh-wht</i>				<i>740</i>		<i>760</i>	
Contractor Name and Address					Water Quality				
					Sample taken? <input type="checkbox"/> Yes <input type="checkbox"/> No				
					Where analyzed _____				
Name of Driller _____					Date well completed _____				
State License Number _____									

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

MPWMD # FO-08

4/4

WELL AND PUMP DATA

Location of Well					Property owner's name and address																																												
County	Township Number	Range Number	Section No.	Fraction																																													
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Formation Log	Bulk Color	Hardness	From	To																																													
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Name of Driller _____					Sample taken? <input type="checkbox"/> Yes <input type="checkbox"/> No																																												
State License Number _____					Where analyzed _____																																												
					Date well completed _____																																												

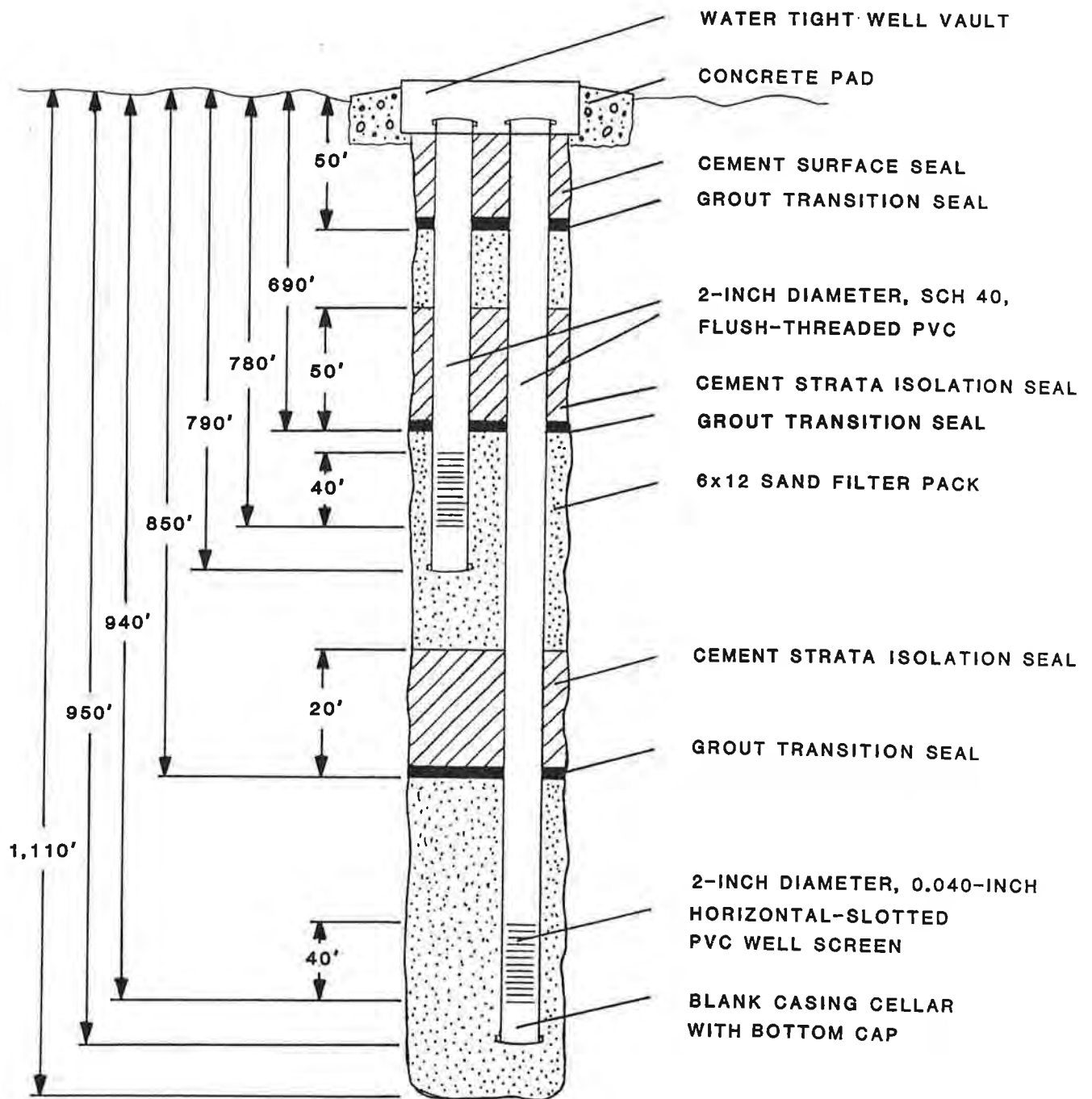
Drilling stops at 1110' as this is all of drill stem that is on site

Hole TD = 1110

FORT ORD COASTAL SUBBASIN GROUND WATER MONITORING PROJECT


MONITOR WELL CONSTRUCTION


MPWMD #FO-08



NOT TO SCALE

Figure 5. FO-08 Completion.

Well Name MPWMD Fort Ord #11 -- FO-11		Property owner's name and address U.S. Army Corps of Engineers 1325 J Street Sacramento, CA 95814-2922		License No. DACA05-3-96-508 Contact Ms. J. Gipson-Taylor
State Well No. 15S/1E-7Ba&b (MPWMD Well No.)		Mo. Co. Health Permit No. WSAL 96-119		
DWR Report No.	Assessor Parcel No. N/A	Hole Depth 1175'	Well Depth 740'/1130'	Reference elevation, source of datum 333' as estimated from POM Annex Survey Map F2.6, Sheet 51
Street Address or Distance and Direction to nearest intersection 1/4 mi N and 1/8 mi. E of Eighth Ave. + Gigling Rd. intersection		Hole Diam. 17"/10"	Well Diam. 2"/2"	
Sketch Map 		Drilling Method direct rotary (biodegrad. mud)	Initial static depth to water Date	
		Contractor name and address Chappell Pump & Supply Driller: Jim Brundage 585 Las Animas Ave. Helper: Sid Gilroy, CA 95020		
		Start Date 9/30/96	Stop Date 10/28/96	Screen slot size 700-730 1090-1120
Depth (feet)		Geophysical Logs Date SP, Resist. 10/21/96		Logged by C. Newman, WELENCO
Field Description		Perforations/Seals/Development, Remarks, etc.		
0 - 238	SAND med to drk reddish brn, vry fine to fine, sub rounded, mostly amber gtz grains, minor drk grains, no silt or clay, no org material at top.	Start drilling ~ 1200 hr on 9/30.		
238 - 258	CLAY, med steel gry, minor silt content, no sand, sticky, plastic	Driller reports minor yellow clay zone immediately above gry clay - no sample available. Complete 10" conductor casing to ~ 258', seal on 10/11/96.		
258 - 330	SAND + CLAY sand is vry fine to med, rnded to subangular, mistly gtz, silty; clay varies from soft to firm + platy -- bulk color lght brn.	Samples from 260 ~ 500 contain frags of cement conductor seal.		
330 - 360	SAND, lght-med brn, fine to coarse, rnded to subangular, mostly "amber" gtz grns. Minor silt + clay, vry minor tan chert frags.			
360 - 420	CLAY med brn, soft, vry silty + sandy (predom. vry fine sand), gritty, vry minor clr angular gtz frags, occasional rd-brn cly.			
420 - 530	SILT med brn, clayey + sandy (vry fine sand)			
530 - 565	CLAY med brn, silty + sandy (vry fine sand) soft, sticky			
565 - 575	CLAY med brn, vry sandy (vry fine sand), soft plastic, abundant wht to gry, angular to sub-rounded porcelainous chert frags	Driller time log shows faster drilling (i.e. 1 min/ft) from 560-570'		
575 - 645	CLAY med brn, silty, plastic, minor porcelainous chert frags up to 1/4" diam.			
645 - 700	CLAY, as above, but with color change from med brn to med gry mixed			

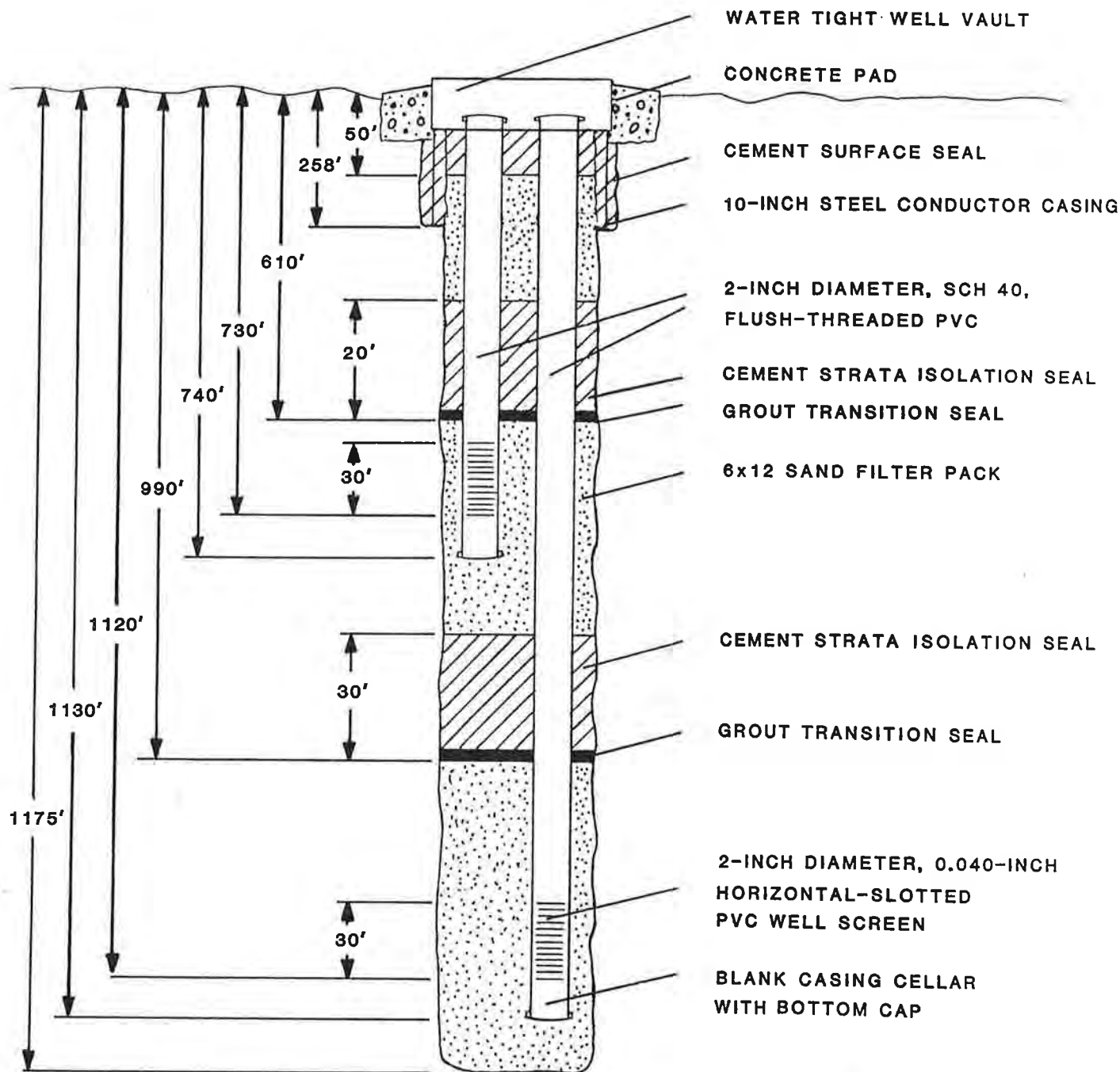
Well Name <p style="text-align: center;">FO-11</p>		Property owner's name and address 		
State Well No. +		Mo. Co. Health Permit No.		
DWR Report No.		Assessor Parcel No.		Hole Depth
Street Address or Distance and Direction to nearest intersection		Hole Diam.	Well Depth	Well Diam.
Sketch Map <p style="text-align: center;">(NORTH) ▲</p>		Drilling Method		Reference elevation, source of datum
		Initial static depth to water		
		Date		
		Contractor name and address		
		Start Date	Stop Date	Screen slot size
		Geophysical Logs	Date	Logged by
Depth (feet)	Field Description	Perforations/Seals/Development, Remarks, etc.		
700 - 710	CLAY med gray-brn, clay frags vary from soft, silty, sticky to firm, thin, brittle, platy; occasional wht granitic frags & tan porcelaneous chert			
710 - 735	SAND med gry-brn, fine to coarse, mostly rnded granitic & angular chert, mod. platy brittle brn clay, vry minor soft wht kaolinitic clay			
735 - 750	CLAY two distinct types: one med brn and one steel blu-gry, both zones soft, sticky, plastic, minor chert frags & vry minor fine to med undelgtz.			
750 - 830	CLAY + CLAYSTONE two types: med tan, silty to sandy, soft plastic; other one steel blu-gry, platy, friable; also minor fine to med rnded granitic grns and chert frags			
830 - 845	SAND, vry clayey, sand is mostly med to coarse subangular granitic grains w/minor chert frags, clay is lght tan, silty, soft			
845 - 960	CLAY & SAND blu-gry, soft to mod. stiff, silty; minor to mod occurrence of soft to stiff med brn clay, abundant shell frags 850-950			
960 - 995	CLAY dk steel gry, soft, plastic, vry minor soft brn clay, vry minor chert frags			
995 - 1020	CLAY + SAND clay is dk gry, soft to stiff, platy; sand is med, rnded granitic, minor greenish quartz grains; vry minor chert			

Well Name <p style="text-align: center;">FO-11</p>		Property owner's name and address		
State Well No. <p style="text-align: center;">Mo. Co. Health Permit No.</p>				
DWR Report No. <p style="text-align: center;">Assessor Parcel No.</p>		Hole Depth	Well Depth	Reference elevation, source of datum
Street Address or Distance and Direction to nearest intersection		Hole Diam.	Well Diam.	
Sketch Map <p style="text-align: center;">(NORTH) ▲</p>		Drilling Method		Initial static depth to water Date
		Contractor name and address		
		Start Date	Stop Date	Screen slot size
		Geophysical Logs Date		Logged by
Depth (feet)	Field Description	Perforations/Seals/Development, Remarks, etc.		
1020-1095	CLAY, drk gry, soft, plastic, mod. occurrence calcareous shell frags, vry minor fine sand	Hole TD = 1175 @ 1900 hr on 10/21/96. ----- Two monitors built in hole from 10/22 to 10/2 : sanitary seal 0-50 conductor seal 0-258 shallow well transition seal 590-610 shallow well perfs 700-730 deep well transition seal 960-990 deep well perfs 1090-1120 Both wells have 10' cellar sections.		
1095-1130	SAND, whitish-grn, fine to med, mostly rounded granitic, minor greenish fgs grains, vry minor blk, brittle, platy claystone; abundant soft, plastic tan clay			
1130-1175	CLAY, blu-gry, soft, plastic, vry minor fine sand; minor platy drk gry claystone			

1996 SEASIDE BASIN GROUND WATER MONITORING PROJECT

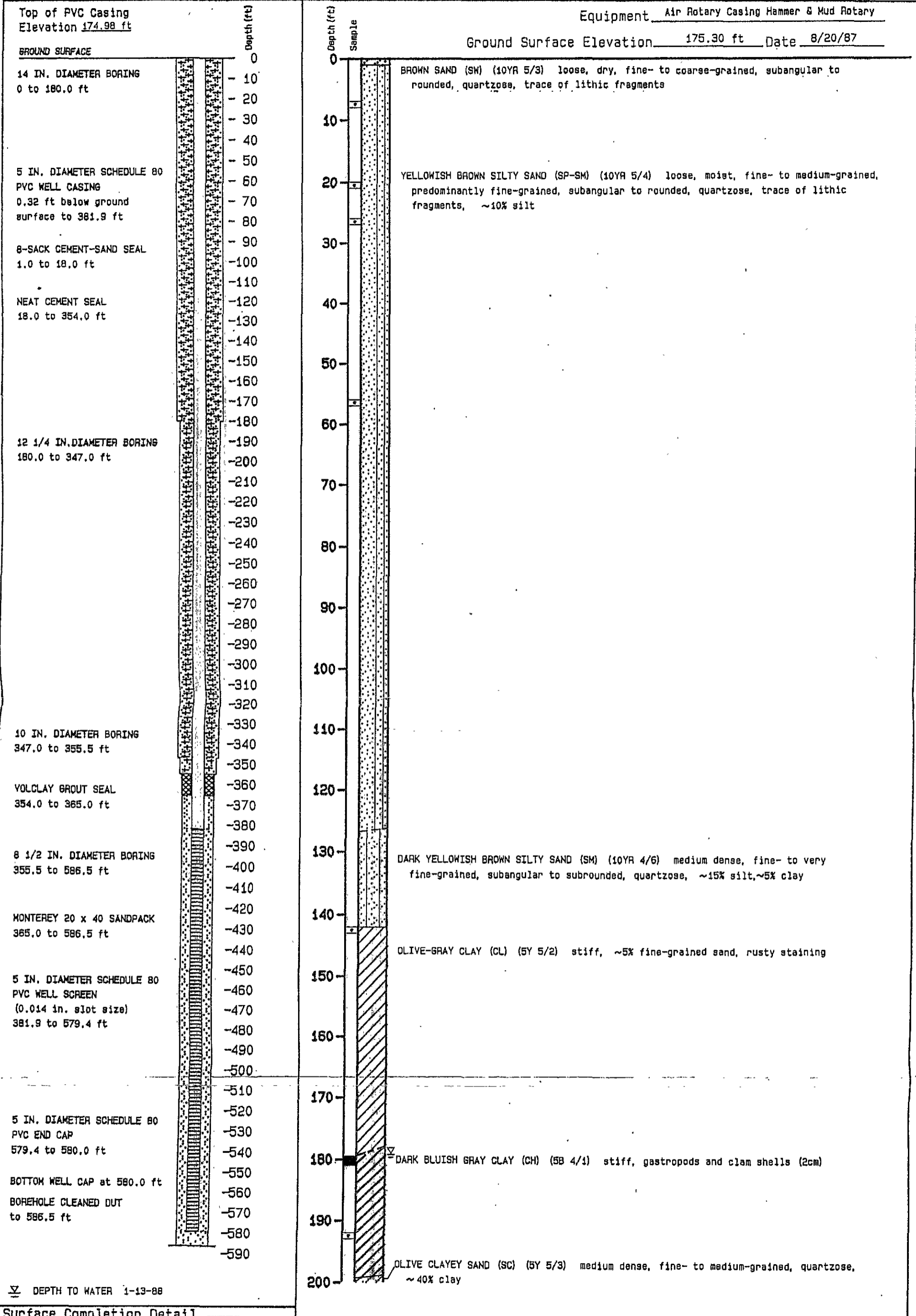
MONITOR WELL CONSTRUCTION

MPWMD #FO-11

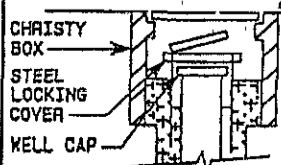


NOT TO SCALE

Figure 4. MPWMD Site FO-11 Well Completion.



Surface Completion Detail



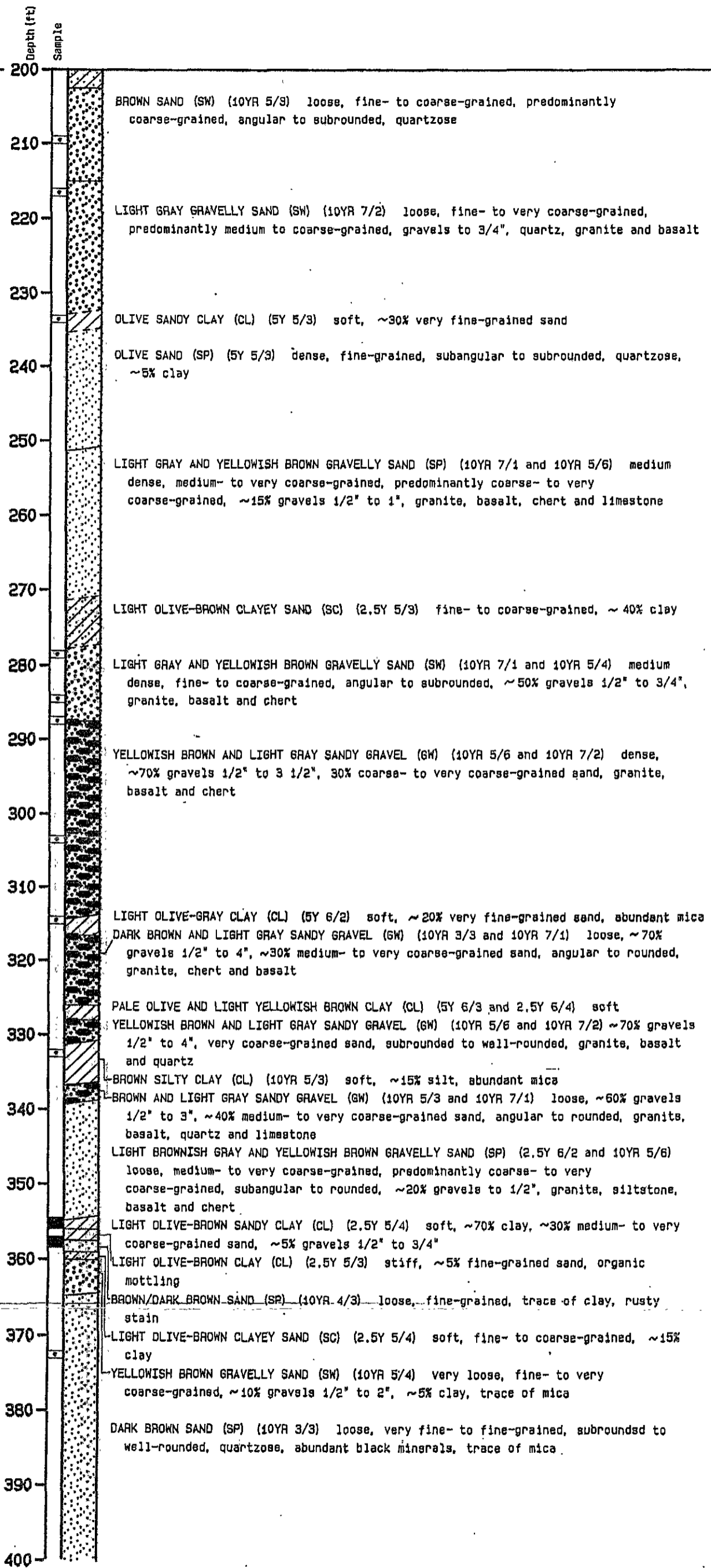
Harding Lawson Associates
 Engineers and Geoscientists

DRAWN: DM
 JOB NUMBER: 7579, 080.02
 APPROVED: [Signature]
 DATE: 3/88


Lithologic Log and Well Completion Detail
 of Monitoring Well L-07-400 (sheet 1 of 3)
 Preliminary Hydrogeologic Investigation
 Fort Ord Landfills - Fort Ord, California

E21

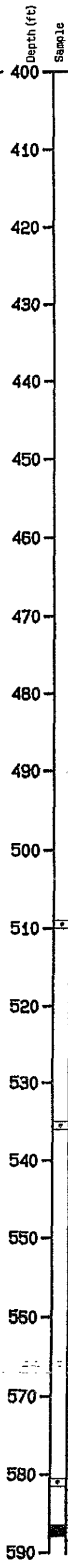
MW-002-07-400



L-07-400

 Harding Lawson Associates Engineers and Geoscientists	Lithologic Log and Well Completion Detail of Monitoring Well L-07-400 (sheet 2 of 3) Preliminary Hydrogeologic Investigation Fort Ord Landfills - Fort Ord, California				E21
	DRAWN DM	JOB NUMBER 7579, 080.02	APPROVED	DATE 3/88		REVISED DATE

NW-002-07-400




Dark Brown Sand cemented from 509 - 510.5 ft

PALE BROWN SANDY CLAY (CL) (10YR 6/3) soft, ~20% sand
DARK BROWN SAND (SP) (10YR 3/3) loose, very fine- to fine-grained, subround to well-rounded, quartzose, abundant black minerals and mica

Dark Brown Sand cemented from 535 - 538 ft
Dark Brown Sand cemented from 540 - 544 ft
Dark Brown Sand cemented from 545 - 547.5 ft

OLIVE-GRAY CLAY (CL) (5Y 5/2) soft, ~5% fine-grained sand
OLIVE-GRAY CLAY (CH) (5Y 5/2) stiff
OLIVE-BROWN CLAYEY SAND (SC) (2.5Y 4/4) soft, ~40% clay, abundant mica
bottom of boring at 587.6 ft

 **Harding Lawson Associates**
Engineers and Geoscientists

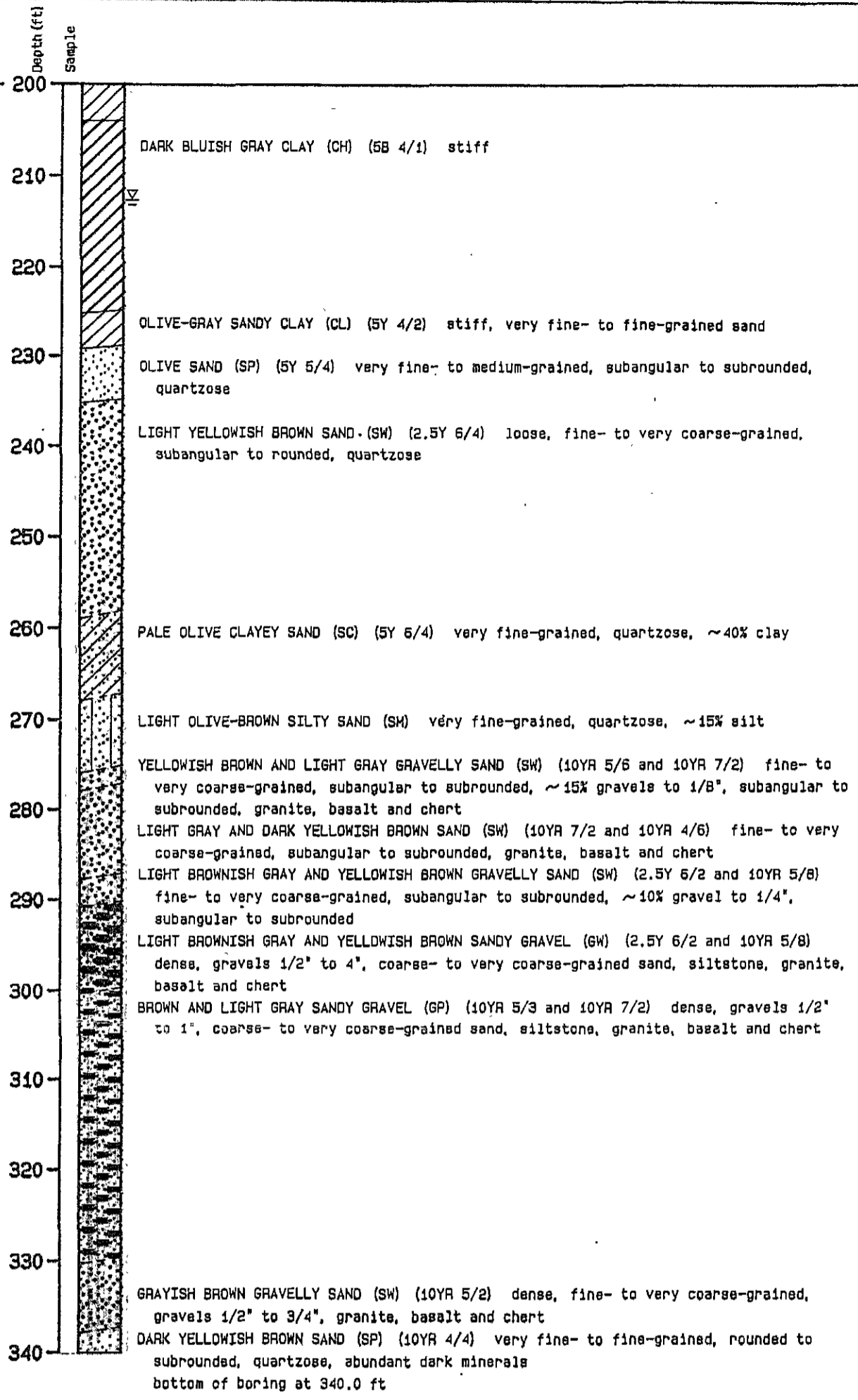
Lithologic Log and Well Completion Detail
of Monitoring Well L-07-400 (sheet 3 of 3)
Preliminary Hydrogeologic Investigation
Fort Ord Landfills - Fort Ord, California

E21

DRAWN DM	JOB NUMBER 7579, 080.02	APPROVED	DATE 3/88	REVISED	DATE
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L-07-400

MU-001-07-108



DEPTH TO WATER 1-13-88



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Lithologic Log and Well Completion Detail
of Monitoring Well L-10-180 (sheet 2 of 2)
Preliminary Hydrogeologic Investigation
Fort Ord Landfills - Fort Ord, California

E19

DRAWN

JOB NUMBER
7579, 080.02

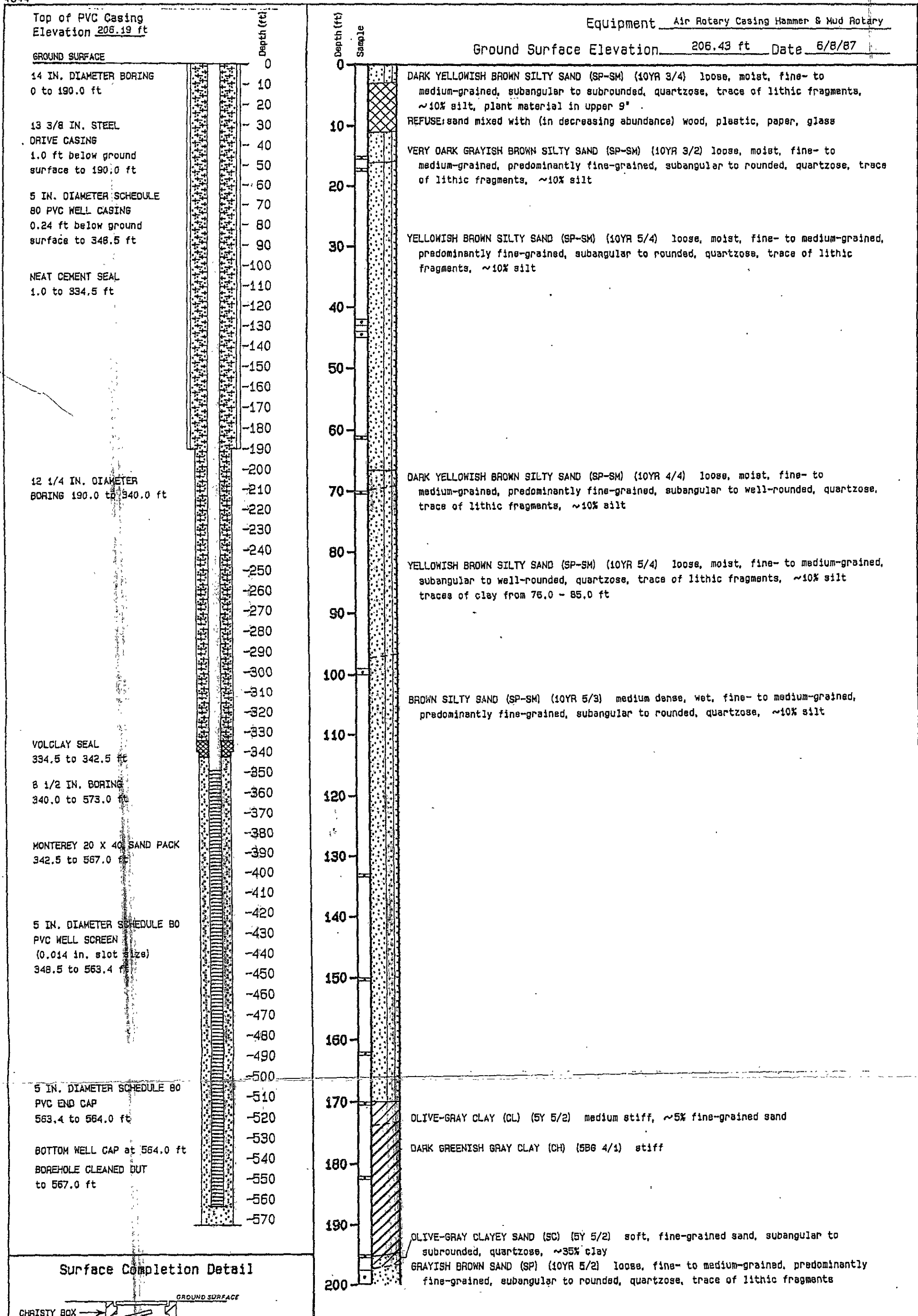
APPROVED

DATE
3/88

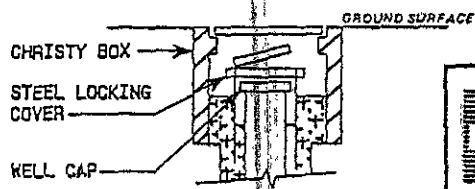
REVISED

DATE

HW-002-10-180



Surface Completion Detail



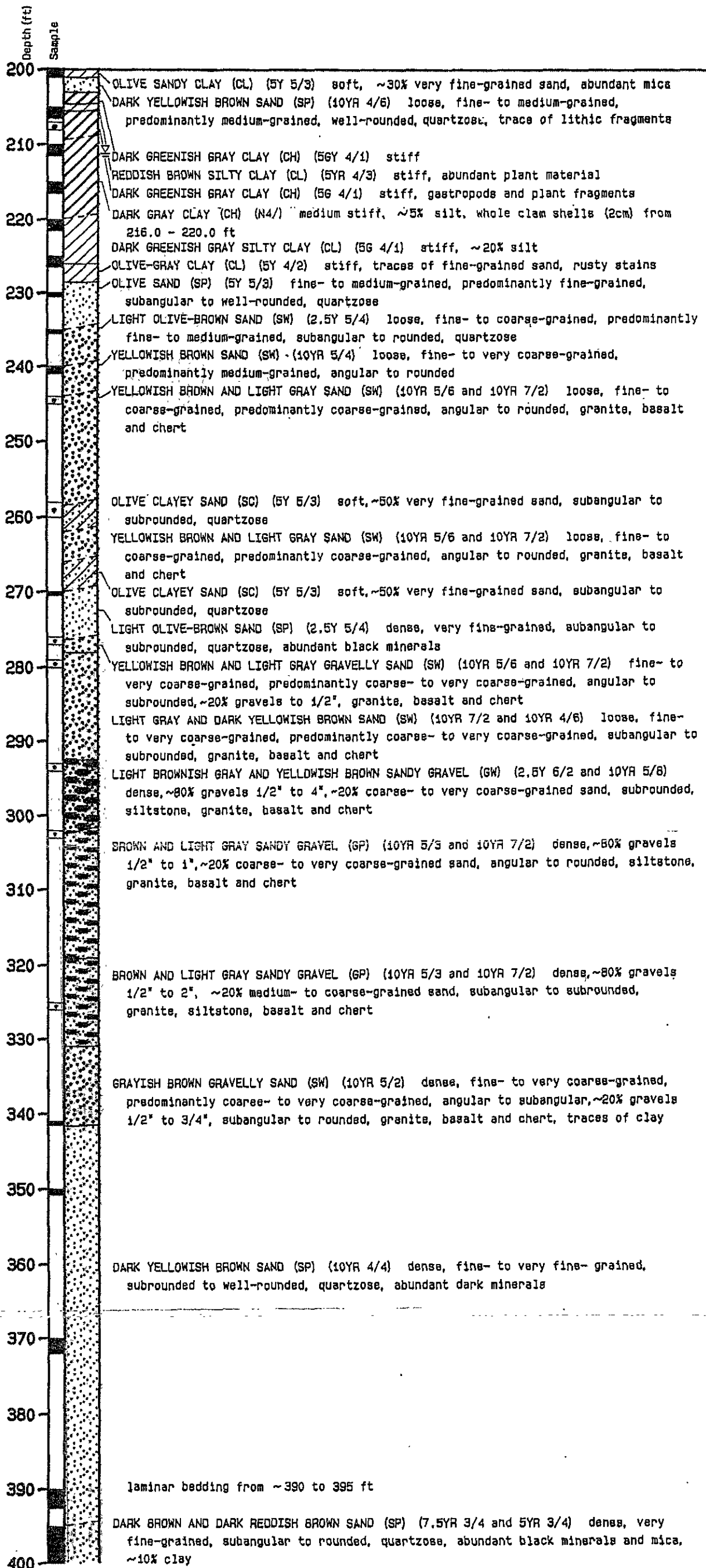
Harding Lawson Associates
Engineers and Geoscientists

Lithologic Log and Well Completion Detail
of Monitoring Well L-10-400 (sheet 1 of 3)
Preliminary Hydrogeologic Investigation
Fort Ord Landfills - Fort Ord, California

E23

DRAWN: DM JOB NUMBER: 7579, 080.02 APPROVED: DATE: 3/88 REVISED: DATE:

M-10-400-10-400



DEPTH TO WATER 1-13-88



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 Engineers and Geoscientists

Lithologic Log and Well Completion Detail
 of Monitoring Well L-10-400 (sheet 2 of 3)
 Preliminary Hydrogeologic Investigation
 Fort Ord Landfills - Fort Ord, California

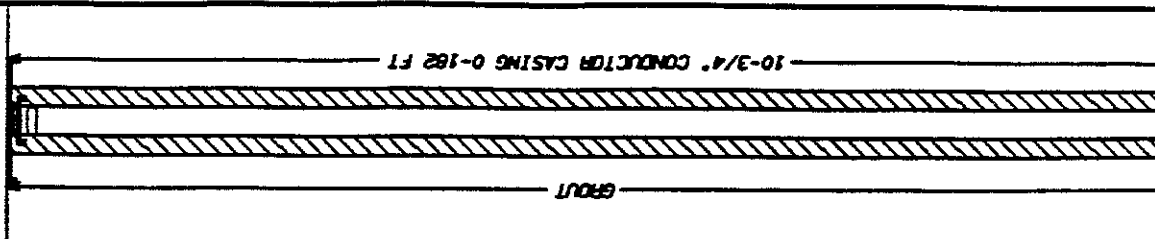
E23

DRAWN DM	JOB NUMBER 7579, 080.02	APPROVED	DATE 3/88	REVISED	DATE
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MWD-0102-10-400

MONITORING WELL L-29-180 (Page 1 of 6)
JOB NAME: FORT ORD LANDFILLS
JOB NUMBER: 13846-007-043
Dames & Moore
DATE COMPLETED: 2/11/92
SURFACE ELEVATION:
TOP OF CASING ELEV: 252.78
DRILLING METHOD: MUD ROTARY

C.A.T.R. (ft)	GAMMA RAY (cpm units) 300/40	SONIC/VARIABLE DENSITY (usec/ft)	SPONTANEOUS POTENTIAL (mV)	RESISTIVITY			DEPTH (feet)	SAMPLES	LITHOLOGIC SYMBOLS	USE GROUP	LITHOLOGIC DESCRIPTION	WELL COMPLETION
				LONG NORMAL (ohm-m)	SHORT NORMAL (ohm-m)	DETAIL CURVE (ohm-c)						
5	26.40											
10							10					
20							20					
30							30	■				
40							40					
50							50	■				
55							55					



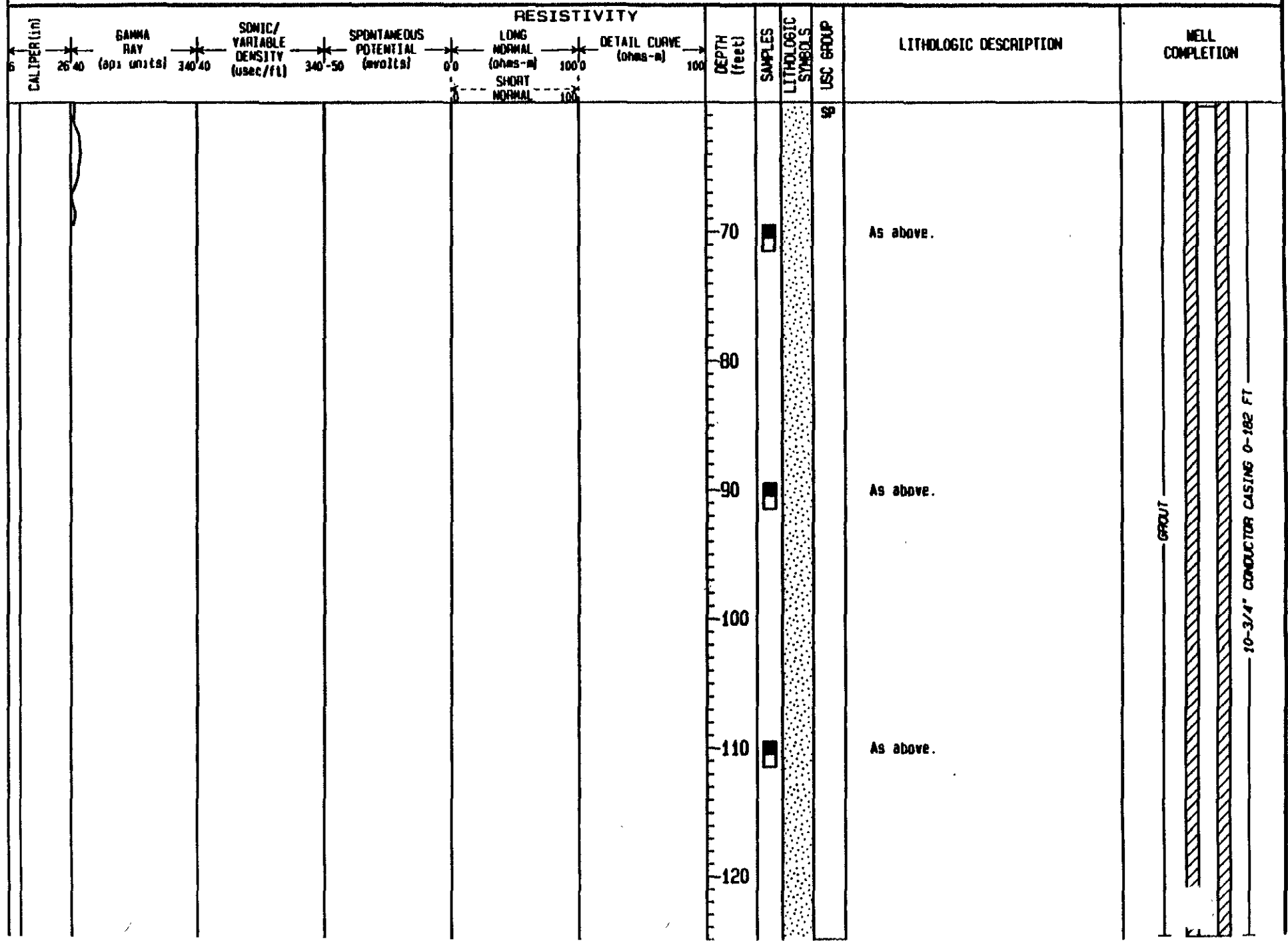
DARK BROWN SAND, medium grained with some fine grains, poorly graded, gravel subrounded to subangular, predominantly quartz, some feldspar, trace mafics.

Color change to brown, medium grained (0.3-0.6 mm) with some fine (0.1 mm) grains, some dark minerals.

Formation taking drilling fluid at 50 feet. Grading slightly darker brown, trace silt.

MONITORING WELL L-29-180 (Page 2 of 6)
JOB NAME: FORT ORD LANDFILLS

Dames & Moore



GROUT
 10-3/4" CONDUCTOR CASING 0-182 FT

HW-002-20-180

MONITORING WELL L-29-180 (Page 3 of 6)
 JOB NAME: FORT ORD LANDFILLS

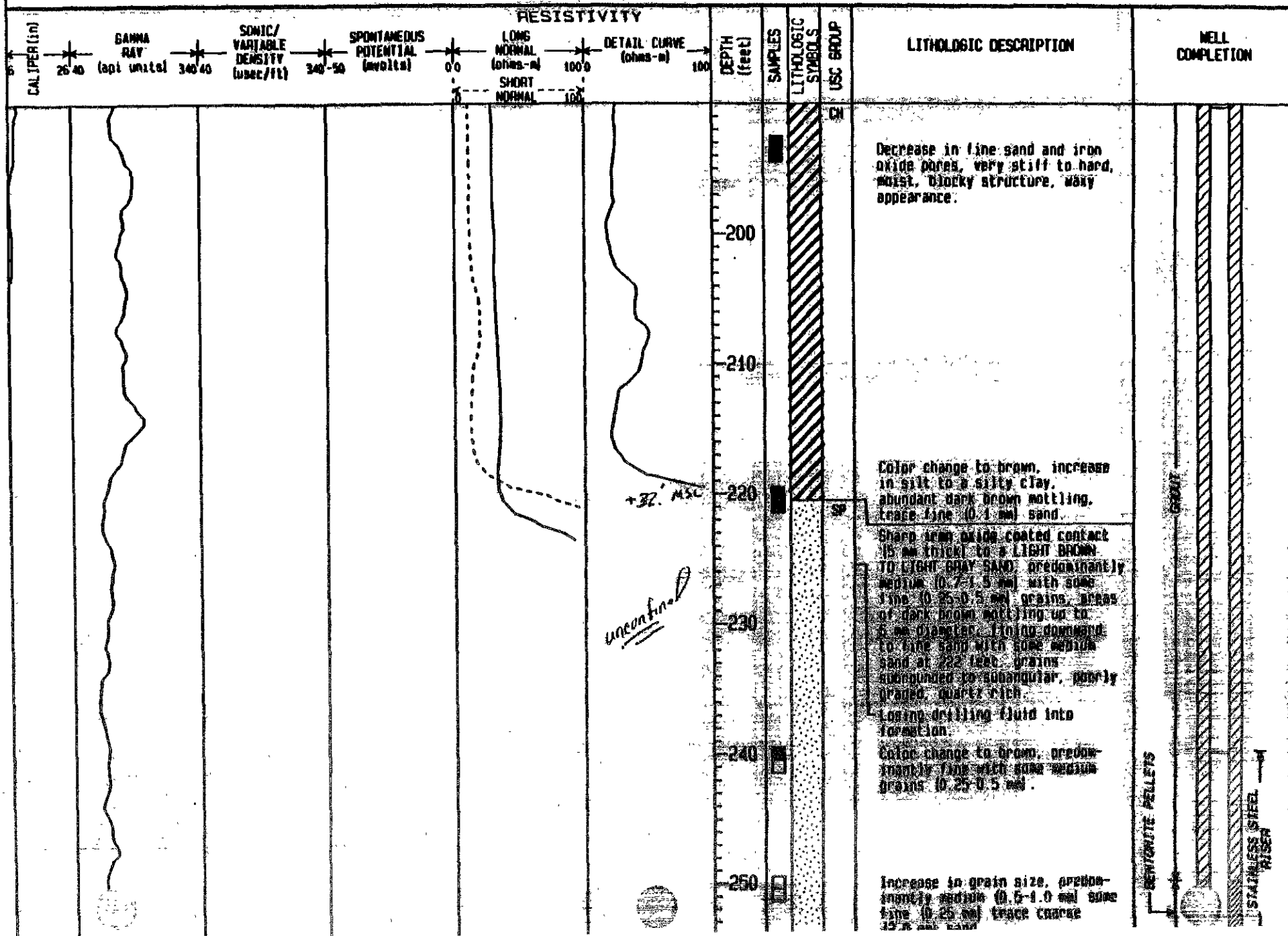
Dames & Moore

CALIPER (in)	GAMMA RAY (api units)	SONIC/VARIABLE DENSITY (ubec/ft)	SPONTANEOUS POTENTIAL (mvd/ft)	RESISTIVITY			DEPTH (feet)	SAMPLES	LITHOLOGIC SYMBOLS	USC GROUP	LITHOLOGIC DESCRIPTION	WELL COMPLETION
				LONG NORMAL (ohm-m)	SHORT NORMAL	DETAIL CURVE (ohm-m)						
28/40	340/40	340-50	00	1000	100	100	135				Trace 1.0 mm sand, predominantly medium (0.3-0.7 mm).	GROUT 10-3/4" CONDUCTOR CASING 0-182 FT
							145				Grading to brownish yellow some iron oxide coated grains.	
							155					
							165				Decrease in grain size, predominantly fine (0.1-0.3 mm), trace 0.5 mm sand.	
							175					
							185		CH		Sharp contact to an OLIVE GRAY CLAY, medium to high plasticity, stiff, slight blocky structure, some oxide lined pores up to 2 mm diameter, trace lenses of fine (0.1-0.25 mm) sand up to 15 mm, iron oxide coated grains.	

MR-002-29-180

MONITORING WELL L-29-180 (Page 4 of 6)
 JOB NAME: FORT ORD LANDFILLS

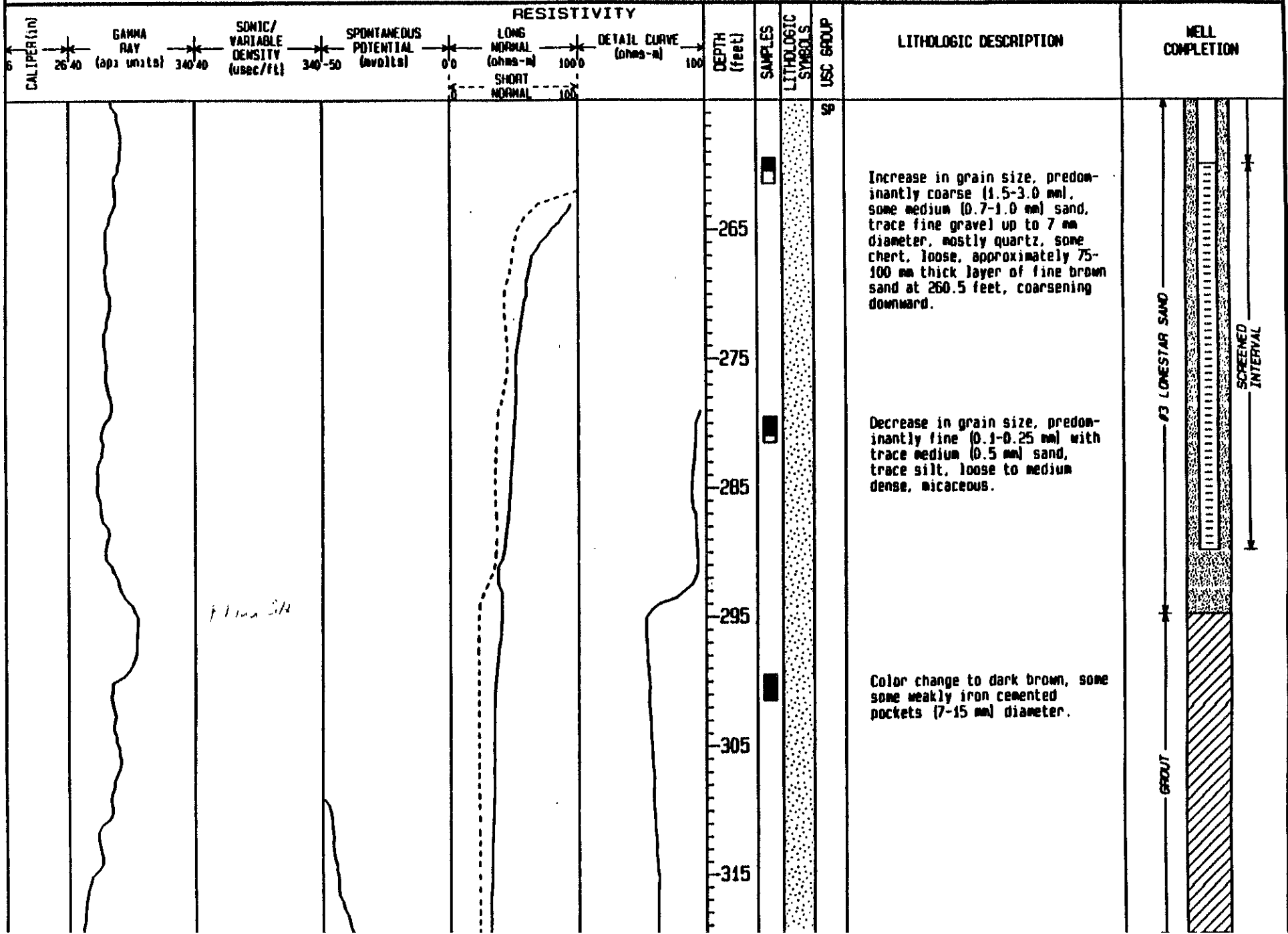
Dames & Moore



A 44-002-24-180

MONITORING WELL L-29-180 (Page 5 of 6)
 JOB NAME: FORT ORD LANDFILLS

Dames & Moore

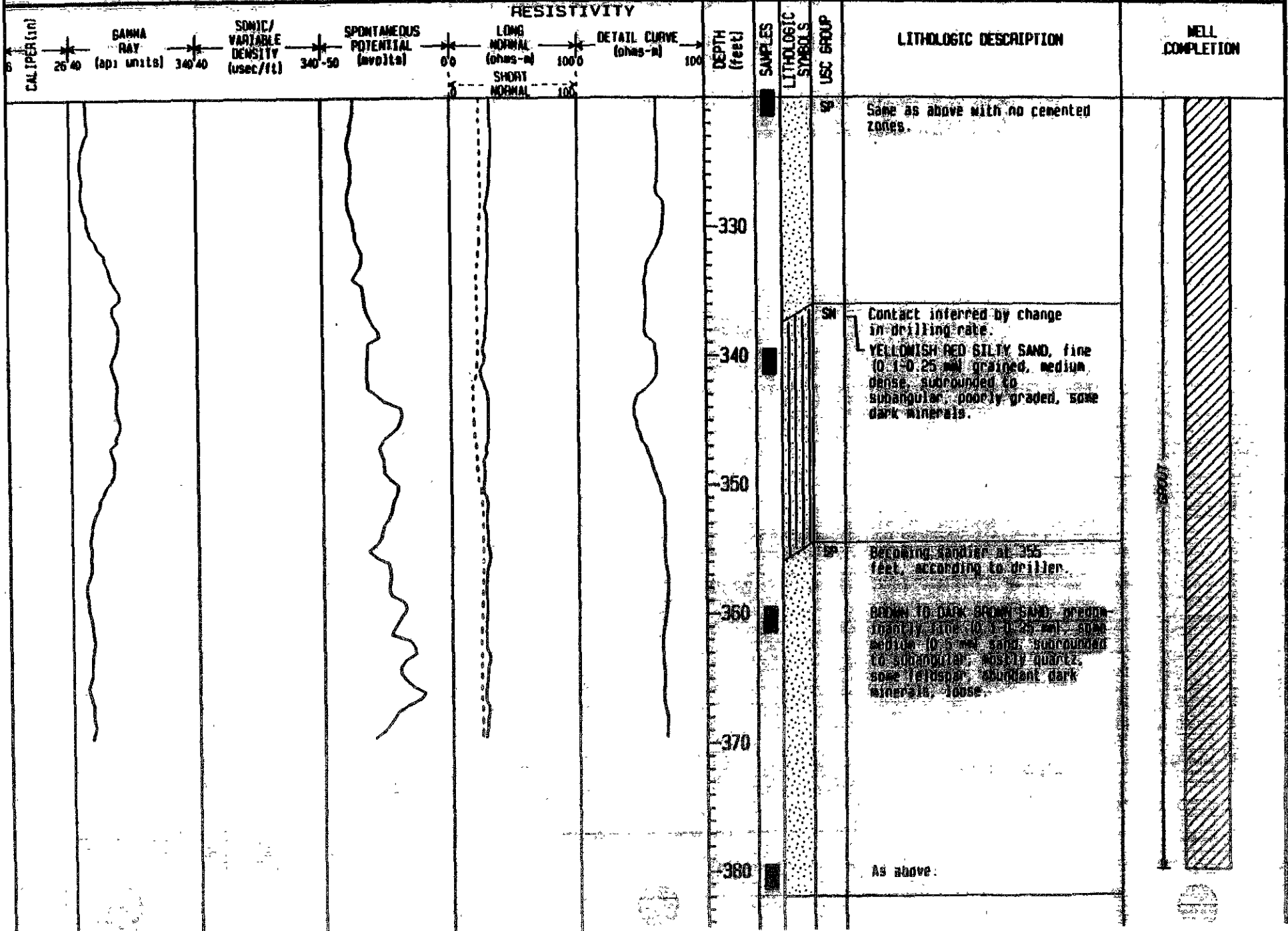


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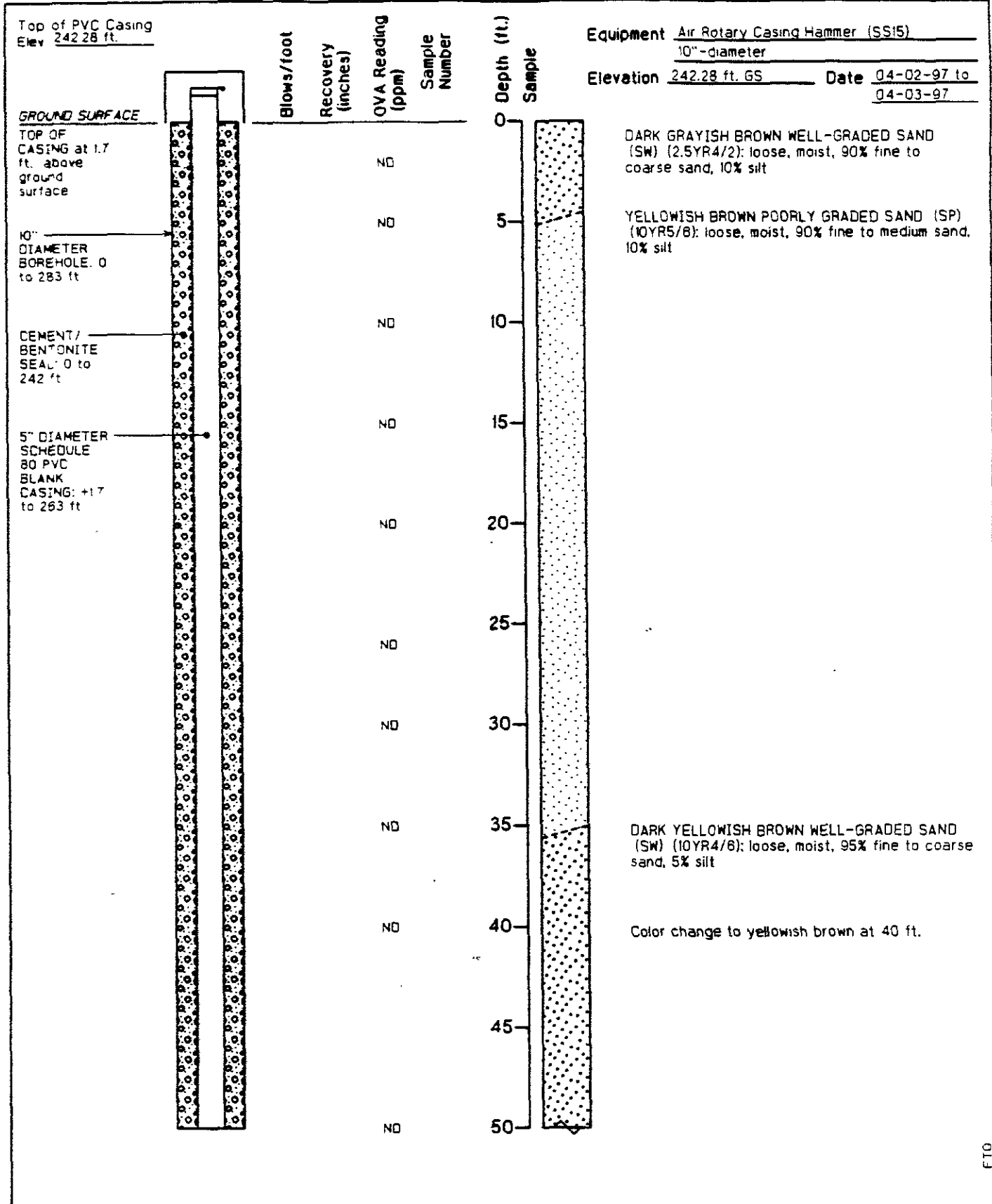
181-200-900-MU

MONITORING WELL L-29-180 (Page 6 of 6)
 JOB NAME: FORT ORD LANDFILLS

Dames & Moore



HW-002-24-180



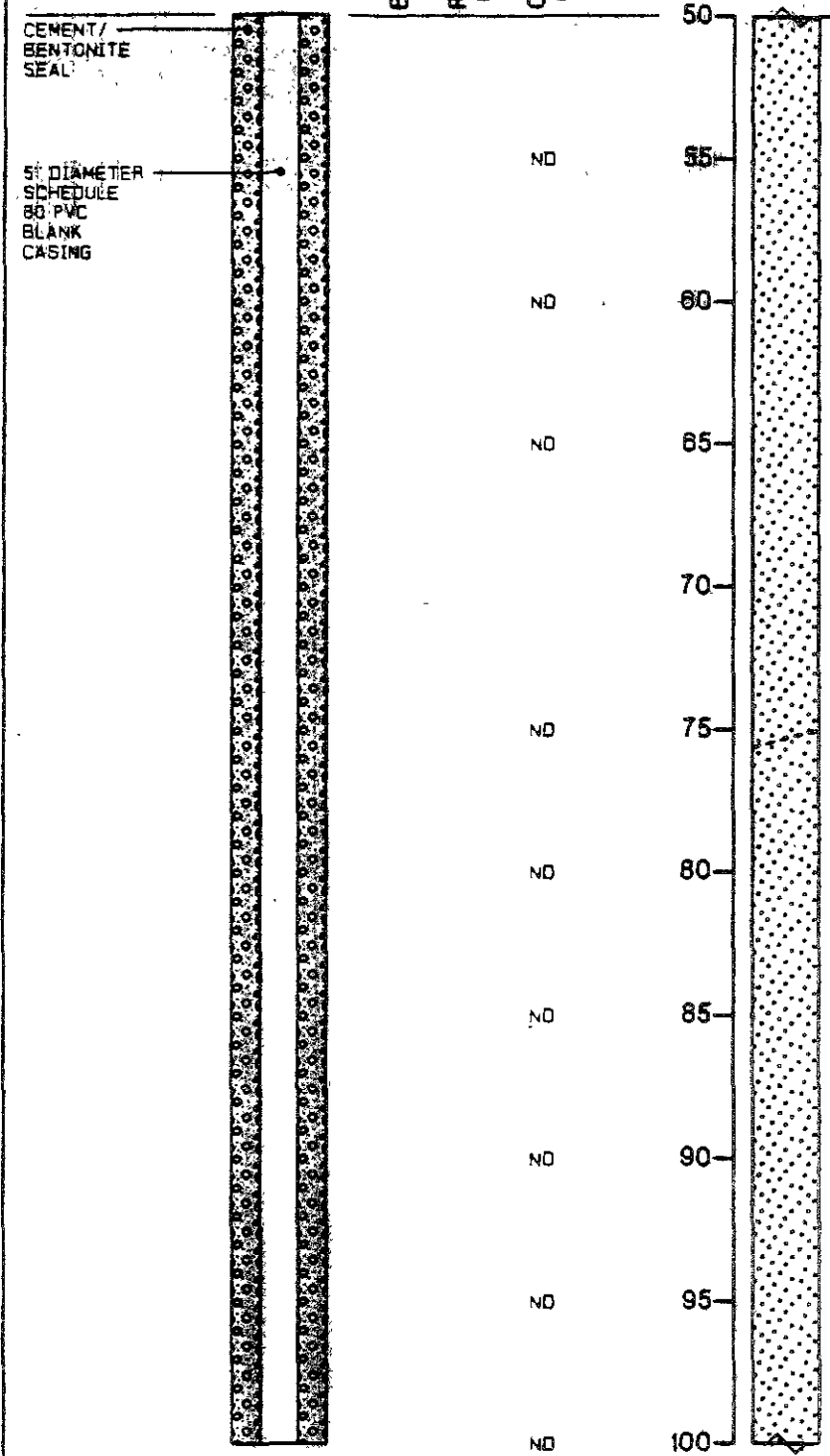
Harding Lawson Associates
 Engineering and Environmental Services

Log of Boring and Well Completion MW-OU2-55-180 PLATE
 OU 2 Plume Delineation
 Investigation Report
 Fort Ord, California

A 12

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SMS	36086 01020701	<i>MDL 4/1/98</i>	06/97	

Equipment Air Rotary Casing Hammer (SR15)
10"-diameter
 Elevation 242.28 ft. SS Date 04-02-97 to
04-03-97



YELLOWISH BROWN POORLY GRADED SAND (SP)
 (10YR5/6); loose, moist, 95% fine to medium sand,
 5% silt

Trace clay, begin water injection, driller notes
 harder drilling at 89 ft.

FTO

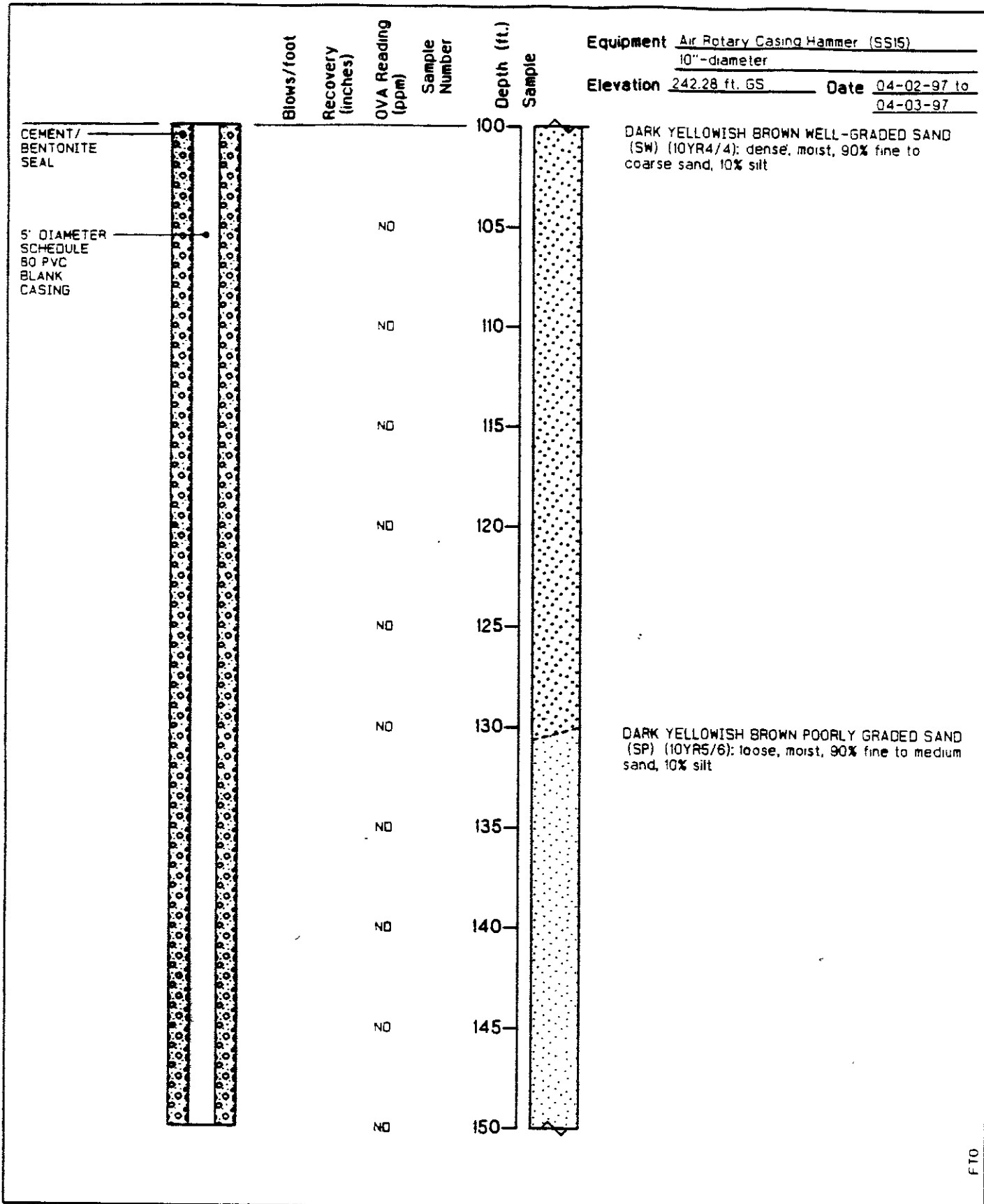


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 Environmental Services

Log of Boring and Well Completion MW-OU2-55-18C PLATE
 OU 2 Plume Delineation
 Investigation Report
 Fort Ord, California

A1E

DRAWN: SMS JOB NUMBER: 36086 01020701 APPROVED: [Signature] DATE: 06/97 REVISED DATE:

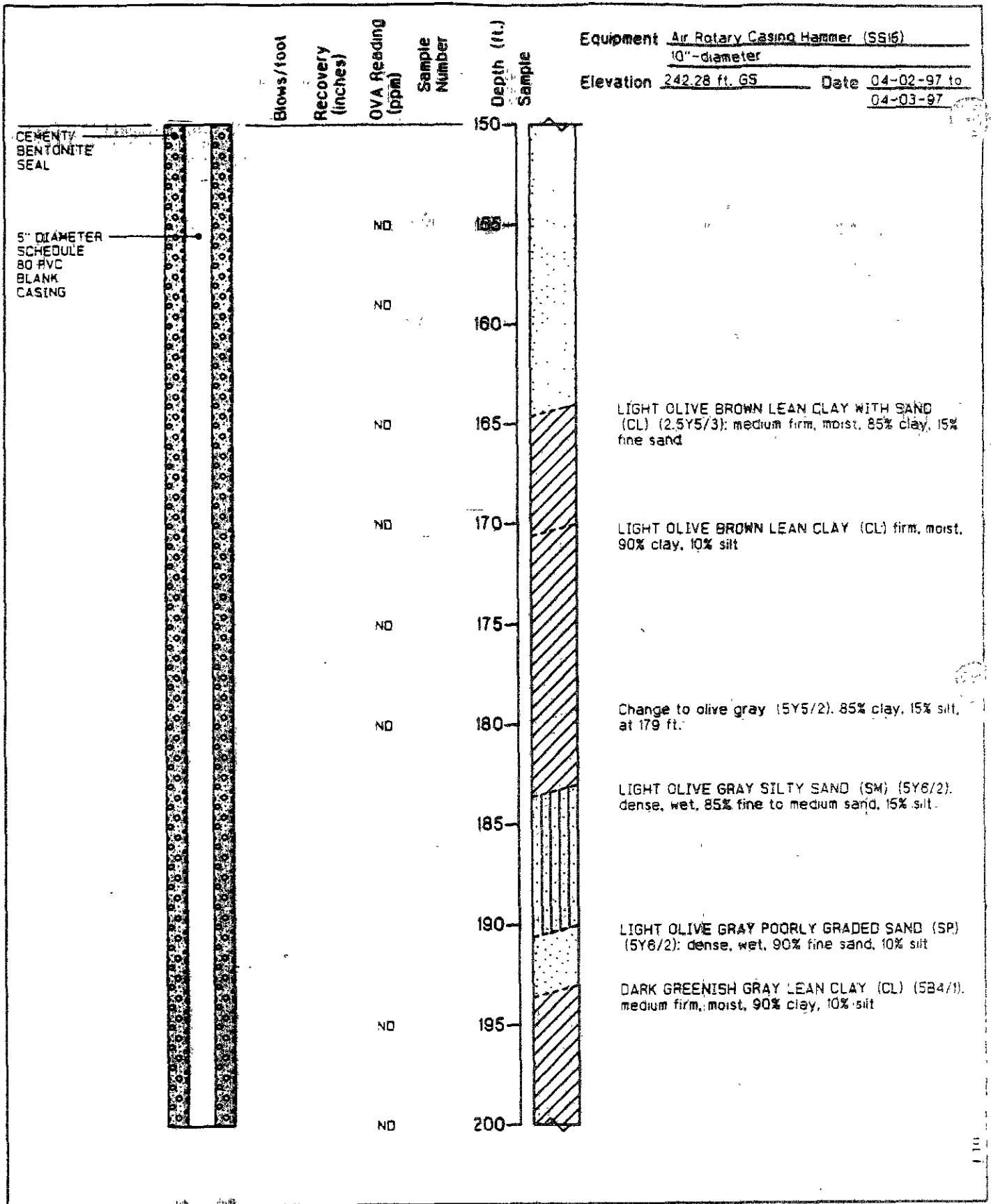


Harding Lawson Associates
 Engineering and Environmental Services

Log of Boring and Well Completion MW-OU2-55-180 PLATE
 OU 2 Plume Delineation
 Investigation Report
 Fort Ord, California

A12

DRAWN SMS	JOB NUMBER 36086 01020701	APPROVED MOT 4/1/97	DATE 06/97	REVISED DATE
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Log of Boring and Well Completion MW-OU2-55-180 PLATE
 OU 2 Plume Delineation
 Investigation Report
 Fort Ord, California

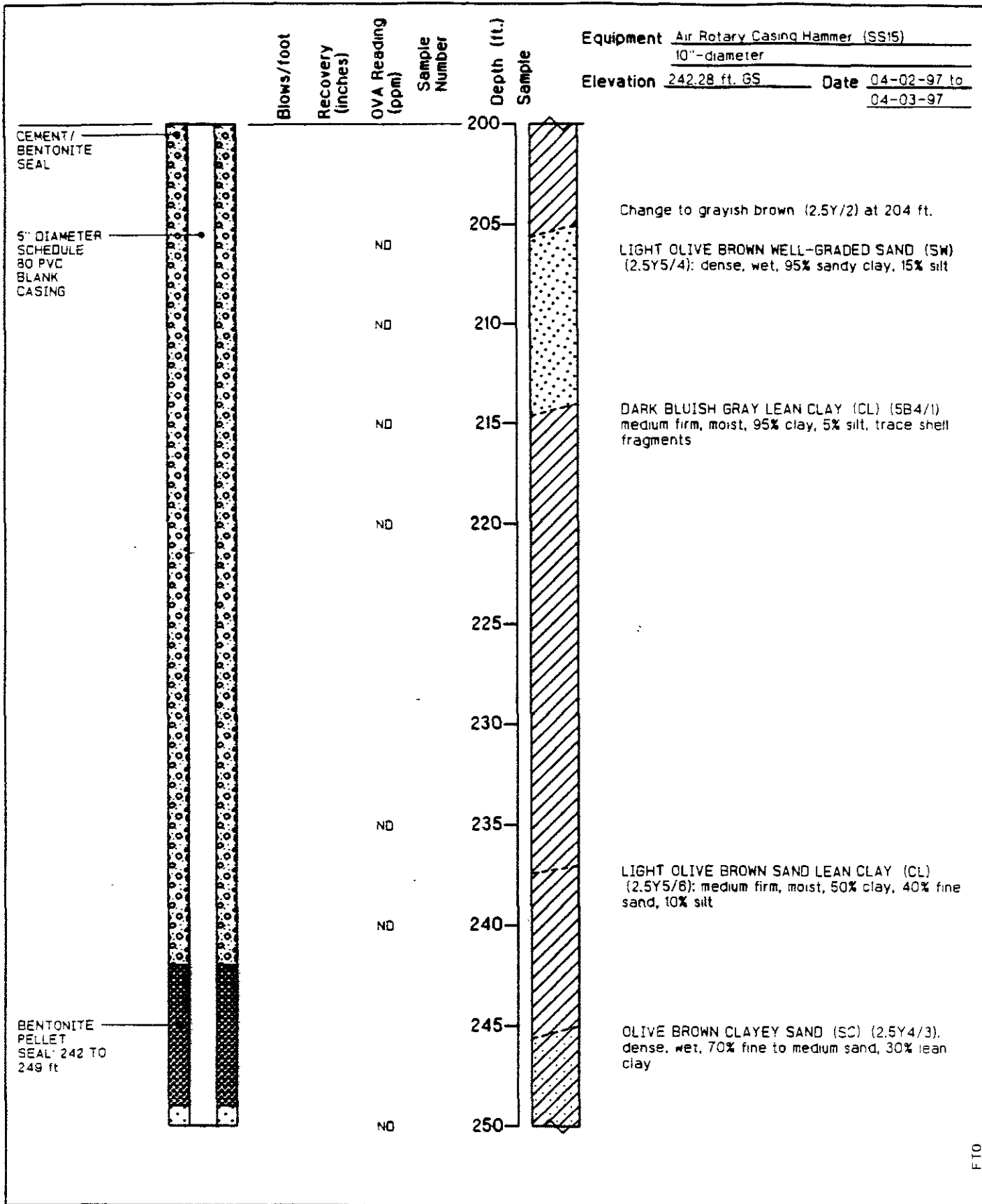
A12

DRAWN SMS JOB NUMBER 36086 01020701

APPROVED DATE 4/1/98

DATE 06/97

REVISED DATE

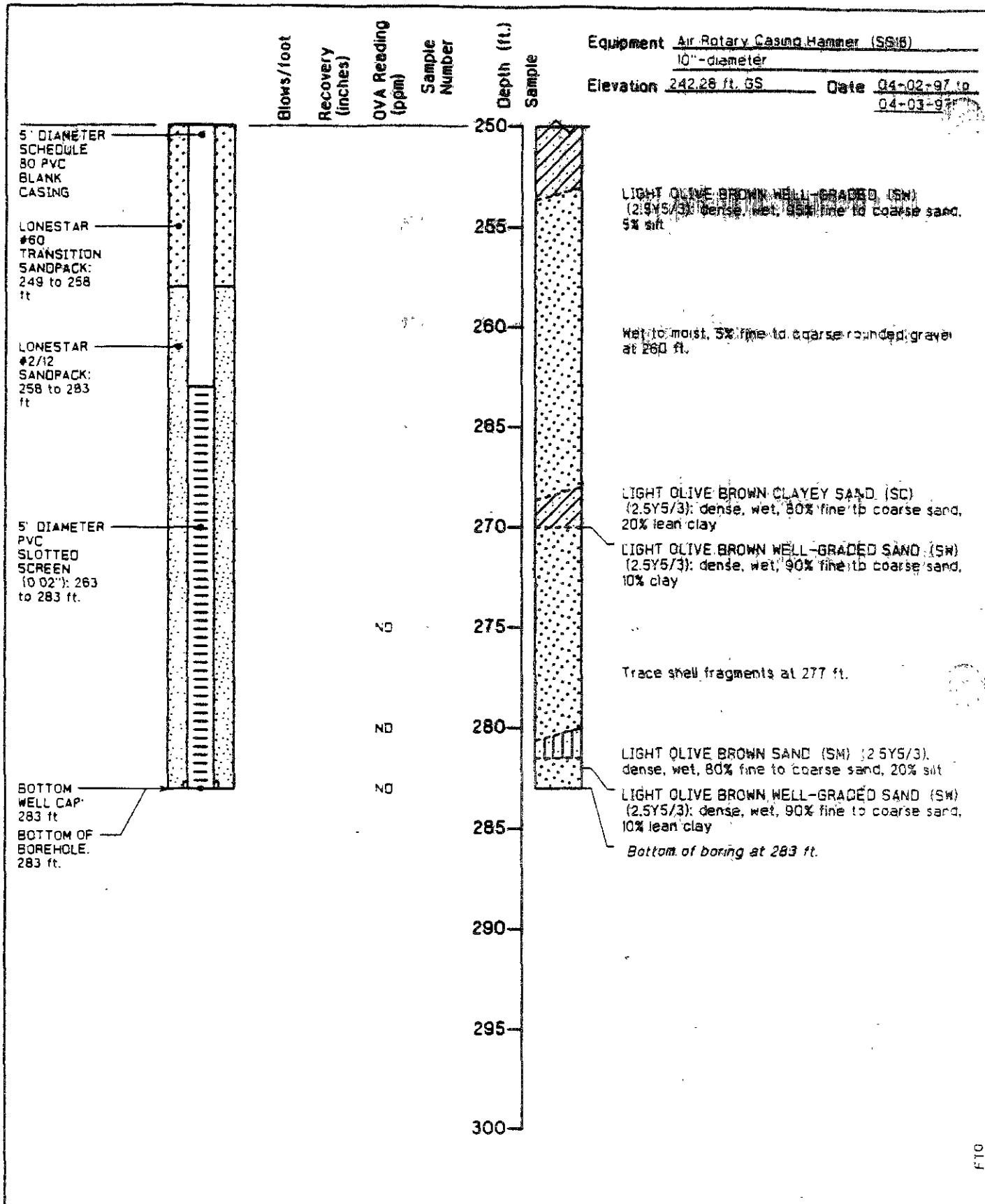


Harding Lawson Associates
Engineering and Environmental Services

Log of Boring and Well Completion MN-OU2-55-180 PLATE
OU 2 Plume Delineation
Investigation Report
Fort Ord, California

A12

DRAWN SMS	JOB NUMBER 36086 01020701	APPROVED MDL 4/1/96	DATE 06/97	REVISED DATE
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Log of Boring and Well Completion MW-OU2-65-180 PLATE
OU 2 Prime Delineation
Investigation Report
Fort Ord, California

A12

DRAWN SMS JOB NUMBER 36086 01020701

APPROVED ADT 4/1/97

DATE 08/97 REVISED DATE

APPENDIX E

Fort Ord Monitoring Wells – Water Levels used for Contours



Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
EISB-EW-01	5744374.886	2144511.385	A	3/14/2016	25.06	10
EISB-EW-02	5744527.597	2144407.148	A	3/14/2016	28.49	10
EW-12-03-180M	5736312.770	2137443.360	Unconfined Upper 180-Foot	3/17/2016	3.04	14
EW-12-03-180U	5736270.500	2137390.340	Unconfined Upper 180-Foot	3/17/2016	3.00	14
EW-12-04-180M	5736192.820	2137075.150	Unconfined Upper 180-Foot	3/17/2016	2.28	14
EW-12-04-180U	5736193.010	2137093.340	Unconfined Upper 180-Foot	3/17/2016	2.19	14
EW-BW-100-A	5748139.348	2139063.635	A	3/17/2016	71.20	10
EW-BW-101-A	5748451.196	2139093.639	A, Salinas Valley Aquitard	3/16/2016	71.83	10
EW-BW-104-A	5748328.272	2139293.286	A	3/16/2016	70.81	10
EW-BW-109-A	5748638.166	2139585.319	A	3/16/2016	70.26	10
EW-BW-112-A	5748370.306	2139732.438	A	3/16/2016	68.98	10
EW-BW-119-A	5748115.426	2139977.979	A	3/16/2016	67.48	10
EW-BW-124-A	5748218.348	2140567.802	A	3/16/2016	64.99	10
EW-BW-126-A	5747694.783	2140623.760	A	3/17/2016	63.51	10
EW-BW-132-A	5748337.878	2140814.965	A, Salinas Valley Aquitard	3/15/2016	64.19	10
EW-BW-135-A	5747820.331	2140835.021	A	3/16/2016	62.78	10
EW-BW-144-A	5747420.387	2141077.418	A	3/16/2016	57.18	10
EW-BW-149-A	5747758.929	2141303.866	A	3/14/2016	60.43	10
EW-BW-150-A	5747359.808	2141354.804	A	3/15/2016	54.18	10
EW-BW-155-A	5747502.134	2141649.370	A, Salinas Valley Aquitard	3/14/2016	54.87	10
EW-BW-159-A	5748742.688	2139882.522	A	3/16/2016	68.80	10
EW-BW-92-A	5748279.173	2138294.916	A	3/17/2016	74.27	10
EW-BW-93-A	5747953.542	2138281.040	A	3/17/2016	73.54	10
EW-BW-97-A	5748211.195	2138819.380	A, Salinas Valley Aquitard	3/17/2016	72.22	10
EW-OU2-01-180	5740014.450	2138239.610	Confined Upper 180-Foot	3/14/2016	1.77	14
EW-OU2-02-180	5744096.986	2136836.547	Confined Upper 180-Foot	3/16/2016	-7.94	14
EW-OU2-03-180	5744805.940	2135150.750	Confined Upper 180-Foot	3/16/2016	-9.74	14
EW-OU2-04-180	5744827.690	2134751.160	Confined Upper 180-Foot	4/5/2016	-12.12	14
EW-OU2-07-A	5743510.584	2136659.839	A	3/16/2016	45.44	10
EW-OU2-08-A	5743718.828	2136726.062	A	3/16/2016	43.84	10
MP-BW-30-282	5747078.380	2141302.810	Intermediate 180-Foot	3/14/2016	-9.38	14
MP-BW-30-467	5747078.380	2141302.810	400-Foot	9/28/2015	-15.50	15
MP-BW-30-467	5747078.380	2141302.810	400-Foot	3/14/2016	-7.86	16
MP-BW-30-537	5747078.380	2141302.810	400-Foot	9/28/2015	-16.06	15
MP-BW-30-537	5747078.380	2141302.810	400-Foot	3/14/2016	-8.22	16
MP-BW-31-457	5747516.290	2141618.670	400-Foot	9/29/2015	-15.88	15
MP-BW-31-457	5747516.290	2141618.670	400-Foot	3/15/2016	-8.17	16
MP-BW-31-522	5747516.290	2141618.670	400-Foot	9/29/2015	-16.78	15
MP-BW-31-522	5747516.290	2141618.670	400-Foot	3/15/2016	-8.29	16
MP-BW-32-287	5747821.730	2141079.330	Intermediate 180-Foot	3/14/2016	-9.80	14
MP-BW-32-472	5747821.730	2141079.330	400-Foot	9/28/2015	-16.48	15
MP-BW-32-472	5747821.730	2141079.330	400-Foot	3/14/2016	-8.89	16

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MP-BW-32-522	5747821.730	2141079.330	400-Foot	9/28/2015	-17.13	15
MP-BW-32-522	5747821.730	2141079.330	400-Foot	3/14/2016	-8.92	16
MP-BW-33-272	5748218.350	2140546.910	Intermediate 180-Foot	3/14/2016	-10.12	14
MP-BW-34-492	5750371.950	2140709.060	400-Foot	9/28/2015	-18.83	15
MP-BW-34-492	5750371.950	2140709.060	400-Foot	3/14/2016	-10.02	16
MP-BW-34-537	5750371.950	2140709.060	400-Foot	9/28/2015	-22.05	15
MP-BW-34-537	5750371.950	2140709.060	400-Foot	3/14/2016	-10.75	16
MP-BW-35-242	5751176.570	2141535.960	Upper 180-Foot	9/30/2015	-14.68	13
MP-BW-35-242	5751176.570	2141535.960	Upper 180-Foot	3/14/2016	-10.62	14
MP-BW-35-527	5751176.570	2141535.960	400-Foot	9/30/2015	-19.94	15
MP-BW-35-527	5751176.570	2141535.960	400-Foot	3/14/2016	-9.77	16
MP-BW-35-562	5751176.570	2141535.960	400-Foot	9/30/2015	-22.42	15
MP-BW-35-562	5751176.570	2141535.960	400-Foot	3/14/2016	-10.19	16
MP-BW-37-178	5747152.990	2141842.890	Upper 180-Foot	9/28/2015	-13.70	13
MP-BW-37-178	5747152.990	2141842.890	Upper 180-Foot	3/15/2016	-9.04	14
MP-BW-37-193	5747152.990	2141842.890	Upper 180-Foot	9/28/2015	-13.52	13
MP-BW-37-193	5747152.990	2141842.890	Upper 180-Foot	3/15/2016	-8.86	14
MP-BW-41-231	5749841.520	2137147.840	Upper 180-Foot	9/29/2015	-18.02	13
MP-BW-42-195	5749532.730	2138063.990	Upper 180-Foot	9/29/2015	-17.10	13
MP-BW-42-215	5749532.730	2138063.990	Upper 180-Foot	9/29/2015	-17.12	13
MP-BW-46-080	5748540.480	2139780.050	A	3/15/2016	69.85	10
MP-BW-46-095	5748540.480	2139780.050	A	3/15/2016	66.48	10
MP-BW-46-170	5748540.480	2139780.050	180-Foot	9/30/2015	-15.08	13
MP-BW-46-170	5748540.480	2139780.050	Upper 180-Foot	3/15/2016	-10.35	14
MP-BW-46-185	5748540.480	2139780.050	Upper 180-Foot	9/30/2015	-15.20	13
MP-BW-46-185	5748540.480	2139780.050	Upper 180-Foot	3/15/2016	-10.35	14
MP-BW-46-200	5748540.480	2139780.050	Upper 180-Foot	9/30/2015	-15.23	13
MP-BW-46-200	5748540.480	2139780.050	Upper 180-Foot	3/15/2016	-10.39	14
MP-BW-46-215	5748540.480	2139780.050	Upper 180-Foot	9/30/2015	-15.17	13
MP-BW-46-215	5748540.480	2139780.050	Upper 180-Foot	3/15/2016	-10.32	14
MP-BW-48-113	5748217.080	2138142.600	A	3/14/2016	79.21	10
MP-BW-48-133	5748217.080	2138142.600	A	3/14/2016	72.03	10
MW-02-05-180	5735913.257	2137820.565	Unconfined Upper 180-Foot	10/2/2015	0.31	13
MW-02-05-180	5735913.257	2137820.565	Unconfined Upper 180-Foot	3/17/2016	2.76	14
MW-02-06-180	5735980.838	2136039.569	Unconfined Upper 180-Foot	10/1/2015	0.61	13
MW-02-06-180	5735980.838	2136039.569	Unconfined Upper 180-Foot	3/15/2016	3.03	14
MW-02-10-180	5736052.965	2138803.732	Unconfined Upper 180-Foot	10/2/2015	0.24	13
MW-02-12-180	5735908.560	2137991.000	Unconfined Upper 180-Foot	10/2/2015	0.07	13
MW-02-12-180	5735908.560	2137991.000	Unconfined Upper 180-Foot	3/17/2016	3.04	14
MW-02-13-180M	5735667.730	2137239.450	Unconfined Upper 180-Foot	10/2/2015	0.25	13
MW-02-13-180U	5735696.690	2137229.970	Unconfined Upper 180-Foot	10/2/2015	0.53	13
MW-02-13-180U	5735696.690	2137229.970	Unconfined Upper 180-Foot	3/17/2016	3.03	14

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-12-01-180	5737257.079	2137615.454	Unconfined Upper 180-Foot	3/14/2016	2.55	14
MW-12-07-180	5736100.674	2136697.703	Unconfined Upper 180-Foot	3/17/2016	3.13	14
MW-12-08-180	5737125.504	2137033.935	Unconfined Upper 180-Foot	3/14/2016	2.79	14
MW-12-15-180M	5736486.049	2137693.238	Unconfined Upper 180-Foot	9/28/2015	0.17	13
MW-12-15-180M	5736486.049	2137693.238	Unconfined Upper 180-Foot	3/14/2016	2.74	14
MW-12-16-180M	5736501.295	2137502.945	Unconfined Upper 180-Foot	3/17/2016	2.83	14
MW-40-01-A	5749976.116	2143043.760	A	10/1/2015	52.04	9
MW-40-01-A	5749976.116	2143043.760	A	3/17/2016	53.14	10
MW-B-05-180	5749043.142	2144750.428	Confined Upper 180-Foot	10/1/2015	-12.55	13
MW-B-05-180	5749043.142	2144750.428	Confined Upper 180-Foot	3/16/2016	-7.71	14
MW-B-12-A	5745442.186	2142895.109	A	9/28/2015	39.65	9
MW-B-12-A	5745442.186	2142895.109	A	3/14/2016	40.33	10
MW-B-14-A	5748110.750	2140874.740	A	9/29/2015	61.27	9
MW-B-14-A	5748110.750	2140874.740	A	3/15/2016	60.91	10
MW-BW-01-A	5753552.842	2137676.206	A	9/30/2015	55.01	9
MW-BW-01-A	5753552.842	2137676.206	A	3/17/2016	53.99	10
MW-BW-02-180	5753538.322	2137597.935	Confined Upper 180-Foot	3/17/2016	-13.21	14
MW-BW-03-400	5753545.582	2137635.416	400-Foot	9/30/2015	-22.50	15
MW-BW-03-400	5753545.582	2137635.416	400-Foot	3/17/2016	-12.63	16
MW-BW-12-180	5739471.519	2138269.818	Confined Upper 180-Foot	9/30/2015	0.99	13
MW-BW-12-180	5739471.519	2138269.818	Confined Upper 180-Foot	3/15/2016	2.13	14
MW-BW-14-180	5741472.858	2137977.047	Confined Upper 180-Foot	9/29/2015	-4.08	13
MW-BW-14-180	5741472.858	2137977.047	Confined Upper 180-Foot	3/15/2016	-2.03	14
MW-BW-15-A	5747954.086	2140967.345	A	9/29/2015	60.30	9
MW-BW-15-A	5747954.086	2140967.345	A	3/15/2016	59.94	10
MW-BW-16-A	5749294.158	2140631.415	A	9/29/2015	63.26	9
MW-BW-16-A	5749294.158	2140631.415	A	3/15/2016	62.84	10
MW-BW-17-A	5747900.661	2140496.760	A	10/1/2015	62.21	9
MW-BW-17-A	5747900.661	2140496.760	A	3/16/2016	61.90	10
MW-BW-18-A	5746759.065	2140319.697	A	9/29/2015	53.04	9
MW-BW-18-A	5746759.065	2140319.697	A	3/17/2016	53.41	10
MW-BW-20-180	5747685.235	2140645.127	Confined Upper 180-Foot	10/1/2015	-14.37	13
MW-BW-20-180	5747685.235	2140645.127	Confined Upper 180-Foot	3/17/2016	-9.39	14
MW-BW-21-180	5748342.543	2140731.912	Confined Upper 180-Foot	9/29/2015	-14.55	13
MW-BW-21-180	5748342.543	2140731.912	Confined Upper 180-Foot	3/15/2016	-9.93	14
MW-BW-22-180	5748198.842	2140553.489	Confined Upper 180-Foot	10/1/2015	-14.63	13
MW-BW-22-180	5748198.842	2140553.489	Confined Upper 180-Foot	3/16/2016	-9.71	14
MW-BW-23-A	5748315.600	2138584.100	A	10/2/2015	70.97	9
MW-BW-23-A	5748315.600	2138584.100	A	3/17/2016	70.66	10
MW-BW-24-A	5747938.658	2140120.461	A	10/1/2015	64.92	9
MW-BW-24-A	5747938.658	2140120.461	A	3/16/2016	64.77	10
MW-BW-25-A	5748402.508	2140037.403	A	10/1/2015	65.31	9

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-BW-25-A	5748402.508	2140037.403	A	3/17/2016	65.00	10
MW-BW-26-180	5747063.385	2141055.189	Confined Upper 180-Foot	10/1/2015	-13.84	13
MW-BW-26-180	5747063.385	2141055.189	Confined Upper 180-Foot	3/17/2016	-8.82	14
MW-BW-26-A	5747191.669	2140994.848	A	10/1/2015	53.68	9
MW-BW-26-A	5747191.669	2140994.848	A	3/16/2016	53.89	10
MW-BW-27-A	5747633.077	2141492.270	A	9/29/2015	55.36	9
MW-BW-27-A	5747633.077	2141492.270	A	3/14/2016	55.19	10
MW-BW-28-A	5748216.839	2141504.804	A	9/29/2015	58.04	9
MW-BW-28-A	5748216.839	2141504.804	A	3/14/2016	57.77	10
MW-BW-29-180	5747985.780	2140951.749	Confined Upper 180-Foot	9/29/2015	-14.32	13
MW-BW-29-180	5747985.780	2140951.749	Confined Upper 180-Foot	3/15/2016	-9.66	14
MW-BW-30-A	5746909.545	2141327.390	A	9/30/2015	51.87	9
MW-BW-30-A	5746909.545	2141327.390	A	3/16/2016	52.52	10
MW-BW-31-A	5746955.528	2141956.153	A	9/28/2015	47.45	9
MW-BW-31-A	5746955.528	2141956.153	A	3/14/2016	47.86	10
MW-BW-32-A	5747436.099	2142128.262	A	9/28/2015	47.42	9
MW-BW-32-A	5747436.099	2142128.262	A	3/14/2016	47.57	10
MW-BW-34-A	5746372.131	2142013.663	A	10/1/2015	45.69	9
MW-BW-34-A	5746372.131	2142013.663	A	3/17/2016	46.05	10
MW-BW-35-A	5746201.783	2142432.427	A	9/28/2015	43.13	9
MW-BW-35-A	5746201.783	2142432.427	A	3/14/2016	43.66	10
MW-BW-36-A	5746519.207	2142791.202	A	9/28/2015	42.24	9
MW-BW-36-A	5746519.207	2142791.202	A	3/14/2016	42.51	10
MW-BW-38-A	5745790.759	2142390.799	A	10/1/2015	42.31	9
MW-BW-38-A	5745790.759	2142390.799	A	3/17/2016	43.07	10
MW-BW-39-A	5745712.811	2143239.705	A	9/28/2015	38.08	9
MW-BW-39-A	5745712.811	2143239.705	A	3/14/2016	38.36	10
MW-BW-41-A	5744425.489	2143247.438	A	10/1/2015	34.92	9
MW-BW-41-A	5744425.489	2143247.438	A	3/17/2016	35.53	10
MW-BW-42-A	5744809.871	2143291.792	A	9/28/2015	35.67	9
MW-BW-42-A	5744809.871	2143291.792	A	3/14/2016	36.38	10
MW-BW-43-180	5746978.170	2140678.010	Upper 180-Foot	10/1/2015	-14.30	13
MW-BW-43-180	5746978.170	2140678.010	Upper 180-Foot	3/17/2016	-9.17	14
MW-BW-43-A	5744303.180	2143608.370	A	9/28/2015	30.95	9
MW-BW-43-A	5744303.180	2143608.370	A	3/14/2016	31.52	10
MW-BW-44-180	5747239.360	2139826.200	Upper 180-Foot	9/29/2015	-15.05	13
MW-BW-44-180	5747239.360	2139826.200	Upper 180-Foot	3/17/2016	-9.66	14
MW-BW-45-180	5747773.430	2139732.890	Upper 180-Foot	10/1/2015	-15.15	13
MW-BW-45-180	5747773.430	2139732.890	Upper 180-Foot	3/17/2016	-9.89	14
MW-BW-47-180	5747763.880	2138842.370	Upper 180-Foot	10/1/2015	-15.89	13
MW-BW-47-180	5747763.880	2138842.370	Upper 180-Foot	3/17/2016	-10.35	14
MW-BW-49-180	5748664.220	2137481.170	Upper 180-Foot	10/1/2015	-17.12	13

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-BW-49-180	5748664.220	2137481.170	Upper 180-Foot	3/17/2016	-11.62	14
MW-BW-50-180	5748379.300	2137526.100	Upper 180-Foot	10/1/2015	-16.84	13
MW-BW-50-180	5748379.300	2137526.100	Upper 180-Foot	3/17/2016	-11.42	14
MW-BW-50-A	5748400.076	2137582.318	A	10/2/2015	74.44	9
MW-BW-50-A	5748400.076	2137582.318	A	3/17/2016	74.22	10
MW-BW-51-180	5749006.670	2138332.900	Upper 180-Foot	10/1/2015	-16.83	13
MW-BW-51-180	5749006.670	2138332.900	Upper 180-Foot	3/16/2016	-11.54	14
MW-BW-51-A	5748907.550	2138565.331	A	10/1/2015	71.76	9
MW-BW-51-A	5748907.550	2138565.331	A	3/16/2016	71.49	10
MW-BW-52-180	5748837.110	2138916.870	Upper 180-Foot	10/1/2015	-16.25	13
MW-BW-52-180	5748837.110	2138916.870	Upper 180-Foot	3/16/2016	-11.15	14
MW-BW-52-A	5748697.023	2138993.070	A	10/1/2015	70.16	9
MW-BW-52-A	5748697.023	2138993.070	A	3/16/2016	69.89	10
MW-BW-53-180	5748120.700	2138987.730	Upper 180-Foot	10/1/2015	-15.93	13
MW-BW-53-180	5748120.700	2138987.730	Upper 180-Foot	3/17/2016	-10.51	14
MW-BW-53-A	5748333.511	2139111.058	A	10/1/2015	69.06	9
MW-BW-53-A	5748333.511	2139111.058	A	3/16/2016	68.73	10
MW-BW-54-180	5746818.200	2142043.800	Upper 180-Foot	9/28/2015	-13.11	13
MW-BW-54-180	5746818.200	2142043.800	Upper 180-Foot	3/14/2016	-8.59	14
MW-BW-54-A	5749576.585	2139291.492	A	10/1/2015	68.62	9
MW-BW-54-A	5749576.585	2139291.492	A	3/17/2016	68.78	10
MW-BW-55-180	5748107.600	2140906.600	Upper 180-Foot	9/29/2015	-14.43	13
MW-BW-55-180	5748107.600	2140906.600	Upper 180-Foot	3/15/2016	-9.77	14
MW-BW-55-A	5747940.950	2139168.530	A	10/1/2015	67.70	9
MW-BW-55-A	5747940.950	2139168.530	A	3/17/2016	67.62	10
MW-BW-56-180	5749385.300	2137367.800	Upper 180-Foot	10/1/2015	-17.58	13
MW-BW-56-A	5749393.010	2140065.760	A	9/29/2015	65.54	9
MW-BW-56-A	5749393.010	2140065.760	A	3/15/2016	65.20	10
MW-BW-57-A	5749032.760	2140300.390	A	9/29/2015	64.62	9
MW-BW-57-A	5749032.760	2140300.390	A	3/15/2016	64.21	10
MW-BW-58-A	5749854.850	2140958.160	A	9/29/2015	61.01	9
MW-BW-58-A	5749854.850	2140958.160	A	3/15/2016	60.61	10
MW-BW-59-A	5745504.100	2143521.790	A	9/28/2015	35.93	9
MW-BW-59-A	5745504.100	2143521.790	A	3/14/2016	36.12	10
MW-BW-60-A	5748120.500	2140860.820	A	9/29/2015	61.22	9
MW-BW-60-A	5748120.500	2140860.820	A	3/15/2016	60.85	10
MW-BW-62-A	5748172.100	2137725.500	A	10/1/2015	73.61	9
MW-BW-62-A	5748172.100	2137725.500	A	3/17/2016	73.30	10
MW-BW-64-A	5748548.700	2138018.000	A	10/1/2015	73.29	9
MW-BW-64-A	5748548.700	2138018.000	A	3/17/2016	73.01	10
MW-BW-66-A	5744400.600	2144350.100	A	9/28/2015	27.49	9
MW-BW-66-A	5744400.600	2144350.100	A	3/14/2016	27.58	10

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-BW-67-A	5744654.100	2144537.800	A	9/28/2015	27.33	9
MW-BW-67-A	5744654.100	2144537.800	A	3/14/2016	27.44	10
MW-BW-71-A	5748085.600	2138141.600	A	10/2/2015	71.91	9
MW-BW-71-A	5748085.600	2138141.600	A	3/17/2016	71.63	10
MW-OU2-01-A	5747348.574	2134065.499	A	10/1/2015	88.07	9
MW-OU2-01-A	5747348.574	2134065.499	A	3/16/2016	88.00	10
MW-OU2-02-A	5747104.673	2136083.549	A	9/30/2015	79.65	9
MW-OU2-02-A	5747104.673	2136083.549	A	3/16/2016	79.34	10
MW-OU2-03-A	5744935.053	2135440.196	A	9/30/2015	56.07	9
MW-OU2-03-A	5744935.053	2135440.196	A	3/17/2016	56.05	10
MW-OU2-04-A	5742879.634	2137557.945	A	10/1/2015	38.43	9
MW-OU2-04-A	5742879.634	2137557.945	A	3/17/2016	38.54	10
MW-OU2-05-180	5743892.174	2139007.820	Confined Upper 180-Foot	9/29/2015	-9.53	13
MW-OU2-05-180	5743892.174	2139007.820	Confined Upper 180-Foot	3/15/2016	-5.86	14
MW-OU2-05-A	5743945.159	2138971.351	A	9/29/2015	42.01	9
MW-OU2-05-A	5743945.159	2138971.351	A	3/15/2016	42.33	10
MW-OU2-07-180R	5744986.405	2138271.347	Confined Upper 180-Foot	9/29/2015	-13.59	13
MW-OU2-07-180R	5744986.405	2138271.347	Confined Upper 180-Foot	3/15/2016	-9.10	14
MW-OU2-07-400	5745078.534	2138250.588	400-Foot	9/29/2015	-13.21	15
MW-OU2-07-400	5745078.534	2138250.588	400-Foot	3/15/2016	-8.49	16
MW-OU2-07-A	5745037.204	2138271.008	A	9/29/2015	49.21	9
MW-OU2-07-A	5745037.204	2138271.008	A	3/15/2016	49.52	10
MW-OU2-08-A	5745600.726	2137949.167	A	9/29/2015	55.37	9
MW-OU2-08-A	5745600.726	2137949.167	A	3/16/2016	55.68	10
MW-OU2-09-180R	5743459.598	2136655.989	Confined Upper 180-Foot	9/29/2015	-10.57	13
MW-OU2-09-180R	5743459.598	2136655.989	Confined Upper 180-Foot	3/18/2016	-7.20	14
MW-OU2-09-A	5743471.147	2136650.451	A	9/29/2015	42.95	9
MW-OU2-09-A	5743471.147	2136650.451	A	3/15/2016	43.17	10
MW-OU2-12-A	5744537.732	2137121.853	A	9/29/2015	45.49	9
MW-OU2-13-A	5749618.204	2134525.562	A	10/1/2015	83.98	9
MW-OU2-13-A	5749618.204	2134525.562	A	3/17/2016	83.90	10
MW-OU2-20-180	5740051.952	2138224.988	Confined Upper 180-Foot	9/30/2015	-1.05	13
MW-OU2-20-180	5740051.952	2138224.988	Confined Upper 180-Foot	3/14/2016	0.34	14
MW-OU2-20-180X	5740087.462	2138221.958	Confined Upper 180-Foot	9/30/2015	-1.27	13
MW-OU2-20-180X	5740087.462	2138221.958	Confined Upper 180-Foot	3/14/2016	0.10	14
MW-OU2-21-A	5742074.261	2136575.221	A	9/29/2015	35.53	9
MW-OU2-21-A	5742074.261	2136575.221	A	3/15/2016	35.99	10
MW-OU2-23-180	5743754.470	2134808.260	Confined Upper 180-Foot	9/30/2015	-10.98	13
MW-OU2-23-180	5743754.470	2134808.260	Confined Upper 180-Foot	3/16/2016	-8.59	14
MW-OU2-23-A	5743765.085	2134810.734	A	9/30/2015	56.60	9
MW-OU2-23-A	5743765.085	2134810.734	A	3/16/2016	56.53	10
MW-OU2-24-180	5744618.912	2137258.454	Confined Upper 180-Foot	9/29/2015	-12.67	13

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-OU2-25-A	5745740.787	2136504.300	A	9/30/2015	73.70	9
MW-OU2-25-A	5745740.787	2136504.300	A	3/17/2016	73.69	10
MW-OU2-27-A	5748968.072	2135926.168	A	10/1/2015	81.01	9
MW-OU2-27-A	5748968.072	2135926.168	A	3/17/2016	80.81	10
MW-OU2-28-180	5749679.975	2135769.557	Confined Upper 180-Foot	10/1/2015	-17.81	13
MW-OU2-28-180	5749679.975	2135769.557	Confined Upper 180-Foot	3/16/2016	-12.79	14
MW-OU2-28-400	5749713.355	2135751.407	400-Foot	3/16/2016	-12.51	16
MW-OU2-28-A	5749700.265	2135766.437	A	10/1/2015	79.81	9
MW-OU2-28-A	5749700.265	2135766.437	A	3/16/2016	79.37	10
MW-OU2-29-180	5747143.424	2133265.903	Confined Upper 180-Foot	9/30/2015	-13.60	13
MW-OU2-29-180	5747143.424	2133265.903	Confined Upper 180-Foot	3/16/2016	-11.92	14
MW-OU2-29-A	5747134.863	2133265.303	A	9/30/2015	91.28	9
MW-OU2-29-A	5747134.863	2133265.303	A	3/16/2016	91.23	10
MW-OU2-30-180	5749087.146	2137855.526	Confined Upper 180-Foot	9/30/2015	-16.88	13
MW-OU2-30-180	5749087.146	2137855.526	Confined Upper 180-Foot	3/16/2016	-11.52	14
MW-OU2-30-A	5749086.916	2137863.037	A	9/30/2015	73.81	9
MW-OU2-30-A	5749086.916	2137863.037	A	3/16/2016	71.38	10
MW-OU2-31-180R	5741211.837	2139288.476	Confined Upper 180-Foot	9/29/2015	-3.98	13
MW-OU2-31-180R	5741211.837	2139288.476	Confined Upper 180-Foot	3/15/2016	-1.73	14
MW-OU2-35-A	5748214.983	2133412.883	A	10/1/2015	89.52	9
MW-OU2-35-A	5748214.983	2133412.883	A	3/16/2016	89.39	10
MW-OU2-36-180	5739410.159	2139561.904	Confined Upper 180-Foot	9/29/2015	-0.60	13
MW-OU2-36-180	5739410.159	2139561.904	Confined Upper 180-Foot	3/15/2016	1.11	14
MW-OU2-39-180	5744290.431	2136119.598	Confined Upper 180-Foot	10/1/2015	-11.59	13
MW-OU2-39-180	5744290.431	2136119.598	Confined Upper 180-Foot	3/17/2016	-7.77	14
MW-OU2-42-180	5740872.617	2136764.107	Confined Upper 180-Foot	9/29/2015	-2.11	13
MW-OU2-42-180	5740872.617	2136764.107	Confined Upper 180-Foot	3/15/2016	-0.85	14
MW-OU2-43-180	5742446.559	2137387.963	Confined Upper 180-Foot	10/1/2015	-6.44	13
MW-OU2-43-180	5742446.559	2137387.963	Confined Upper 180-Foot	3/17/2016	-3.83	14
MW-OU2-44-180	5747073.000	2136550.000	Confined Upper 180-Foot	9/30/2015	-15.63	13
MW-OU2-44-180	5747073.000	2136550.000	Confined Upper 180-Foot	3/16/2016	-11.35	14
MW-OU2-44-A	5747056.460	2136535.410	A	9/30/2015	79.83	9
MW-OU2-44-A	5747056.460	2136535.410	A	3/16/2016	79.59	10
MW-OU2-45-A	5750245.071	2135985.864	A	10/1/2015	75.04	9
MW-OU2-46-180	5748574.750	2136641.970	Confined Upper 180-Foot	10/1/2015	-17.07	13
MW-OU2-46-180	5748574.750	2136641.970	Confined Upper 180-Foot	3/16/2016	-12.19	14
MW-OU2-46-A	5748584.380	2136663.140	A	10/1/2015	80.72	9
MW-OU2-46-A	5748584.380	2136663.140	A	3/16/2016	80.59	10
MW-OU2-47-180	5747685.982	2137157.235	Confined Upper 180-Foot	10/2/2015	-16.36	13
MW-OU2-49-180	5745543.490	2138546.913	Confined Upper 180-Foot	9/29/2015	-14.35	13
MW-OU2-49-180	5745543.490	2138546.913	Confined Upper 180-Foot	3/16/2016	-10.41	14
MW-OU2-50-180	5742548.473	2134263.492	Confined Upper 180-Foot	9/29/2015	-8.02	13

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-OU2-50-180	5742548.473	2134263.492	Confined Upper 180-Foot	3/16/2016	-6.66	14
MW-OU2-51-180	5742414.310	2134813.007	Confined Upper 180-Foot	9/29/2015	-8.03	13
MW-OU2-51-180	5742414.310	2134813.007	Confined Upper 180-Foot	3/17/2016	-6.15	14
MW-OU2-52-180	5742727.973	2135456.988	Confined Upper 180-Foot	9/29/2015	-8.96	13
MW-OU2-52-180	5742727.973	2135456.988	Confined Upper 180-Foot	3/17/2016	-6.54	14
MW-OU2-53-180	5745184.835	2136278.812	Confined Upper 180-Foot	9/30/2015	-14.19	13
MW-OU2-53-180	5745184.835	2136278.812	Confined Upper 180-Foot	3/17/2016	-10.05	14
MW-OU2-54-180	5742053.417	2133808.990	Confined Upper 180-Foot	10/2/2015	-6.79	13
MW-OU2-54-180	5742053.417	2133808.990	Confined Upper 180-Foot	3/15/2016	-6.01	14
MW-OU2-55-180	5744756.498	2134182.756	Confined Upper 180-Foot	9/30/2015	-12.63	13
MW-OU2-55-180	5744756.498	2134182.756	Confined Upper 180-Foot	3/16/2016	-10.58	14
MW-OU2-56-180	5746877.486	2135972.384	Confined Upper 180-Foot	9/30/2015	-15.55	13
MW-OU2-56-180	5746877.486	2135972.384	Confined Upper 180-Foot	3/16/2016	-11.54	14
MW-OU2-57-A	5748699.696	2134909.848	A	10/1/2015	84.48	9
MW-OU2-57-A	5748699.696	2134909.848	A	3/17/2016	85.27	10
MW-OU2-58-A	5750607.287	2137331.221	A	10/1/2015	71.56	9
MW-OU2-58-A	5750607.287	2137331.221	A	3/16/2016	71.16	10
MW-OU2-59-A	5750924.768	2136830.170	A	10/1/2015	71.81	9
MW-OU2-59-A	5750924.768	2136830.170	A	3/16/2016	71.40	10
MW-OU2-60-A	5750438.987	2135729.642	A	10/1/2015	77.04	9
MW-OU2-61-180	5749529.758	2136550.620	Confined Upper 180-Foot	10/1/2015	-18.65	13
MW-OU2-62-180	5748496.148	2135528.586	Confined Upper 180-Foot	10/1/2015	-16.82	13
MW-OU2-62-180	5748496.148	2135528.586	Confined Upper 180-Foot	3/17/2016	-12.27	14
MW-OU2-63-180	5747522.313	2137909.322	Confined Upper 180-Foot	10/2/2015	-16.16	13
MW-OU2-63-180	5747522.313	2137909.322	Confined Upper 180-Foot	3/17/2016	-10.78	14
MW-OU2-64-180	5750482.500	2137557.418	Confined Upper 180-Foot	10/1/2015	-18.19	13
MW-OU2-67-180	5751514.870	2136604.723	Confined Upper 180-Foot	10/1/2015	-19.35	13
MW-OU2-67-180	5751514.870	2136604.723	Confined Upper 180-Foot	3/16/2016	-13.17	14
MW-OU2-70-180	5752535.456	2135885.214	Confined Upper 180-Foot	9/30/2015	-19.68	13
MW-OU2-70-180	5752535.456	2135885.214	Confined Upper 180-Foot	3/16/2016	-13.89	14
MW-OU2-73-A	5747760.233	2135943.489	A	9/30/2015	80.57	9
MW-OU2-73-A	5747760.233	2135943.489	A	3/17/2016	79.83	10
MW-OU2-74-A	5746631.557	2135135.544	A	9/30/2015	83.22	9
MW-OU2-74-A	5746631.557	2135135.544	A	3/17/2016	83.14	10
MW-OU2-75-A	5747505.820	2137931.354	A	10/1/2015	69.99	9
MW-OU2-75-A	5747505.820	2137931.354	A	3/17/2016	69.75	10
MW-OU2-76-A	5746550.255	2138841.421	A	9/29/2015	58.27	9
MW-OU2-76-A	5746550.255	2138841.421	A	3/16/2016	58.01	10
MW-OU2-77-A	5749960.557	2136330.161	A	10/1/2015	76.45	9
MW-OU2-77-A	5749960.557	2136330.161	A	3/17/2016	76.21	10
MW-OU2-80-A	5748460.940	2135520.130	A	9/30/2015	85.25	9
MW-OU2-80-A	5748460.940	2135520.130	A	3/17/2016	85.03	10

Fort Ord Monitoring Wells - Water Levels used for Contours

Well ID	State Plane Coordinates		Screened Aquifer	Date	WL [ft, NAVD88]	Figure Number
	X	Y				
MW-OU2-81-A	5746275.160	2137041.110	A	9/30/2015	73.64	9
MW-OU2-81-A	5746275.160	2137041.110	A	3/17/2016	73.47	10

APPENDIX F
Water Quality Data – Initial Samples following Development





Monterey Bay Analytical Services

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 Susy Jacobson

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 831.375.MBAS

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ELAP Certification Number: 2385

Lab Number: AB26897

Collection Date/Time: 2/13/2015 11:45 Sample Collector: SALMON M
 Submittal Date/Time: 2/13/2015 14:11 Sample ID

Sample Description: Geoscience MW-1S (monitoring)

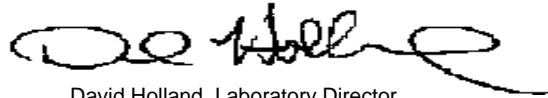
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	105		2	2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	43		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	68	J	125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	128		10	2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	2.27		0.05	2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	39		10	2/14/2015	TC
Calcium	EPA200.7	mg/L	661		5	3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	646		5	3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		2/24/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	14504		100	2/14/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		2/19/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	4		3	2/13/2015	TC
Copper, Total	EPA200.8	µg/L	62		50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		2/21/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		2/24/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		2/21/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	0.3		0.5	2/14/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E		2/24/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5678		10	3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	25		10	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	15		10	2/27/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	2/25/2015	TC
Lithium	EPA200.8	µg/L	172		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	978		0.5	2/27/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	979		1	2/27/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	41		10	2/27/2015	MW
Manganese, Total	EPA200.7	µg/L	43		10	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/13/2015	HM
Nitrate as NO3	EPA300.0	mg/L	3		5	2/14/2015	DH
Nitrate+Nitrite as N	EPA300.0	mg/L	0.7		0.5	2/14/2015	DH
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.5	2/14/2015	TC
Odor Threshold at 60 C	SM2150B	TON	1		1	2/13/2015	TC

mg/L : Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
 H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
 D = Method deviates from standard method due to insufficient sample for MS/MSD

o-Phosphate-P	Hach 8048	mg/L	0.07	H	0.03	2/15/2015	DH
pH (Field Test)	SM4500-H+B	pH	7.15			2/13/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	7.2		0.1	2/13/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		2/21/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.05		0.03	2/25/2015	LRH
Potassium	EPA200.7	mg/L	228		0.5	2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	224		0.1	2/27/2015	MW
QC Ratio TDS/SEC	Calculation		0.68			2/18/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		2/24/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	20		0.5	2/27/2015	MW
Sodium	EPA200.7	mg/L	7306		5	3/6/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	7500		0.5	3/6/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	39090		1	2/16/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	39747		1	2/13/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	7995		62	3/4/2015	SM
Sulfate	EPA300.0	mg/L	1840		100	2/14/2015	DH
Temperature (Field)	SM2550	° C	18.8			2/13/2015	MS
Total Diss. Solids	SM2540C	mg/L	26600		10	2/16/2015	HM
Turbidity	EPA180.1	NTU	0.10		0.05	2/13/2015	TC
Turbidity (Field)	EPA180.1	NTU	0.28		0.05	2/13/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E		2/23/2015	BSK
Zinc, Total	EPA200.8	µg/L	413		250	3/4/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26897 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	7500	0.04350	326.25
Potassium	224	0.02558	5.73
Calcium	649	0.04990	32.39
Magnesium	979	0.08229	80.56
NH3-N	0	0.07143	0.00
		SUM	444.93

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	105	0.02000	2.10
Sulfate	1900	0.02082	39.56
Chloride	14504	0.02821	409.16
Nitrate-Nitrogen	0.6	0.07138	0.04
Phosphate-P	0.1	0.01031	0.00
Bromide	39.0	0.01252	0.49
		SUM	451.35

ANION-CATION BALANCE **-1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	39090	
Cation Sum X 100	44493	114%
Anion Sum X 100	45135	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26897 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	7306	0.04350	317.81
Potassium	228	0.02558	5.83
Calcium	661	0.04990	32.98
Magnesium	978	0.08229	80.48
NH3-N	0	0.07143	0.00
		SUM	437.11

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	105	0.02000	2.10
Sulfate	1900	0.02082	39.56
Chloride	14504	0.02821	409.16
Nitrate-Nitrogen	0.6	0.07138	0.04
Phosphate-P	0.1	0.01031	0.00
Bromide	39.0	0.01252	0.49
		SUM	451.35

ANION-CATION BALANCE **-2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	39090	
Cation Sum X 100	43711	112%
Anion Sum X 100	45135	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/13/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.024	---	<0.05
ICVL	0.050	0.056	112	80-120
ICV	0.250	0.231	92.4	80-120

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26897	0.017	0.250	0.291	0.28	109.6	105.2	3.9	80/120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample

AB27199 D

25X Dilution

Date Analyzed

Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26920	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/15/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.000	---	< 0.03	16:46
LCSL	0.030	0.023	76.7	50-150	16:46
ICV	1.00	0.99	99	90-110	16:47
QCS	1.00	1.01	101	80-120	16:47
CCV	1.00	1.01	101	80-120	17:02
CCVB	0.00	0.00		< 0.03	17:03

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26920	0.03	0.20	0.23	0.21	100	90	9.1	70-130	10	17:01	17:02

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/13/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.8	99.1	95-105	1400

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB26897	7.21	7.22	0.1	10	1425

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Phosphorus QC Summary (Hach 8190)

Date: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	16:25
LCSL	0.03	0.03	100	50-150	16:25
ICV	1.00	0.96	96	90-110	16:25
QCS	1.00	0.96	96	80-120	16:25
CCVB	---	<0.03	---	< 0.03	17:23
CCV	1.00	0.97	97	80-120	17:23

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26918	0.09	1.00	1.03	1.03	94	94	0.0	70-130	10	16:25	16:25

Note: The RPD % of the spiked sample AB27178 was over the acceptance criteria. Data was accepted due the recovery percents of LCSL, ICV, QCS, and Matrix Spikes.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 2/25/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.090	---	<0.5
LCS	5.0	4.9	98	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26892	0.5	5.0	5.5	5.6	100	102	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26942	686	671	2.2	5	10:03

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150227

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	0.98	97.7%	0.96	96.1%	1.7%	1	0.94	93.8%	1	0.93	92.5%
B 249.772	0.05-5ppm	0.01	0.01	1.04	103.6%	1.01	101.3%	2.3%	1	0.99	98.7%	1	1.00	99.8%
Ca 317.933	50-300ppm	-3.43	-3.51	47.7	95.4%	46.8	93.5%	1.9%	50	46.7	93.3%	50	45.77	91.5%
Ca 396.847	0.5-50ppm	-0.51	-0.65	51.9	103.8%	51.0	102.1%	1.7%	50	49.7	99.5%	50	49.76	99.5%
Cu 324.754	10ppb-100ppm	-8.30	-10.83	1070	107.0%	1050	105.0%	1.9%	1000	1028	102.8%	1000	1034.5	103.5%
Cu 327.394	10ppb-100ppm	-6.44	-7.99	1086	108.6%	1059	105.9%	2.5%	1000	1036	103.6%	1000	1057.6	105.8%
Fe 238.204	10ppb-100ppm	1.81	3.14	950	95.0%	943	94.3%	0.8%	1000	925	92.5%	1000	931.19	93.1%
Fe 259.940	10ppb-100ppm	-4.29	-1.60	1013	101.3%	993	99.3%	2.0%	1000	974	97.4%	1000	994.75	99.5%
K 766.491	0.5-750ppm	0.09	0.08	10.9	109.3%	10.5	105.0%	4.1%	10	10.6	106.3%	10	10.52	105.2%
Mg 202.583	50-1000ppm	-0.31	-0.45	52.4	104.9%	52.0	104.0%	0.8%	50	51.0	102.0%	50	51.10	102.2%
Mg 279.071	0.5-50ppm	0.01	-0.08	52.6	105.1%	51.5	103.1%	2.0%	50	51.1	102.2%	50	51.03	102.1%
Mn 257.611	10ppb-11ppm	-9.11	-11.09	985	98.5%	967	96.7%	1.8%	1000	955	95.5%	1000	969.08	96.9%
Mn 260.561	10ppb-11ppm	-8.74	-12.88	986	98.6%	971	97.1%	1.5%	1000	960	96.0%	1000	975.47	97.5%
Na 568.821	50-1000ppm	5.80	5.26	58.4	116.8%	58.1	116.2%	0.5%	50	55.6	111.3%	50	57.37	114.7%
Na 589.592	0.5-50ppm	-0.41	-0.48	55.1	110.1%	54.7	109.4%	0.6%	50	53.4	106.8%	50	53.68	107.4%
Si 251.611	0.5-200ppm	0.14	-0.10	50.0	100.0%	49.0	97.9%	2.1%	50	48.5	97.0%	50	49.52	99.0%
Si 252.411	0.5-200ppm	0.20	-0.02	49.5	99.0%	48.3	96.7%	2.4%	50	48.3	96.6%	50	49.00	98.0%
Zn 213.857	10ppb-50ppm	-19.01	14.37	960	96.0%	952	95.2%	0.8%	1000	939	93.9%	1000	935.71	93.6%

Matrix Spikes

Sample ID AB26944

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.07	1.03	95.7%	1.02	94.1%	1.5%	1	0.95	95.5%	1.8%	0.00
B 249.772	0.07	1.10	102.9%	1.09	102.1%	0.7%	1	1.03	102.9%	4.1%	0.00
Ca 317.933	46.7	93.8	94.0%	93.5	93.5%	0.3%	50	47.8	95.5%	2.4%	-3.45
Ca 396.847	51.6	95.4	87.6%	94.8	86.5%	0.6%	50	51.8	103.7%	4.1%	-0.56
Cu 324.754	-9	1073	108.1%	1054	106.3%	1.8%	1000	1084	108.4%	5.3%	-8.91
Cu 327.394	-10	1081	109.1%	1069	107.9%	1.1%	1000	1092	109.2%	5.4%	-6.63
Fe 238.204	5	940	93.5%	928	92.3%	1.2%	1000	947	94.7%	2.3%	3.25
Fe 259.940	3	1002	99.9%	1003	100.1%	0.1%	1000	1011	101.1%	3.8%	-2.41
K 766.491	2.8	13.6	108.3%	13.4	105.7%	1.9%	10	11.2	112.0%	5.2%	0.07
Mg 202.581	30.6	83.7	106.2%	82.8	104.3%	1.2%	50	54.0	107.9%	5.6%	-0.43
Mg 279.077	30.1	81.4	102.6%	80.5	101.0%	1.0%	50	53.1	106.3%	4.0%	0.00
Mn 257.611	-11	963	97.3%	960	97.0%	0.3%	1000	981	98.1%	2.7%	-10.36
Mn 260.561	-9	989	99.9%	980	98.9%	1.0%	1000	1004	100.4%	4.4%	-10.04
Na 568.821	125.5	183.1	115.3%	178.2	105.5%	2.7%	50	61.7	123.4%	10.3%	6.06
Na 589.592	115.8	144.2	56.8%	130.7	29.9%	9.8%	50	56.7	113.4%	6.0%	-0.13
Si 251.611	38.7	86.9	96.3%	86.4	95.4%	0.5%	50	50.7	101.3%	4.4%	-0.15
Si 252.411	37.7	84.9	94.3%	84.2	93.0%	0.8%	50	49.5	98.9%	2.4%	-0.13
Zn 213.857	-28	919	94.7%	919	94.7%	0.1%	1000	964	96.4%	3%	-20.71

4 Justin Court Ste D, Monterey, CA 93940

831.375.MBAS (6227), 831.641.0734 (Fax)

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

Batch ID: **20150214**

	F	Cl	NO2-N	SO4	Br	NO3-N	PO4-P
Spike amount	2	20	2	20	2	2	2
ICVB	0.00	0.20	0.00	0.01	0.00	0.00	0.00
ICV	1.91	19.93	2.01	19.50	1.83	1.82	1.96
Rec 90-110%	95.46	99.64	100.26	97.48	91.70	91.01	97.94
ICVL	0.18	2.04	0.18	1.73	0.24	0.22	0.22
Rec 50-150%	92.32	101.90	91.23	86.44	118.40	108.19	109.85
Sample ID AB26919	0.62	77.67	0.36	17.92	3.84	5.18	0.37
MS	2.76	99.28	2.41	38.61	6.16	7.28	2.54
Rec 80-120%	106.64	108.08	102.31	103.42	116.08	104.78	108.31
MSD	2.81	100.10	2.41	38.53	6.17	7.31	2.52
Rec 80-120%	109.25	112.16	102.69	103.04	116.74	106.35	107.50
Diff 10%	1.87	0.82	0.32	0.20	0.21	0.43	0.65
CCV	2.08	20.84	2.10	20.74	2.18	1.98	2.15
Rec 90-110%	104.23	104.20	105.02	103.71	108.87	99.13	107.68
Diff 10%	8.79	4.48	4.64	6.19	17.12	8.55	9.47
CCVB	0.00	0.27	0.03	0.06	0.09	0.00	0.00



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

TDS QC Summary (SM 2540C)

Date Analyzed: 2/16/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1300
ICVL	100	106	106	80-120	1300
ICV	500	494	98.8	90-110	1300

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26920	33900	34100	0.6	10	1300

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



4 Justin Court Ste D, Monterey, CA 93940
831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/13/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:00
ICV	1.00	1.09	109%	95-105	16:00

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB26897	0.10	0.10	0%	10	16:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

*Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762*

February 27, 2015

Ceres ID: 10597

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 17, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

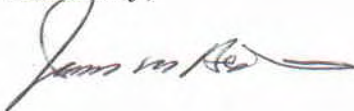
This work was authorized under M.B.A.'s Project # AB26897.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10597-001	MW-1S	2/17/2015	2/13/2015 11:45

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB26897		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH				Reviewed by:	BS		

Sample ID: Ongoing Precision and Recovery							
Client Data		Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB26897	Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
				ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	106	25-141	
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
				<i>a. Method acceptance criteria .</i>			
Analyst: JMH			Reviewed by: BS				

Sample ID: MW-1S							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10597-001		Date Received: 17-Feb-15
Project: AB26897			Sample Size: 1.035 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 13-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 11:45							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.21			IS ¹³ C-2,3,7,8-TCDD	92.5	31 - 137
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	92.7	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Chain of Custody

Please Print in Pen

Ceres Use Only

Pg. ___ of ___

Ceres Project ID: 10597
 Temperature: _____ °C

Reports and invoices will be delivered by email in .pdf format

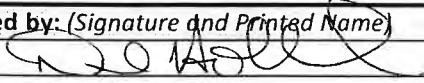
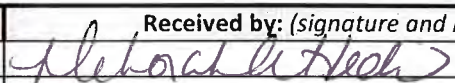
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Monterey Bay Analytical</u> Contact Name: <u>David Holland</u> Address: <u>4 Justin Court Ste D Monterey CA 93940</u> Ph: <u>831-375-6227</u> Email: <u>mweidner@mbasinc.com</u>	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

Sample ID	Sample Collection		Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
	Date	Time									<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
1 mw-1S <u>mw-1S</u>	<u>2/13/2015</u>	<u>0:00 11:45</u>	<u>Aq</u>	<u>2</u>	<u>X</u>						<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
2											<input type="checkbox"/> Other Comments
3											
4											
5											
6											
7											
8											<u>Seawater</u>
9											
10											
11											
12											

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
David Holland 	<u>2/16/2015</u>	<u>16:00</u>		<u>2-17-15</u>	<u>10:10</u>

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10597</u>	Date/Time: <u>2/17/15</u> 2/18/15 <u>10:10</u>	
Client Project ID: <u>MW-1S</u> <u>AB26897</u>	Received Temperature: <u>0.9</u> Acceptable: <input checked="" type="radio"/> Y / <input type="radio"/> N	
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N	
Custody Seals? Present?	<input type="radio"/> Y / <input type="radio"/> N	
	Intact?	<input type="radio"/> Y / <input type="radio"/> N
	NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	<input type="radio"/> Y / <input checked="" type="radio"/> N	
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N	
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N	
Drinking Water, Sodium Thiosulfate present?	<input type="radio"/> Y / <input type="radio"/> N <input checked="" type="radio"/> NA	
List COC discrepancies:		
<u>none 2-17-15</u>		
List Damaged Samples:		
<u>none 2-17-15</u>		

Ceres Analytical Laboratory

Process Request

Ceres ID: 10597 PB: 1296 Sample #: 1 Due Date: 3/3/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:


Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10597-1	1547.97g	512.50g	1.035 L

Chemist:  Date: 2/25/15

Method: 1613B
 SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness				chem/date/witness
0-1296-MB001	Method Blank		1.000L	2/25/15 <i>MA</i>	2/26/15 <i>MA</i>	NA	2/26/15	NA	2/26/15 <i>MA</i>
0-1296-OPR001	OPR		1.000L	(A)					
10597-1296-001	MW-1S	✓	1.035L						

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: 07:30 2/26/15

Samples Logged out by: 107:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: 1A

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15
 Extracts returned to Storage Location: _____

Chemist: [Signature]

Method: 8290A/1613B
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	10.1	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20.1	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3000, 100, 20ml	143512	4/24/15
Sigal	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/23/15
Nansoy	1.5g	P101614A	4/16/15
20% DemitHex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/05/15 17:09
Attention: David Holland	Received Date: 02/17/15 09:00
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B17025	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

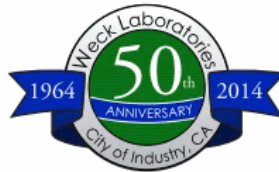
Dear David Holland :

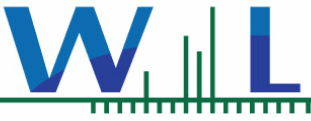
Enclosed are the results of analyses for samples received 02/17/15 09:00 with the Chain of Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

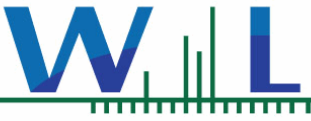
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-15	MAtan Salmon	AB26897	5B17025-01	Water	02/13/15 11:15

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

5B17025-01 MW-15**Sampled:** 02/13/15 11:15**Sampled By:** MAtan Salmon**Matrix:** Water**Sample Note:** AB26897**Anions by IC, EPA Method 9056**

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 14:56	

Chlorinated Pesticides and/or PCBs

Method: EPA 508

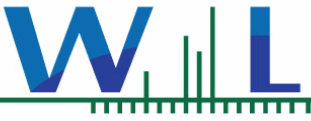
Batch: W5B0911

Prepared: 02/18/15 10:49

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	02/19/15 00:33	
4,4'-DDE	ND	0.010	ug/l	1	02/19/15 00:33	
4,4'-DDT	ND	0.010	ug/l	1	02/19/15 00:33	
Aldrin	ND	0.010	ug/l	1	02/19/15 00:33	
alpha-BHC	ND	0.010	ug/l	1	02/19/15 00:33	
Aroclor 1016	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1221	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1232	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1242	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1248	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1254	ND	0.10	ug/l	1	02/19/15 00:33	
Aroclor 1260	ND	0.10	ug/l	1	02/19/15 00:33	
beta-BHC	ND	0.010	ug/l	1	02/19/15 00:33	
Chlordane (tech)	ND	0.10	ug/l	1	02/19/15 00:33	
Chlorothalonil	ND	0.050	ug/l	1	02/19/15 00:33	
delta-BHC	ND	0.010	ug/l	1	02/19/15 00:33	
Dieldrin	ND	0.010	ug/l	1	02/19/15 00:33	
Endosulfan I	ND	0.010	ug/l	1	02/19/15 00:33	
Endosulfan II	ND	0.010	ug/l	1	02/19/15 00:33	
Endosulfan sulfate	ND	0.010	ug/l	1	02/19/15 00:33	
Endrin	ND	0.010	ug/l	1	02/19/15 00:33	
Endrin aldehyde	ND	0.010	ug/l	1	02/19/15 00:33	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	02/19/15 00:33	
Heptachlor	ND	0.010	ug/l	1	02/19/15 00:33	
Heptachlor epoxide	ND	0.010	ug/l	1	02/19/15 00:33	
Hexachlorobenzene	ND	0.050	ug/l	1	02/19/15 00:33	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	02/19/15 00:33	
Methoxychlor	ND	0.010	ug/l	1	02/19/15 00:33	
PCBs, Total	ND	0.50	ug/l	1	02/19/15 00:33	
Propachlor	ND	0.050	ug/l	1	02/19/15 00:33	
Toxaphene	ND	1.0	ug/l	1	02/19/15 00:33	
Trifluralin	ND	0.010	ug/l	1	02/19/15 00:33	
<i>Surr: Decachlorobiphenyl</i>	67 %	Conc:0.0674	70-130	%		
<i>Surr: Tetrachloro-meta-xylene</i>	76 %	Conc:0.0764	70-130	%		

S-GC



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

5B17025-01 MW-15

Sampled: 02/13/15 11:15

Sampled By: MAtan Salmon

Matrix: Water

Sample Note: AB26897

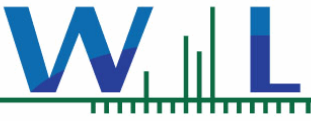
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

Anions by IC, EPA Method 9056 - Quality Control

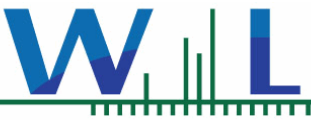
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B0911-BLK1)				Analyzed: 02/18/15 19:57						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



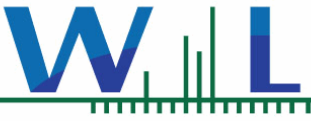
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B0911-BLK1)										
Analyzed: 02/18/15 19:57										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0792		ug/l	0.100		79	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0739		ug/l	0.100		74	70-130			
LCS (W5B0911-BS1)										
Analyzed: 02/18/15 20:28										
4,4'-DDD	0.0880	0.010	ug/l	0.100		88	55-142			
4,4'-DDE	0.0881	0.010	ug/l	0.100		88	49-129			
4,4'-DDT	0.0955	0.010	ug/l	0.100		96	54-160			
Aldrin	0.0786	0.010	ug/l	0.100		79	29-115			
alpha-BHC	0.0832	0.010	ug/l	0.100		83	59-131			
beta-BHC	0.0978	0.010	ug/l	0.100		98	63-136			
delta-BHC	0.100	0.010	ug/l	0.100		100	59-137			
Dieldrin	0.0857	0.010	ug/l	0.100		86	59-135			
Endosulfan I	0.0688	0.010	ug/l	0.100		69	28-138			
Endosulfan II	0.0817	0.010	ug/l	0.100		82	53-133			
Endosulfan sulfate	0.108	0.010	ug/l	0.100		108	58-155			
Endrin	0.0913	0.010	ug/l	0.100		91	57-148			
Endrin aldehyde	0.0838	0.010	ug/l	0.100		84	45-139			
gamma-BHC (Lindane)	0.0856	0.010	ug/l	0.100		86	59-129			
Heptachlor	0.0841	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0855	0.010	ug/l	0.100		86	59-134			
Methoxychlor	0.0993	0.010	ug/l	0.100		99	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0828		ug/l	0.100		83	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0743		ug/l	0.100		74	70-130			
LCS (W5B0911-BS2)										
Analyzed: 02/18/15 21:29										
Hexachlorobenzene	0.0954	0.010	ug/l	0.100		95	65-135			
Hexachlorocyclopentadiene	0.345	0.050	ug/l	0.500		69	65-135			
Propachlor	0.442	0.050	ug/l	0.500		88	73-133			
Trifluralin	0.0935	0.010	ug/l	0.100		93	73-133			
<i>Surr: Decachlorobiphenyl</i>	0.0889		ug/l	0.100		89	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0814		ug/l	0.100		81	70-130			
LCS Dup (W5B0911-BSD1)										
Analyzed: 02/18/15 20:58										
4,4'-DDD	0.0909	0.010	ug/l	0.100		91	55-142	3	25	
4,4'-DDE	0.0907	0.010	ug/l	0.100		91	49-129	3	25	
4,4'-DDT	0.100	0.010	ug/l	0.100		100	54-160	5	25	
Aldrin	0.0782	0.010	ug/l	0.100		78	29-115	0.5	25	



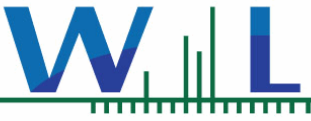
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B0911-BSD1)				Analyzed: 02/18/15 20:58						
alpha-BHC	0.0835	0.010	ug/l	0.100		84	59-131	0.4	25	
beta-BHC	0.101	0.010	ug/l	0.100		101	63-136	3	25	
delta-BHC	0.105	0.010	ug/l	0.100		105	59-137	5	25	
Dieldrin	0.0882	0.010	ug/l	0.100		88	59-135	3	25	
Endosulfan I	0.0703	0.010	ug/l	0.100		70	28-138	2	25	
Endosulfan II	0.0842	0.010	ug/l	0.100		84	53-133	3	25	
Endosulfan sulfate	0.113	0.010	ug/l	0.100		113	58-155	4	25	
Endrin	0.0940	0.010	ug/l	0.100		94	57-148	3	25	
Endrin aldehyde	0.0905	0.010	ug/l	0.100		91	45-139	8	25	
gamma-BHC (Lindane)	0.0863	0.010	ug/l	0.100		86	59-129	0.8	25	
Heptachlor	0.0847	0.010	ug/l	0.100		85	42-136	0.7	25	
Heptachlor epoxide	0.0873	0.010	ug/l	0.100		87	59-134	2	25	
Methoxychlor	0.0992	0.010	ug/l	0.100		99	56-167	0.09	25	
Surr: Decachlorobiphenyl	0.0835		ug/l	0.100		84	70-130			
Surr: Tetrachloro-meta-xylene	0.0727		ug/l	0.100		73	70-130			
LCS Dup (W5B0911-BSD2)				Analyzed: 02/18/15 21:59						
Hexachlorobenzene	0.0810	0.010	ug/l	0.100		81	65-135	16	25	
Hexachlorocyclopentadiene	0.292	0.050	ug/l	0.500		58	65-135	17	25	BS-04
Propachlor	0.398	0.050	ug/l	0.500		80	73-133	11	25	
Trifluralin	0.0783	0.010	ug/l	0.100		78	73-133	18	25	
Surr: Decachlorobiphenyl	0.0749		ug/l	0.100		75	70-130			
Surr: Tetrachloro-meta-xylene	0.0697		ug/l	0.100		70	70-130			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:09

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1296

2/26/2015

Invoice: A504103

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1296 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/17/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 2/17/2015 - 10:00 Report Due: 3/03/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 5.0	Containers Intact COC/Labels Agree Preservation Confirmed Received On Wet Ice Packing Material - Other Sample(s) were received in temperature range. Initial receipt at BSK-FAL
--	---

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- DL1.0 Sample required a dilution due to the matrix or high concentration of a non-target analyte.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B1296-01
Sampled By: Matan Salmon
Sample Description: MW-1S // AB26897

Sample Date - Time: 02/13/15 - 11:45
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A501929	02/20/15	02/21/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A501929	02/20/15	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	108 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A501918	02/19/15	02/21/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A501918	02/19/15	02/21/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
Surrogate: DCPAA	EPA 515.3	94 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1296-01
Sampled By: Matan Salmon
Sample Description: MW-1S // AB26897

Sample Date - Time: 02/13/15 - 11:45
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	BS1.0, CV0.0
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1296-01
Sampled By: Matan Salmon
Sample Description: MW-1S // AB26897

Sample Date - Time: 02/13/15 - 11:45
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics by GC-MS</u>									
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	91 %	<i>Acceptable range: 70-130 %</i>						
Surrogate: Bromofluorobenzene	EPA 524.2	96 %	<i>Acceptable range: 70-130 %</i>						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502051	02/23/15	02/24/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502051	02/23/15	02/24/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	109 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502038	02/23/15	02/24/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	5	A502061	02/24/15	02/24/15	DL1.0
Surrogate: AMPA	EPA 547	99 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A501985	02/20/15	02/21/15	

Certificate of Analysis

Sample ID: A5B1296-01
Sampled By: Matan Salmon
Sample Description: MW-1S // AB26897

Sample Date - Time: 02/13/15 - 11:45
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A501738	02/17/15	02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A501929

Prepared: 02/20/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A501929-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							02/20/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike (A501929-BS1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		123	70-130			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		102	70-130			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike Dup (A501929-BSD1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		121	70-130	1	20	02/21/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		105	70-130	2	20	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		110	70-130			02/21/15	

Matrix Spike (A501929-MS1), Source: A5B1118-06

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12	ND	121	65-135			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12	ND	106	65-135			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		109	70-130			02/20/15	

EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A501918-BLK1)

2,4,5-T	ND	1.0	ug/L							02/20/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							02/20/15	
2,4-D	ND	10	ug/L							02/20/15	
Bentazon	ND	2.0	ug/L							02/20/15	
Dalapon	ND	10	ug/L							02/20/15	
Dicamba	ND	1.5	ug/L							02/20/15	
Dinoseb	ND	2.0	ug/L							02/20/15	
Pentachlorophenol	ND	0.20	ug/L							02/20/15	
Picloram	ND	1.0	ug/L							02/20/15	
Surrogate: DCPAA	58			58		100	70-130			02/20/15	

Blank Spike (A501918-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130			02/20/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		97	70-130			02/20/15	
2,4-D	0.44	10	ug/L	0.40		110	70-130			02/20/15	
Bentazon	8.5	2.0	ug/L	8.0		107	70-130			02/20/15	
Dalapon	4.1	10	ug/L	4.0		102	70-130			02/20/15	
Dicamba	6.0	1.5	ug/L	6.0		101	70-130			02/20/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			02/20/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			02/20/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A501918-BS1)

Surrogate: DCPAA	57			58		98	70-130			02/20/15	
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Blank Spike Dup (A501918-BSD1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130	0	20	02/21/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80		100	70-130	3	20	02/21/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130	2	20	02/21/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130	0	20	02/21/15	
Dalapon	4.0	10	ug/L	4.0		100	70-130	2	20	02/21/15	
Dicamba	6.4	1.5	ug/L	6.0		106	70-130	5	20	02/21/15	
Dinoseb	0.80	2.0	ug/L	0.80		100	70-130	2	20	02/21/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		96	70-130	2	20	02/21/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130	0	20	02/21/15	
Surrogate: DCPAA	57			58		98	70-130			02/21/15	

Matrix Spike (A501918-MS1), Source: A5B1073-01

2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			02/20/15	
2,4,5-TP (Silvex)	0.79	1.0	ug/L	0.80	ND	99	70-130			02/20/15	
2,4-D	0.44	10	ug/L	0.40	ND	109	70-130			02/20/15	
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130			02/20/15	
Dalapon	4.1	10	ug/L	4.0	ND	103	70-130			02/20/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	101	70-130			02/20/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130			02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130			02/20/15	
Picloram	0.40	1.0	ug/L	0.40	ND	100	70-130			02/20/15	
Surrogate: DCPAA	58			58		100	70-130			02/20/15	

Matrix Spike Dup (A501918-MSD1), Source: A5B1073-01

2,4,5-T	4.0	1.0	ug/L	4.0	ND	100	70-130	2	20	02/20/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80	ND	100	70-130	1	20	02/20/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	2	20	02/20/15	
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130	0	20	02/20/15	
Dalapon	4.0	10	ug/L	4.0	ND	101	70-130	2	20	02/20/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	100	70-130	1	20	02/20/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	3	20	02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130	0	20	02/20/15	
Picloram	0.38	1.0	ug/L	0.40	ND	96	70-130	4	20	02/20/15	
Surrogate: DCPAA	57			58		99	70-130			02/20/15	

EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							02/23/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/23/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/23/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/23/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
2-Butanone	ND	5.0	ug/L							02/23/15	
2-Chlorotoluene	ND	0.50	ug/L							02/23/15	
2-Hexanone	ND	10	ug/L							02/23/15	
4-Chlorotoluene	ND	0.50	ug/L							02/23/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/23/15	
Acetone	ND	10	ug/L							02/23/15	
Benzene	ND	0.50	ug/L							02/23/15	
Bromobenzene	ND	0.50	ug/L							02/23/15	
Bromochloromethane	ND	0.50	ug/L							02/23/15	
Bromodichloromethane	ND	0.50	ug/L							02/23/15	
Bromoform	ND	0.50	ug/L							02/23/15	
Bromomethane	ND	0.50	ug/L							02/23/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/23/15	
Chlorobenzene	ND	0.50	ug/L							02/23/15	
Chloroethane	ND	0.50	ug/L							02/23/15	
Chloroform	ND	0.50	ug/L							02/23/15	
Chloromethane	ND	0.50	ug/L							02/23/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Dibromochloromethane	ND	0.50	ug/L							02/23/15	
Dibromomethane	ND	0.50	ug/L							02/23/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/23/15	
Dichloromethane	ND	0.50	ug/L							02/23/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/23/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/23/15	
Ethylbenzene	ND	0.50	ug/L							02/23/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/23/15	
Isopropylbenzene	ND	0.50	ug/L							02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

m,p-Xylenes	ND	0.50	ug/L							02/23/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/23/15	
Naphthalene	ND	0.50	ug/L							02/23/15	
n-Butylbenzene	ND	0.50	ug/L							02/23/15	
n-Propylbenzene	ND	0.50	ug/L							02/23/15	
o-Xylene	ND	0.50	ug/L							02/23/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/23/15	
sec-Butylbenzene	ND	0.50	ug/L							02/23/15	
Styrene	ND	0.50	ug/L							02/23/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/23/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/23/15	
tert-Butylbenzene	ND	0.50	ug/L							02/23/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/23/15	
Toluene	ND	0.50	ug/L							02/23/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/23/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/23/15	
Vinyl Chloride	ND	0.50	ug/L							02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.6			5.0		91	70-130			02/23/15	
Surrogate: Bromofluorobenzene	48			50		95	70-130			02/23/15	

Blank Spike (A501992-BS1)

1,1,1,2-Tetrachloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1,1-Trichloroethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,1,2,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130			02/23/15	
1,1,2-Trichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			02/23/15	
1,1-Dichloropropene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,2,3-Trichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2,4-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2,4-Trimethylbenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2-Dichloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,2-Dichloropropane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3,5-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
1,3-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3-Dichloropropane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,4-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
2,2-Dichloropropane	9.5	0.50	ug/L	10		95	70-130			02/23/15	
2-Butanone	8.4	5.0	ug/L	10		84	70-130			02/23/15	
2-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
2-Hexanone	8.7	10	ug/L	10		87	70-130			02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

4-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
4-Methyl-2-pentanone	8.5	5.0	ug/L	10		85	70-130			02/23/15	
Acetone	8.2	10	ug/L	10		82	70-130			02/23/15	
Benzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Bromobenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Bromochloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromodichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Bromoform	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromomethane	14	0.50	ug/L	10		138	70-130			02/23/15	BS High
Carbon Tetrachloride	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Chloroethane	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chloroform	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Chloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
cis-1,2-Dichloroethene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
cis-1,3-Dichloropropene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Dibromochloromethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dibromomethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dichlorodifluoromethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Dichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Di-isopropyl ether (DIPE)	8.9	3.0	ug/L	10		89	70-130			02/23/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Ethylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Hexachlorobutadiene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
m,p-Xylenes	19	0.50	ug/L	20		93	70-130			02/23/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		93	70-130			02/23/15	
Naphthalene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
n-Butylbenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
n-Propylbenzene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
o-Xylene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
p-Isopropyltoluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Styrene	10	0.50	ug/L	10		100	70-130			02/23/15	
tert-Amyl Methyl Ether (TAME)	9.4	3.0	ug/L	10		94	70-130			02/23/15	
tert-Butyl alcohol (TBA)	7.3	2.0	ug/L	10		73	70-130			02/23/15	
tert-Butylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Tetrachloroethene (PCE)	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Toluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
trans-1,2-Dichloroethene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
trans-1,3-Dichloropropene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Trichloroethene (TCE)	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Trichlorofluoromethane	9.0	5.0	ug/L	10		90	70-130			02/23/15	
Vinyl Chloride	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.5			5.0		90	70-130			02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

Surrogate: Bromofluorobenzene 46 50 92 70-130 02/23/15

Blank Spike Dup (A501992-BSD1)

1,1,1,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130	7	30	02/23/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130	10	30	02/23/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		100	70-130	8	30	02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		102	70-130	10	30	02/23/15	
1,1,2-Trichloroethane	9.9	0.50	ug/L	10		99	70-130	9	30	02/23/15	
1,1-Dichloroethane	10	0.50	ug/L	10		101	70-130	10	30	02/23/15	
1,1-Dichloroethene	11	0.50	ug/L	10		109	70-130	10	30	02/23/15	
1,1-Dichloropropene	10	0.50	ug/L	10		104	70-130	10	30	02/23/15	
1,2,3-Trichlorobenzene	9.5	0.50	ug/L	10		95	70-130	4	30	02/23/15	
1,2,4-Trichlorobenzene	9.5	0.50	ug/L	10		95	70-130	6	30	02/23/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		102	70-130	12	30	02/23/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		101	70-130	10	30	02/23/15	
1,2-Dichloroethane	10	0.50	ug/L	10		101	70-130	9	30	02/23/15	
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	10	30	02/23/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		106	70-130	11	30	02/23/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	11	30	02/23/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	8	30	02/23/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	12	30	02/23/15	
2,2-Dichloropropane	10	0.50	ug/L	10		105	70-130	10	30	02/23/15	
2-Butanone	9.5	5.0	ug/L	10		95	70-130	12	30	02/23/15	
2-Chlorotoluene	10	0.50	ug/L	10		104	70-130	12	30	02/23/15	
2-Hexanone	9.7	10	ug/L	10		97	70-130	11	30	02/23/15	
4-Chlorotoluene	10	0.50	ug/L	10		104	70-130	12	30	02/23/15	
4-Methyl-2-pentanone	9.3	5.0	ug/L	10		93	70-130	9	30	02/23/15	
Acetone	9.4	10	ug/L	10		94	70-130	14	30	02/23/15	
Benzene	10	0.50	ug/L	10		100	70-130	10	30	02/23/15	
Bromobenzene	10	0.50	ug/L	10		102	70-130	10	30	02/23/15	
Bromochloromethane	9.7	0.50	ug/L	10		97	70-130	10	30	02/23/15	
Bromodichloromethane	9.9	0.50	ug/L	10		99	70-130	9	30	02/23/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130	5	30	02/23/15	
Bromomethane	15	0.50	ug/L	10		146	70-130	6	30	02/23/15	BS High
Carbon Tetrachloride	11	0.50	ug/L	10		106	70-130	10	30	02/23/15	
Chlorobenzene	10	0.50	ug/L	10		100	70-130	9	30	02/23/15	
Chloroethane	11	0.50	ug/L	10		108	70-130	12	30	02/23/15	
Chloroform	10	0.50	ug/L	10		100	70-130	10	30	02/23/15	
Chloromethane	9.7	0.50	ug/L	10		97	70-130	10	30	02/23/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130	11	30	02/23/15	
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	9	30	02/23/15	
Dibromochloromethane	9.8	0.50	ug/L	10		98	70-130	8	30	02/23/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130	9	30	02/23/15	
Dichlorodifluoromethane	10	0.50	ug/L	10		104	70-130	10	30	02/23/15	
Dichloromethane	10	0.50	ug/L	10		101	70-130	11	30	02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A501992-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	6	30	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130	7	30	02/23/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	11	30	02/23/15	
Hexachlorobutadiene	10	0.50	ug/L	10		103	70-130	10	30	02/23/15	
Isopropylbenzene	11	0.50	ug/L	10		107	70-130	11	30	02/23/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130	11	30	02/23/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		102	70-130	9	30	02/23/15	
Naphthalene	7.9	0.50	ug/L	10		79	70-130	14	30	02/23/15	
n-Butylbenzene	10	0.50	ug/L	10		102	70-130	11	30	02/23/15	
n-Propylbenzene	11	0.50	ug/L	10		106	70-130	12	30	02/23/15	
o-Xylene	10	0.50	ug/L	10		104	70-130	11	30	02/23/15	
p-Isopropyltoluene	10	0.50	ug/L	10		104	70-130	13	30	02/23/15	
sec-Butylbenzene	11	0.50	ug/L	10		106	70-130	13	30	02/23/15	
Styrene	11	0.50	ug/L	10		114	70-130	13	30	02/23/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		102	70-130	8	30	02/23/15	
tert-Butyl alcohol (TBA)	8.4	2.0	ug/L	10		84	70-130	14	30	02/23/15	
tert-Butylbenzene	10	0.50	ug/L	10		105	70-130	12	30	02/23/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	9	30	02/23/15	
Toluene	10	0.50	ug/L	10		100	70-130	9	30	02/23/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		105	70-130	11	30	02/23/15	
trans-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	8	30	02/23/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130	10	30	02/23/15	
Trichlorofluoromethane	10	5.0	ug/L	10		100	70-130	11	30	02/23/15	
Vinyl Chloride	9.7	0.50	ug/L	10		97	70-130	9	30	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.8			5.0		97	70-130			02/23/15	
Surrogate: Bromofluorobenzene	49			50		97	70-130			02/23/15	

EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Alachlor	ND	1.0	ug/L							02/24/15	
Atrazine	ND	0.50	ug/L							02/24/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/24/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/24/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/24/15	
Bromacil	ND	10	ug/L							02/24/15	
Butachlor	ND	0.38	ug/L							02/24/15	
Diazinon	ND	0.25	ug/L							02/24/15	
Dimethoate	ND	10	ug/L							02/24/15	
Metolachlor	ND	0.50	ug/L							02/24/15	
Metribuzin	ND	0.50	ug/L							02/24/15	
Molinate	ND	2.0	ug/L							02/24/15	
Prometryn	ND	2.0	ug/L							02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Propachlor	ND	0.50	ug/L							02/24/15	
Simazine	ND	1.0	ug/L							02/24/15	
Thiobencarb	ND	1.0	ug/L							02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.5			5.0		110	70-130			02/24/15	

Blank Spike (A502051-BS1)

Alachlor	0.87	1.0	ug/L	1.0		87	70-130			02/24/15	
Atrazine	0.43	0.50	ug/L	0.50		87	70-130			02/24/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10		82	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		91	70-130			02/24/15	
Bromacil	0.96	10	ug/L	1.0		96	70-130			02/24/15	
Butachlor	0.87	0.38	ug/L	1.0		87	70-130			02/24/15	
Diazinon	0.16	0.25	ug/L	0.20		80	70-130			02/24/15	
Dimethoate	0.84	10	ug/L	1.0		84	70-130			02/24/15	
Metolachlor	1.8	0.50	ug/L	2.0		91	70-130			02/24/15	
Metribuzin	0.82	0.50	ug/L	1.0		82	70-130			02/24/15	
Molinate	0.91	2.0	ug/L	1.0		91	70-130			02/24/15	
Prometryn	1.5	2.0	ug/L	2.0		76	70-130			02/24/15	
Propachlor	0.46	0.50	ug/L	0.50		93	70-130			02/24/15	
Simazine	0.31	1.0	ug/L	0.35		88	70-130			02/24/15	
Thiobencarb	0.44	1.0	ug/L	0.50		87	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.4			5.0		108	70-130			02/24/15	

Blank Spike Dup (A502051-BS1)

Alachlor	0.90	1.0	ug/L	1.0		90	70-130	3	30	02/24/15	
Atrazine	0.47	0.50	ug/L	0.50		94	70-130	8	30	02/24/15	
Benzo(a)pyrene	0.085	0.10	ug/L	0.10		85	70-130	4	30	02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130	1	30	02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		94	70-130	3	30	02/24/15	
Bromacil	1.0	10	ug/L	1.0		103	70-130	7	30	02/24/15	
Butachlor	0.90	0.38	ug/L	1.0		90	70-130	3	30	02/24/15	
Diazinon	0.17	0.25	ug/L	0.20		83	70-130	4	30	02/24/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130	5	30	02/24/15	
Metolachlor	1.9	0.50	ug/L	2.0		96	70-130	5	30	02/24/15	
Metribuzin	0.93	0.50	ug/L	1.0		93	70-130	13	30	02/24/15	
Molinate	1.0	2.0	ug/L	1.0		105	70-130	14	30	02/24/15	
Prometryn	1.8	2.0	ug/L	2.0		92	70-130	19	30	02/24/15	
Propachlor	0.50	0.50	ug/L	0.50		100	70-130	7	30	02/24/15	
Simazine	0.34	1.0	ug/L	0.35		96	70-130	9	30	02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	8	30	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.8			5.0		116	70-130			02/24/15	

Matrix Spike (A502051-MS1), Source: A5B1296-01

Alachlor	0.94	1.0	ug/L	0.97	ND	98	70-130			02/24/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502051-MS1), Source: A5B1296-01

Atrazine	0.47	0.50	ug/L	0.48	ND	98	70-130			02/24/15	
Benzo(a)pyrene	0.092	0.10	ug/L	0.097	ND	95	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	2.0	3.0	ug/L	1.9	ND	103	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.4	ND	99	70-130			02/24/15	
Bromacil	1.1	10	ug/L	0.97	ND	114	70-130			02/24/15	
Butachlor	0.94	0.38	ug/L	0.97	ND	98	70-130			02/24/15	
Diazinon	0.18	0.25	ug/L	0.19	ND	94	70-130			02/24/15	
Dimethoate	0.85	10	ug/L	0.97	ND	88	70-130			02/24/15	
Metolachlor	1.9	0.50	ug/L	1.9	ND	99	70-130			02/24/15	
Metribuzin	0.92	0.50	ug/L	0.97	ND	95	70-130			02/24/15	
Molinate	0.95	2.0	ug/L	0.97	ND	98	70-130			02/24/15	
Prometryn	2.0	2.0	ug/L	1.9	ND	105	70-130			02/24/15	
Propachlor	0.49	0.50	ug/L	0.48	ND	102	70-130			02/24/15	
Simazine	0.35	1.0	ug/L	0.34	ND	104	70-130			02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.48	ND	96	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.9			4.8		101	70-130			02/24/15	

EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502038-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							02/24/15	
Aldicarb	ND	3.0	ug/L							02/24/15	
Aldicarb Sulfone	ND	2.0	ug/L							02/24/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							02/24/15	
Carbaryl	ND	5.0	ug/L							02/24/15	
Carbofuran	ND	5.0	ug/L							02/24/15	
Methiocarb	ND	2.0	ug/L							02/24/15	
Methomyl	ND	2.0	ug/L							02/24/15	
Oxamyl	ND	20	ug/L							02/24/15	
Propoxur	ND	2.0	ug/L							02/24/15	

Blank Spike (A502038-BS1)

3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120			02/24/15	
Aldicarb	4.6	3.0	ug/L	4.0		114	80-120			02/24/15	
Aldicarb Sulfone	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120			02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		97	80-120			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0		98	80-120			02/24/15	
Methiocarb	3.9	2.0	ug/L	4.0		97	80-120			02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120			02/24/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502038-BSD1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120	2	20	02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0		113	80-120	1	20	02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120	1	20	02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		108	80-120	0	20	02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		96	80-120	1	20	02/24/15	
Carbofuran	3.8	5.0	ug/L	4.0		94	80-120	4	20	02/24/15	
Methiocarb	4.0	2.0	ug/L	4.0		99	80-120	2	20	02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120	0	20	02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120	0	20	02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120	0	20	02/24/15	

Matrix Spike (A502038-MS1), Source: A5B1073-01

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0	ND	98	65-135			02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	113	65-135			02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0	ND	108	65-135			02/24/15	
Carbaryl	3.7	5.0	ug/L	4.0	ND	94	65-135			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	97	65-135			02/24/15	
Methiocarb	3.8	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Methomyl	3.7	2.0	ug/L	4.0	ND	93	65-135			02/24/15	
Oxamyl	3.4	20	ug/L	4.0	ND	85	65-135			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	98	65-135			02/24/15	

EPA 547 - Quality Control

Batch: A502061

Prepared: 02/24/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502061-BLK1)

Glyphosate	ND	25	ug/L							02/24/15	
Surrogate: AMPA	98			100		98	70-130			02/24/15	

Blank Spike (A502061-BS1)

Glyphosate	110	25	ug/L	100		107	70-130			02/24/15	
Surrogate: AMPA	100			100		104	70-130			02/24/15	

Blank Spike Dup (A502061-BSD1)

Glyphosate	110	25	ug/L	100		108	70-130	1	30	02/24/15	
Surrogate: AMPA	100			100		101	70-130			02/24/15	

Matrix Spike (A502061-MS1), Source: A5B1841-01

Glyphosate	110	25	ug/L	100	ND	112	70-130			02/24/15	
Surrogate: AMPA	100			100		103	70-130			02/24/15	

Matrix Spike Dup (A502061-MSD1), Source: A5B1841-01

Glyphosate	110	25	ug/L	100	ND	106	70-130	6	30	02/24/15	
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A5B1296

Cal Am

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502061
Prep Method: EPA 547

Prepared: 02/24/2015
Analyst: WPR

Matrix Spike Dup (A502061-MSD1), Source: A5B1841-01

Surrogate: AMPA	110			100		104	70-130			02/24/15	
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EPA 548.1 - Quality Control

Batch: A501985
Prep Method: EPA 548.1

Prepared: 02/20/2015
Analyst: KHH

Blank (A501985-BLK1)

Endothall	ND	45	ug/L							02/21/15	
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Blank Spike (A501985-BS1)

Endothall	16	45	ug/L	20		81	54-105			02/21/15	
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Blank Spike Dup (A501985-BSD1)

Endothall	17	45	ug/L	20		87	54-105	8	46	02/21/15	
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Matrix Spike (A501985-MS1), Source: A5B1500-01

Endothall	4.4	45	ug/L	20	ND	22	54-105			02/21/15	MS1.0 Low
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EPA 549.2 - Quality Control

Batch: A501738
Prep Method: EPA 549.2

Prepared: 02/17/2015
Analyst: PYA

Blank (A501738-BLK1)

Diquat	ND	4.0	ug/L							02/24/15	
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Blank Spike (A501738-BS1)

Diquat	3.7	4.0	ug/L	4.0		93	70-130			02/24/15	
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Blank Spike Dup (A501738-BSD1)

Diquat	3.6	4.0	ug/L	4.0		89	70-130	5	30	02/24/15	
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Matrix Spike (A501738-MS1), Source: A5B1073-01

Diquat	3.6	4.0	ug/L	4.0	ND	89	70-130			02/24/15	
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Matrix Spike (A501738-MS2), Source: A5B1073-02

Diquat	3.6	4.0	ug/L	4.0	ND	90	70-130			02/24/15	
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Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5B1296



02172015



Monte6227

Turnaround: Standard

Due Date: 3/3/2015



Monterey Bay Analytical



Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed: _____



*Required Fields

Temp: 5.0

Company/Client Name*: Monterey Bay Analytical Services	Report Attention*: Mason Weidner-Holland Additional cc's: David Holland	Invoice To*: David Holland PO#:	Phone*: 831-375-6227	Fax: 831-641-0734
Address*: 4 Justin Court, Suite D			City*: Monterey	State*: CA
Project: Cal Am		Project #:	How would you like to receive your completed results?*	
Reporting Options: <input type="checkbox"/> Trace (J-Flag) <input type="checkbox"/> Swamp <input type="checkbox"/> EDD Type: _____		Regulatory Carbon Copies <input type="checkbox"/> SWRCB (Drinking Water) <input type="checkbox"/> Merced Co <input type="checkbox"/> Fresno Co <input type="checkbox"/> Madera Co <input type="checkbox"/> Tulare Co <input type="checkbox"/> Other: _____	Regulatory Compliance <input type="checkbox"/> EDT to California SWRCB (Drinking Water) System Number*: _____ <input type="checkbox"/> Geotracker #: _____	
Sampler Name (Printed/Signature)*: Matan Salmon		Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid		

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
1	MW-15 MW-15	2/13/15	1145	GW	AB26897	X	X	X	X	X	X	X	X
					Please include excell report								
					Seawater								

Relinquished by: (Signature and Printed Name) D. Holland	Company MBAS	Date 2/16/15	Time 1600	Received by: (Signature and Printed Name)	Company
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Received for Lab By: (Signature and Printed Name) 		Date 2/17/15	Time 1000	Payment Received at Delivery:	Check / Cash
Shipping Method: <input checked="" type="checkbox"/> ONTRAC <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> WALK-IN <input type="checkbox"/> FED EX	Courier: _____	Amount:	PIA#:	Custody Seal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Chilling Process Begun: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		Yes No NA		Were correct containers and preservatives received for the tests requested?		Yes No NA					
		If samples were taken today, is there evidence that chilling has begun?		Yes No <u>NA</u>		Were there bubbles in the VOA vials? (Volatiles Only)		<u>Yes</u> <u>No</u> NA				
	Did all bottles arrive unbroken and intact?		<u>Yes</u> No		Was a sufficient amount of sample received?		<u>Yes</u> No					
	Did all bottle labels agree with COC?		<u>Yes</u> No		Do samples have a hold time <72 hours?		Yes <u>No</u>					
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes No <u>NA</u>		Was PM notified of discrepancies? PM: _____ By/Time: _____		Yes No <u>NA</u>					
Bottles Received <small>"—" means preservation/chlorine checks are either N/A or are performed in the lab</small>	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?								
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$		—	—								
	None (P) ^{White Cap}		—	—								
	Cr6 (P) ^{Br Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW		pH > 8	Y N								
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW		pH 9-9.5	Y N								
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW		pH 9.3-9.7	Y N								
	HNO_3 (P) ^{Red Cap}		—	—								
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}		pH < 2	Y N								
	NaOH (P) ^{Green Cap}		Cl, pH >10	Y N								
	NaOH + ZnAc (P)		pH > 9	Y N								
	Dissolved Oxygen 300ml (g)		—	—								
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—								
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel		—	—								
	$\text{Na}_2\text{O}_3\text{S}+\text{HCl}$ (AG) ^{Lt. Pink Label} 525		—	—	2C							
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549		—	—	1C							
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524		—	—	2A, 4U							
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505		—	—								
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531		pH < 3	<u>Y</u> N	1U							
	NH_4Cl (AG) ^{Purple Label} 552		—	—								
	EDA (AG) ^{Brown Label} DBPs		—	—								
	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624		—	—	3U							
	Buffer pH 4 (CG)		—	—								
	None (CG)		—	—								
H_3PO_4 (CG) ^{Salmon Label}		—	—									
Other:												
Asbestos 1Liter Plastic w/ Foil		—	—									
Low Level Hg / Metals Double Baggie		—	—									
Bottled Water		—	—									
Clear Glass Jar: 250 / 500 / 1 Liter		—	—									
Soil Tube Brass / Steel / Plastic		—	—									
Tedlar Bag / Plastic Bag		—	—									
Split	Container		Preservative		Date/Time/Initials		Container		Preservative		Date/Time/Initials	
	S	P					S	P				
	S	P					S	P				
Comments												

Labeled by: 86 @ 1101

Labels checked by: MW @ 11:24

RUSH Paged by: @

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested			
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter dissolved metals; diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance MBAS Project Manager: David Holland <i>Bottle for dissolved metals filtered in the field using 0.45-µm syringe to filter</i>

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com, susan.jacobson@amwater.com, <i>soke@geoscience-water.com, bvillalobos@geoscience-water.com, nreynolds@geoscience-water.com</i>		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well <input checked="" type="checkbox"/> Soil [] Sludge [] Groundwater <input checked="" type="checkbox"/>		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size	
26897		MW-15 (Monitoring)	2-13-15	11:45	7.1									

Field Parameters:

Temp: 18.8°C

pH: 7.15

Sp Cond: 39,747 µS/cm

Turb: 0.28

	Printed Name	Signature	Date	Time	Comment
Sampled by:	<i>Matan Salmon</i> Nathan Reynolds / GEOSCIENCE	<i>[Signature]</i>			Is sample for regulatory purposes? Yes / No DO = 4.85 mg/L @ 9.8°C 2/13/15
Relinquished by:	<i>Matan Salmon (Geoscience)</i>	<i>[Signature]</i>	2/13/15	14:11	
Received by:					
Relinquished by:					
Received by:	TERREN CHANG	<i>[Signature]</i>	2/13/15	14:11	

<input type="checkbox"/> Payment received	Check #	Amount:	Receipt #	Date:
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Constituent	Units	Method Reporting Limit	Method
Manganese, Dissolved	µg/L	20	EPA 200.7 / EPA 200.8
Manganese, Total	µg/L	20	EPA 200.7 / EPA 200.8
Mass Balance, Total & Dissolved	meq/L	-	Calculation
MBAS	mg/L	0.050	SM 5540 C / EPA 200.8
Nitrogen, Nitrate as NO ₃	mg/L	1	EPA 353.2 / EPA 300.0
Nitrogen, Nitrite, Dissolved	mg/L as N	1	SM 4500 NO ₂ B
Nitrogen, NO ₂ + NO ₃	mg/L as N	1	EPA 300.0
Nitrogen, Ammonia, Dissolved	mg/L as N	0.1	SM 4500 NH ₃ H / EPA 350.1
Nitrogen, Ammonia + Organic, Diss. (TKN)	mg/L as N	0.1	EPA 351.2
Phosphorus, Dissolved	mg/L as P	0.01	EPA 365.3
Phosphorus, ortho, Dissolved	mg/L as P	0.01	EPA 365.3
✓ Potassium, Dissolved	mg/L	1	EPA 200.7
Silica, Dissolved	mg/L	1	SM 4500 SiE
✓ Sodium, Dissolved	mg/L	1	EPA 200.7
Strontium, Dissolved	mg/L	0.1	EPA 200.7 / EPA 200.8
Sulfate as SO ₄ , dissolved	mg/L	0.5	EPA 300.0
Zinc, Total	µg/L	50	EPA 200.7
Volatile Organic Compounds			
VOCs plus Oxygenates (MTBE)	µg/L	varies	EPA 524.2
EPA Organic Methods			
EDB and DBCP	µg/L	varies	EPA 504.1
Chlorinated Pesticides & PCB's as DCP	µg/L	varies	EPA 508
Chlorinated Acid Herbicides	µg/L	varies	EPA 515
Nitrogen & Phosphorus Pesticides DEHP, DEHA, Benzo(a)Pyrene	µg/L	varies	EPA 525
Carbamates	µg/L	varies	EPA 531.1
Glyphosate	µg/L	varies	EPA 547
Endothall	µg/L	varies	EPA 548.1
Diquat	µg/L	varies	EPA 549.1
Dioxin (2,3,7,8 TCDD)	µg/L	varies	EPA 1613

Weck

Total and dissolved iron and manganese will be measured by field filtering samples directly into an acidified container immediately upon collection. A second sample will be collected directly into an acidified container without filtering. This method will provide a reliable and accurate means to determine the amount of dissolved and particulate iron and manganese, which has implications for desalting plant design.

**Table 3-3. Water Quality Analyses for Quarterly Sampling
Monitoring Wells and Test Slant Well**

Constituent	Units	Method Reporting Limit	Method
Physical Properties			
✓ Color (Lab)	Color Units	3.0	SM 2120B/EPA 110.2
Oxidation-Reduction Potential (Field)	mV	-	Field Meter - Myron L 6PII
✓ pH (Lab)	Units	0.10	SM 4500 H+B
✓ pH (Field)	Units	-	Field Meter - YSI Pro Plus
✓ Turbidity (Laboratory)	NTU	0.20	EPA 180.1/SM 2130B
✓ Turbidity (Field)	NTU	-	Field Meter - Hach 2100P
✓ Temperature (Field)	°C	-	Field Meter - YSI Pro Plus
✓ Dissolved Oxygen (Field)	mg/L	-	Field Meter - YSI Pro Plus
Silt Density Index (Field)	-	-	ASTM D4189-07
Threshold Odor Number (Lab)	T.O.N.	1.0	EPA 140.1/SM 2150
Total Dissolved Solids (Lab)	mg/L	10	SM 2540 C
Specific Conductance (Lab)	µmhos/cm	1	SM 2510 B
Specific Conductance (Field)	µS/cm	-	Field Meter - YSI Pro Plus
General Minerals			
Total Cations	meq/L	-	Calculation
Total Anions	meq/L	-	Calculation
✓ Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
✓ Bicarbonate Alkalinity as HCO ₃	mg/L	3	SM 2320 B
✓ Carbonate Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
✓ Hydroxide Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
✓ Total Hardness as CaCO ₃	mg/L	3	Calculation
Aluminum	µg/L	1	EPA 200.7
Arsenic	µg/L	1	EPA 200.7 / EPA 200.8
Barium, Dissolved	µg/L	0.01	EPA 200.7
Boron, Dissolved	µg/L	0.5	EPA 200.8
Bromide, Dissolved	mg/L	0.1	EPA 326.0
✓ Calcium, Dissolved	mg/L	1	EPA 200.7
Chloride, Dissolved	mg/L	1	EPA 300.0
Copper, Total	µg/L	50	EPA 200.7
Fluoride, Dissolved	mg/L	0.10	EPA 300.0 / SM 4500 FC
Iodide, Dissolved	mg/L	0.1	USGS I-2371 / EPA 9056A
Iron, Dissolved	µg/L	100	EPA 200.7 / EPA 200.8
Iron, Total	µg/L	100	EPA 200.7 / EPA 200.8
Lithium	µg/L	10	EPA 200.7 / EPA 6010B
✓ Magnesium, Dissolved	mg/L	1	EPA 200.7

Ca1Am - ^{Geoscience} MW

26897

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

• 250 mL vacuum filtered 0.45 μ ^{pre fused} membrane filter for dissolved colorimetric orthophosphate

• 250 mL " " for dissolved total P + H₂SO₄ to pH <2

• 500 mL " " for dissolved TKN + NH₃ elect + H₂SO₄ + Na₂S₂O₃



MBAS

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ELAP Certification Number: 2385

California American Water
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ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Page 1 of 2

Wednesday, March 18, 2015

Lab Number: AB26918

Collection Date/Time: 2/14/2015 10:10 Sample Collector: SALMON M
Submittal Date/Time: 2/14/2015 12:35 Sample ID

Sample Description: Geoscience MW-1M (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	112		2	2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	41		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	61	J	125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	137		10	2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	2.36		0.05	2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	46		10	2/14/2015	TC
Calcium	EPA200.7	mg/L	746		5	3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	732		5	3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		2/21/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	16037		100	2/14/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		2/18/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	Not Detected		3	2/14/2015	DH
Copper, Total	EPA200.8	µg/L	61		50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		2/21/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		2/24/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		2/20/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		0.5	2/14/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E		2/20/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6327		10	3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		10	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	12		10	2/27/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	2/25/2015	TC
Lithium	EPA200.8	µg/L	201		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	1080		5	3/6/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	1100		10	3/6/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	18		10	2/27/2015	MW
Manganese, Total	EPA200.7	µg/L	19		10	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/16/2015	HM
Nitrate as NO3	EPA300.0	mg/L	2		5	2/14/2015	DH
Nitrate+Nitrite as N	EPA300.0	mg/L	1.1		0.5	2/14/2015	DH
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	0.6		0.5	2/14/2015	TC
Odor Threshold at 60 C	SM2150B	TON	1		1	2/14/2015	DH
o-Phosphate-P	Hach 8048	mg/L	0.07		0.03	2/15/2015	DH
pH (Field Test)	SM4500-H+B	pH	7.02			2/14/2015	MS

mg/L : Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

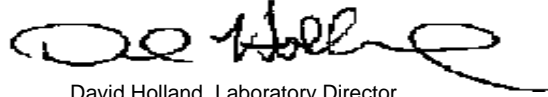
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

pH (Laboratory)	SM4500-H+B	pH (H)	7.0		0.1	2/14/2015	DH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		2/21/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.09		0.03	2/25/2015	LRH
Potassium	EPA200.7	mg/L	201		0.5	2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	197		0.1	2/27/2015	MW
QC Ratio TDS/SEC	Calculation		0.70			2/18/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		2/24/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	22		0.5	2/27/2015	MW
Sodium	EPA200.7	mg/L	8011		5	3/6/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	8320		5	3/6/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	43960		1	2/16/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	43788		1	2/14/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	8689		62	3/4/2015	SM
Sulfate	EPA300.0	mg/L	2070		100	2/14/2015	DH
Temperature (Field)	SM2550	° C	17.2			2/14/2015	MS
Total Diss. Solids	SM2540C	mg/L	30900		10	2/16/2015	HM
Turbidity	EPA180.1	NTU	0.10		0.05	2/14/2015	DH
Turbidity (Field)	EPA180.1	NTU	0.41		0.05	2/14/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E		2/23/2015	BSK
Zinc, Total	EPA200.8	µg/L	Not Detected		250	3/4/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26918 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	8011	0.04350	348.48
Potassium	201	0.02558	5.14
Calcium	746	0.04990	37.23
Magnesium	1080	0.08229	88.87
NH3-N	0	0.07143	0.00
		SUM	479.72

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	112	0.02000	2.24
Sulfate	2070	0.02082	43.10
Chloride	16037	0.02821	452.40
Nitrate-Nitrogen	0.5	0.07138	0.04
Phosphate-P	0.1	0.01031	0.00
Bromide	46.0	0.01252	0.58
		SUM	498.35

ANION-CATION BALANCE **-2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	43960	
Cation Sum X 100	47972	109%
Anion Sum X 100	49835	113%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

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Monterey CA, 93940**

SAMPLE ID **26918 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	8318	0.04350	361.83
Potassium	197	0.02558	5.04
Calcium	732	0.04990	36.53
Magnesium	1100	0.08229	90.52
NH3-N	0	0.07143	0.00
		SUM	493.92

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	112	0.02000	2.24
Sulfate	2070	0.02082	43.10
Chloride	16037	0.02821	452.40
Nitrate-Nitrogen	0.5	0.07138	0.04
Phosphate-P	0.1	0.01031	0.00
Bromide	46.0	0.01252	0.58
		SUM	498.35

ANION-CATION BALANCE **0** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	43960	
Cation Sum X 100	49392	112%
Anion Sum X 100	49835	113%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample

AB27199 D

25X Dilution

Date Analyzed

Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Orthophosphate QC Summary (Hach 8048)

Date: 2/15/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.000	---	< 0.03	16:46
LCSL	0.030	0.023	76.7	50-150	16:46
ICV	1.00	0.99	99	90-110	16:47
QCS	1.00	1.01	101	80-120	16:47
CCV	1.00	1.01	101	80-120	17:02
CCVB	0.00	0.00		< 0.03	17:03

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26920	0.03	0.20	0.23	0.21	100	90	9.1	70-130	10	17:01	17:02

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/16/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.023	---	<0.05
ICVL	0.050	0.053	106	80-120
ICV	0.250	0.229	91.6	80-120

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26920	0.028	0.250	0.279	0.269	100.4	96.4	3.6	80/120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26920	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Phosphorus QC Summary (Hach 8190)

Date: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	16:25
LCSL	0.03	0.03	100	50-150	16:25
ICV	1.00	0.96	96	90-110	16:25
QCS	1.00	0.96	96	80-120	16:25
CCVB	---	<0.03	---	< 0.03	17:23
CCV	1.00	0.97	97	80-120	17:23

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26918	0.09	1.00	1.03	1.03	94	94	0.0	70-130	10	16:25	16:25

Note: The RPD % of the spiked sample AB27178 was over the acceptance criteria. Data was accepted due the recovery percents of LCSL, ICV, QCS, and Matrix Spikes.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 2/25/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.090	---	<0.5
LCS	5.0	4.9	98	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26892	0.5	5.0	5.5	5.6	100	102	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26942	686	671	2.2	5	10:03

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150227

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	0.98	97.7%	0.96	96.1%	1.7%	1	0.94	93.8%	1	0.93	92.5%
B 249.772	0.05-5ppm	0.01	0.01	1.04	103.6%	1.01	101.3%	2.3%	1	0.99	98.7%	1	1.00	99.8%
Ca 317.933	50-300ppm	-3.43	-3.51	47.7	95.4%	46.8	93.5%	1.9%	50	46.7	93.3%	50	45.77	91.5%
Ca 396.847	0.5-50ppm	-0.51	-0.65	51.9	103.8%	51.0	102.1%	1.7%	50	49.7	99.5%	50	49.76	99.5%
Cu 324.754	10ppb-100ppm	-8.30	-10.83	1070	107.0%	1050	105.0%	1.9%	1000	1028	102.8%	1000	1034.5	103.5%
Cu 327.394	10ppb-100ppm	-6.44	-7.99	1086	108.6%	1059	105.9%	2.5%	1000	1036	103.6%	1000	1057.6	105.8%
Fe 238.204	10ppb-100ppm	1.81	3.14	950	95.0%	943	94.3%	0.8%	1000	925	92.5%	1000	931.19	93.1%
Fe 259.940	10ppb-100ppm	-4.29	-1.60	1013	101.3%	993	99.3%	2.0%	1000	974	97.4%	1000	994.75	99.5%
K 766.491	0.5-750ppm	0.09	0.08	10.9	109.3%	10.5	105.0%	4.1%	10	10.6	106.3%	10	10.52	105.2%
Mg 202.583	50-1000ppm	-0.31	-0.45	52.4	104.9%	52.0	104.0%	0.8%	50	51.0	102.0%	50	51.10	102.2%
Mg 279.071	0.5-50ppm	0.01	-0.08	52.6	105.1%	51.5	103.1%	2.0%	50	51.1	102.2%	50	51.03	102.1%
Mn 257.611	10ppb-11ppm	-9.11	-11.09	985	98.5%	967	96.7%	1.8%	1000	955	95.5%	1000	969.08	96.9%
Mn 260.561	10ppb-11ppm	-8.74	-12.88	986	98.6%	971	97.1%	1.5%	1000	960	96.0%	1000	975.47	97.5%
Na 568.821	50-1000ppm	5.80	5.26	58.4	116.8%	58.1	116.2%	0.5%	50	55.6	111.3%	50	57.37	114.7%
Na 589.592	0.5-50ppm	-0.41	-0.48	55.1	110.1%	54.7	109.4%	0.6%	50	53.4	106.8%	50	53.68	107.4%
Si 251.611	0.5-200ppm	0.14	-0.10	50.0	100.0%	49.0	97.9%	2.1%	50	48.5	97.0%	50	49.52	99.0%
Si 252.411	0.5-200ppm	0.20	-0.02	49.5	99.0%	48.3	96.7%	2.4%	50	48.3	96.6%	50	49.00	98.0%
Zn 213.857	10ppb-50ppm	-19.01	14.37	960	96.0%	952	95.2%	0.8%	1000	939	93.9%	1000	935.71	93.6%

Matrix Spikes

Sample ID AB26944

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.07	1.03	95.7%	1.02	94.1%	1.5%	1	0.95	95.5%	1.8%	0.00
B 249.772	0.07	1.10	102.9%	1.09	102.1%	0.7%	1	1.03	102.9%	4.1%	0.00
Ca 317.933	46.7	93.8	94.0%	93.5	93.5%	0.3%	50	47.8	95.5%	2.4%	-3.45
Ca 396.847	51.6	95.4	87.6%	94.8	86.5%	0.6%	50	51.8	103.7%	4.1%	-0.56
Cu 324.754	-9	1073	108.1%	1054	106.3%	1.8%	1000	1084	108.4%	5.3%	-8.91
Cu 327.394	-10	1081	109.1%	1069	107.9%	1.1%	1000	1092	109.2%	5.4%	-6.63
Fe 238.204	5	940	93.5%	928	92.3%	1.2%	1000	947	94.7%	2.3%	3.25
Fe 259.940	3	1002	99.9%	1003	100.1%	0.1%	1000	1011	101.1%	3.8%	-2.41
K 766.491	2.8	13.6	108.3%	13.4	105.7%	1.9%	10	11.2	112.0%	5.2%	0.07
Mg 202.581	30.6	83.7	106.2%	82.8	104.3%	1.2%	50	54.0	107.9%	5.6%	-0.43
Mg 279.077	30.1	81.4	102.6%	80.5	101.0%	1.0%	50	53.1	106.3%	4.0%	0.00
Mn 257.611	-11	963	97.3%	960	97.0%	0.3%	1000	981	98.1%	2.7%	-10.36
Mn 260.561	-9	989	99.9%	980	98.9%	1.0%	1000	1004	100.4%	4.4%	-10.04
Na 568.821	125.5	183.1	115.3%	178.2	105.5%	2.7%	50	61.7	123.4%	10.3%	6.06
Na 589.592	115.8	144.2	56.8%	130.7	29.9%	9.8%	50	56.7	113.4%	6.0%	-0.13
Si 251.611	38.7	86.9	96.3%	86.4	95.4%	0.5%	50	50.7	101.3%	4.4%	-0.15
Si 252.411	37.7	84.9	94.3%	84.2	93.0%	0.8%	50	49.5	98.9%	2.4%	-0.13
Zn 213.857	-28	919	94.7%	919	94.7%	0.1%	1000	964	96.4%	3%	-20.71



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

TDS QC Summary (SM 2540C)

Date Analyzed: 2/16/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1300
ICVL	100	106	106	80-120	1300
ICV	500	494	98.8	90-110	1300

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26920	33900	34100	0.6	10	1300

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

4 Justin Court Ste D, Monterey, CA 93940

831.375.MBAS (6227), 831.641.0734 (Fax)

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

Batch ID: **20150214**

	F	Cl	NO2-N	SO4	Br	NO3-N	PO4-P
Spike amount	2	20	2	20	2	2	2
ICVB	0.00	0.20	0.00	0.01	0.00	0.00	0.00
ICV	1.91	19.93	2.01	19.50	1.83	1.82	1.96
Rec 90-110%	95.46	99.64	100.26	97.48	91.70	91.01	97.94
ICVL	0.18	2.04	0.18	1.73	0.24	0.22	0.22
Rec 50-150%	92.32	101.90	91.23	86.44	118.40	108.19	109.85
Sample ID AB26919	0.62	77.67	0.36	17.92	3.84	5.18	0.37
MS	2.76	99.28	2.41	38.61	6.16	7.28	2.54
Rec 80-120%	106.64	108.08	102.31	103.42	116.08	104.78	108.31
MSD	2.81	100.10	2.41	38.53	6.17	7.31	2.52
Rec 80-120%	109.25	112.16	102.69	103.04	116.74	106.35	107.50
Diff 10%	1.87	0.82	0.32	0.20	0.21	0.43	0.65
CCV	2.08	20.84	2.10	20.74	2.18	1.98	2.15
Rec 90-110%	104.23	104.20	105.02	103.71	108.87	99.13	107.68
Diff 10%	8.79	4.48	4.64	6.19	17.12	8.55	9.47
CCVB	0.00	0.27	0.03	0.06	0.09	0.00	0.00



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/14/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:00
ICV	1.00	1.05	105%	95-105	16:00

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB26918	0.10	0.10	0%	10	16:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/16/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	845
ICV	24800	24900	100.4%	95-105	845

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB26920	40120	40180	0.1%	10	845

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/14/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.8	99.1	95-105	1400

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB26918	7.01	7.08	1.0	10	1400

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

February 27, 2015

Ceres ID: 10598

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 17, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

This work was authorized under M.B.A.'s Project # AB26918.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10598-001	MW-1M	2/17/2015	2/14/2015 10:10

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB26918		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB26918		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	106	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-1M							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10598-001		Date Received: 17-Feb-15
Project: AB26918			Sample Size: 1.039 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 14-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 10:00							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.07			<u>IS</u> ¹³ C-2,3,7,8-TCDD	88.4	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	89.0	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10598
 Temperature: _____ °C

Reports and invoices will be delivered by email in .pdf format

Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: <u>mweidner@mbasinc.com</u>	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF	Comments
		Date	Time										<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other	
1	MW-15M	2/14/2015	10:00	Aq	2	X								AB26918
2														(2,3,7,8 TCDD only)
3														
4														
5														please include
6														excell report
7														
8														Seawater
9														
10														
11														
12														

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/16/2015	16:00	 Deborah A. Decker	2-17-15	10:40

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10598</u>	Date/Time: <u>2/17/15 10:10</u>
Client Project ID: <u>MW-15M AB269B</u>	Received Temperature: <u>0.9°C</u> Acceptable: <u>Y/N</u>
Chain of Custody Relinquished by signed?	<u>Y</u> /N
Custody Seals? Present?	Y/N
Intact?	Y/N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	Y/ <u>N</u>
Proper Containers:	<u>Y</u> /N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>Y</u> /N
Drinking Water, Sodium Thiosulfate present?	Y/N/NA
List COC discrepancies:	<u>10:10 Collection Time</u> <u>1M instead 15M</u>
List Damaged Samples:	<u>gone 2-17-15</u>

Ceres Analytical Laboratory

Process Request

Ceres ID: 10598 PB: 1296 Sample #: 1 Due Date: 3/3/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
 Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:


Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10598-1	1555.35g	516.33g	1.039L

Chemist:  Date: 2/25/15

Method: 1613B
 SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1296-MB001	Method Blank		1.000L	2/25/15 ML	2/26/15 ML	NA	2/26/15	NA	2/26/15 ML
0-1296-OPR001	OPR		1.000L (A)	↓	↓	↓	↓	↓	↓
10598-1296-001	MW-1M	✓	1.539L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: 07:30 2/26/15

Samples Logged out by: 07:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: 1^A

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15
 Extracts returned to Storage Location: _____

Chemist: [Signature]

Method: 8290A/1613B
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	5021115A	10ul	2/11/30
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20ul	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3020, 100, 20ml	143512	4/24/15
Si gel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122314A	6/23/15
Na2SO4	1.5g	P101614A	4/16/15
20% DemitHex	32ml	L102714A	4/27/15

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/05/15 16:48
Attention: David Holland	Received Date: 02/17/15 09:00
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B17022	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

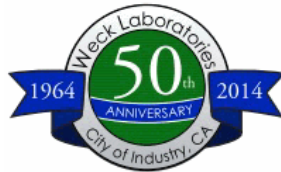
Dear David Holland :

Enclosed are the results of analyses for samples received 02/17/15 09:00 with the Chain of Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

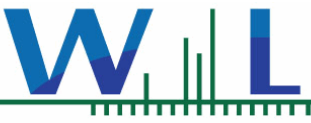
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-15M	Matan Salmon	AB26918	5B17022-01	Water	02/14/15 10:10

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

5B17022-01 MW-15M

Sampled: 02/14/15 10:10

Sampled By: Matan Salmon

Matrix: Water

Sample Note: AB26918

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 14:24	

Chlorinated Pesticides and/or PCBs

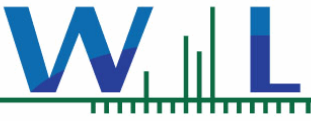
Method: EPA 508

Batch: W5B0911

Prepared: 02/18/15 10:49

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	02/18/15 23:32	
4,4'-DDE	ND	0.010	ug/l	1	02/18/15 23:32	
4,4'-DDT	ND	0.010	ug/l	1	02/18/15 23:32	
Aldrin	ND	0.010	ug/l	1	02/18/15 23:32	
alpha-BHC	ND	0.010	ug/l	1	02/18/15 23:32	
Aroclor 1016	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1221	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1232	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1242	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1248	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1254	ND	0.10	ug/l	1	02/18/15 23:32	
Aroclor 1260	ND	0.10	ug/l	1	02/18/15 23:32	
beta-BHC	ND	0.010	ug/l	1	02/18/15 23:32	
Chlordane (tech)	ND	0.10	ug/l	1	02/18/15 23:32	
Chlorothalonil	ND	0.050	ug/l	1	02/18/15 23:32	
delta-BHC	ND	0.010	ug/l	1	02/18/15 23:32	
Dieldrin	ND	0.010	ug/l	1	02/18/15 23:32	
Endosulfan I	ND	0.010	ug/l	1	02/18/15 23:32	
Endosulfan II	ND	0.010	ug/l	1	02/18/15 23:32	
Endosulfan sulfate	ND	0.010	ug/l	1	02/18/15 23:32	
Endrin	ND	0.010	ug/l	1	02/18/15 23:32	
Endrin aldehyde	ND	0.010	ug/l	1	02/18/15 23:32	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	02/18/15 23:32	
Heptachlor	ND	0.010	ug/l	1	02/18/15 23:32	
Heptachlor epoxide	ND	0.010	ug/l	1	02/18/15 23:32	
Hexachlorobenzene	ND	0.050	ug/l	1	02/18/15 23:32	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	02/18/15 23:32	
Methoxychlor	ND	0.010	ug/l	1	02/18/15 23:32	
PCBs, Total	ND	0.50	ug/l	1	02/18/15 23:32	
Propachlor	ND	0.050	ug/l	1	02/18/15 23:32	
Toxaphene	ND	1.0	ug/l	1	02/18/15 23:32	
Trifluralin	ND	0.010	ug/l	1	02/18/15 23:32	
Surr: Decachlorobiphenyl	40 %	Conc:0.0398	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	74 %	Conc:0.0736	70-130	%		



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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

5B17022-01 MW-15M

Sampled: 02/14/15 10:10

Sampled By: Matan Salmon

Matrix: Water

Sample Note: AB26918

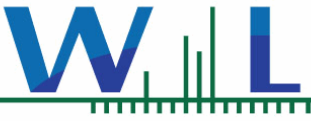
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

Anions by IC, EPA Method 9056 - Quality Control

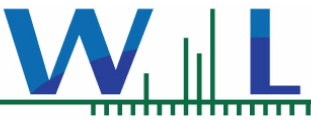
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B0911-BLK1)				Analyzed: 02/18/15 19:57						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



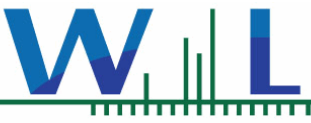
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B0911-BLK1)										
Analyzed: 02/18/15 19:57										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0792		ug/l	0.100		79	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0739		ug/l	0.100		74	70-130			
LCS (W5B0911-BS1)										
Analyzed: 02/18/15 20:28										
4,4'-DDD	0.0880	0.010	ug/l	0.100		88	55-142			
4,4'-DDE	0.0881	0.010	ug/l	0.100		88	49-129			
4,4'-DDT	0.0955	0.010	ug/l	0.100		96	54-160			
Aldrin	0.0786	0.010	ug/l	0.100		79	29-115			
alpha-BHC	0.0832	0.010	ug/l	0.100		83	59-131			
beta-BHC	0.0978	0.010	ug/l	0.100		98	63-136			
delta-BHC	0.100	0.010	ug/l	0.100		100	59-137			
Dieldrin	0.0857	0.010	ug/l	0.100		86	59-135			
Endosulfan I	0.0688	0.010	ug/l	0.100		69	28-138			
Endosulfan II	0.0817	0.010	ug/l	0.100		82	53-133			
Endosulfan sulfate	0.108	0.010	ug/l	0.100		108	58-155			
Endrin	0.0913	0.010	ug/l	0.100		91	57-148			
Endrin aldehyde	0.0838	0.010	ug/l	0.100		84	45-139			
gamma-BHC (Lindane)	0.0856	0.010	ug/l	0.100		86	59-129			
Heptachlor	0.0841	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0855	0.010	ug/l	0.100		86	59-134			
Methoxychlor	0.0993	0.010	ug/l	0.100		99	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0828		ug/l	0.100		83	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0743		ug/l	0.100		74	70-130			
LCS (W5B0911-BS2)										
Analyzed: 02/18/15 21:29										
Hexachlorobenzene	0.0954	0.010	ug/l	0.100		95	65-135			
Hexachlorocyclopentadiene	0.345	0.050	ug/l	0.500		69	65-135			
Propachlor	0.442	0.050	ug/l	0.500		88	73-133			
Trifluralin	0.0935	0.010	ug/l	0.100		93	73-133			
<i>Surr: Decachlorobiphenyl</i>	0.0889		ug/l	0.100		89	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0814		ug/l	0.100		81	70-130			
LCS Dup (W5B0911-BSD1)										
Analyzed: 02/18/15 20:58										
4,4'-DDD	0.0909	0.010	ug/l	0.100		91	55-142	3	25	
4,4'-DDE	0.0907	0.010	ug/l	0.100		91	49-129	3	25	
4,4'-DDT	0.100	0.010	ug/l	0.100		100	54-160	5	25	
Aldrin	0.0782	0.010	ug/l	0.100		78	29-115	0.5	25	



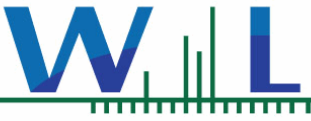
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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B0911 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B0911-BSD1)				Analyzed: 02/18/15 20:58						
alpha-BHC	0.0835	0.010	ug/l	0.100		84	59-131	0.4	25	
beta-BHC	0.101	0.010	ug/l	0.100		101	63-136	3	25	
delta-BHC	0.105	0.010	ug/l	0.100		105	59-137	5	25	
Dieldrin	0.0882	0.010	ug/l	0.100		88	59-135	3	25	
Endosulfan I	0.0703	0.010	ug/l	0.100		70	28-138	2	25	
Endosulfan II	0.0842	0.010	ug/l	0.100		84	53-133	3	25	
Endosulfan sulfate	0.113	0.010	ug/l	0.100		113	58-155	4	25	
Endrin	0.0940	0.010	ug/l	0.100		94	57-148	3	25	
Endrin aldehyde	0.0905	0.010	ug/l	0.100		91	45-139	8	25	
gamma-BHC (Lindane)	0.0863	0.010	ug/l	0.100		86	59-129	0.8	25	
Heptachlor	0.0847	0.010	ug/l	0.100		85	42-136	0.7	25	
Heptachlor epoxide	0.0873	0.010	ug/l	0.100		87	59-134	2	25	
Methoxychlor	0.0992	0.010	ug/l	0.100		99	56-167	0.09	25	
Surr: Decachlorobiphenyl	0.0835		ug/l	0.100		84	70-130			
Surr: Tetrachloro-meta-xylene	0.0727		ug/l	0.100		73	70-130			
LCS Dup (W5B0911-BSD2)				Analyzed: 02/18/15 21:59						
Hexachlorobenzene	0.0810	0.010	ug/l	0.100		81	65-135	16	25	
Hexachlorocyclopentadiene	0.292	0.050	ug/l	0.500		58	65-135	17	25	BS-04
Propachlor	0.398	0.050	ug/l	0.500		80	73-133	11	25	
Trifluralin	0.0783	0.010	ug/l	0.100		78	73-133	18	25	
Surr: Decachlorobiphenyl	0.0749		ug/l	0.100		75	70-130			
Surr: Tetrachloro-meta-xylene	0.0697		ug/l	0.100		70	70-130			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 16:48

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1295

2/26/2015

Invoice: A504102

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1295 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/17/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 2/17/2015 - 10:00 Report Due: 3/03/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 5.0	Containers Intact COC/Labels Agree Preservation Confirmed Received On Wet Ice Packing Material - Other Sample(s) were received in temperature range. Initial receipt at BSK-FAL
--	---

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B1295-01
Sampled By: Matan Salmon
Sample Description: MW-15M // AB26918

Sample Date - Time: 02/14/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A501929	02/20/15	02/21/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A501929	02/20/15	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	112 %	Acceptable range: 70-130 %						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A501918	02/19/15	02/21/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A501918	02/19/15	02/21/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
Surrogate: DCPAA	EPA 515.3	90 %	Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1295-01
Sampled By: Matan Salmon
Sample Description: MW-15M // AB26918

Sample Date - Time: 02/14/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	BS1.0, CV0.0
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1295-01
Sampled By: Matan Salmon
Sample Description: MW-15M // AB26918

Sample Date - Time: 02/14/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics by GC-MS</u>									
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	95 %	<i>Acceptable range: 70-130 %</i>						
Surrogate: Bromofluorobenzene	EPA 524.2	100 %	<i>Acceptable range: 70-130 %</i>						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502051	02/23/15	02/24/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502051	02/23/15	02/24/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502038	02/23/15	02/24/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A501867	02/20/15	02/20/15	
Surrogate: AMPA	EPA 547	87 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A501985	02/20/15	02/21/15	

Certificate of Analysis

Sample ID: A5B1295-01
Sampled By: Matan Salmon
Sample Description: MW-15M // AB26918

Sample Date - Time: 02/14/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Diquat by HPLC</u> Diquat	EPA 549.2	ND	4.0	ug/L	1	A501738	02/17/15	02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A501929

Prepared: 02/20/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A501929-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							02/20/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike (A501929-BS1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		123	70-130			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		102	70-130			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike Dup (A501929-BSD1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		121	70-130	1	20	02/21/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		105	70-130	2	20	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		110	70-130			02/21/15	

Matrix Spike (A501929-MS1), Source: A5B1118-06

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12	ND	121	65-135			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12	ND	106	65-135			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		109	70-130			02/20/15	

EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A501918-BLK1)

2,4,5-T	ND	1.0	ug/L							02/20/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							02/20/15	
2,4-D	ND	10	ug/L							02/20/15	
Bentazon	ND	2.0	ug/L							02/20/15	
Dalapon	ND	10	ug/L							02/20/15	
Dicamba	ND	1.5	ug/L							02/20/15	
Dinoseb	ND	2.0	ug/L							02/20/15	
Pentachlorophenol	ND	0.20	ug/L							02/20/15	
Picloram	ND	1.0	ug/L							02/20/15	
Surrogate: DCPAA	58			58		100	70-130			02/20/15	

Blank Spike (A501918-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130			02/20/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		97	70-130			02/20/15	
2,4-D	0.44	10	ug/L	0.40		110	70-130			02/20/15	
Bentazon	8.5	2.0	ug/L	8.0		107	70-130			02/20/15	
Dalapon	4.1	10	ug/L	4.0		102	70-130			02/20/15	
Dicamba	6.0	1.5	ug/L	6.0		101	70-130			02/20/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			02/20/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			02/20/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A501918-BS1)

<i>Surrogate: DCPAA</i>	57			58		98	70-130			02/20/15	
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Blank Spike Dup (A501918-BSD1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130	0	20	02/21/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80		100	70-130	3	20	02/21/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130	2	20	02/21/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130	0	20	02/21/15	
Dalapon	4.0	10	ug/L	4.0		100	70-130	2	20	02/21/15	
Dicamba	6.4	1.5	ug/L	6.0		106	70-130	5	20	02/21/15	
Dinoseb	0.80	2.0	ug/L	0.80		100	70-130	2	20	02/21/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		96	70-130	2	20	02/21/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130	0	20	02/21/15	
<i>Surrogate: DCPAA</i>	57			58		98	70-130			02/21/15	

Matrix Spike (A501918-MS1), Source: A5B1073-01

2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			02/20/15	
2,4,5-TP (Silvex)	0.79	1.0	ug/L	0.80	ND	99	70-130			02/20/15	
2,4-D	0.44	10	ug/L	0.40	ND	109	70-130			02/20/15	
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130			02/20/15	
Dalapon	4.1	10	ug/L	4.0	ND	103	70-130			02/20/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	101	70-130			02/20/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130			02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130			02/20/15	
Picloram	0.40	1.0	ug/L	0.40	ND	100	70-130			02/20/15	
<i>Surrogate: DCPAA</i>	58			58		100	70-130			02/20/15	

Matrix Spike Dup (A501918-MSD1), Source: A5B1073-01

2,4,5-T	4.0	1.0	ug/L	4.0	ND	100	70-130	2	20	02/20/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80	ND	100	70-130	1	20	02/20/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	2	20	02/20/15	
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130	0	20	02/20/15	
Dalapon	4.0	10	ug/L	4.0	ND	101	70-130	2	20	02/20/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	100	70-130	1	20	02/20/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	3	20	02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130	0	20	02/20/15	
Picloram	0.38	1.0	ug/L	0.40	ND	96	70-130	4	20	02/20/15	
<i>Surrogate: DCPAA</i>	57			58		99	70-130			02/20/15	

EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/23/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/23/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/23/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
2-Butanone	ND	5.0	ug/L							02/23/15	
2-Chlorotoluene	ND	0.50	ug/L							02/23/15	
2-Hexanone	ND	10	ug/L							02/23/15	
4-Chlorotoluene	ND	0.50	ug/L							02/23/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/23/15	
Acetone	ND	10	ug/L							02/23/15	
Benzene	ND	0.50	ug/L							02/23/15	
Bromobenzene	ND	0.50	ug/L							02/23/15	
Bromochloromethane	ND	0.50	ug/L							02/23/15	
Bromodichloromethane	ND	0.50	ug/L							02/23/15	
Bromoform	ND	0.50	ug/L							02/23/15	
Bromomethane	ND	0.50	ug/L							02/23/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/23/15	
Chlorobenzene	ND	0.50	ug/L							02/23/15	
Chloroethane	ND	0.50	ug/L							02/23/15	
Chloroform	ND	0.50	ug/L							02/23/15	
Chloromethane	ND	0.50	ug/L							02/23/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Dibromochloromethane	ND	0.50	ug/L							02/23/15	
Dibromomethane	ND	0.50	ug/L							02/23/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/23/15	
Dichloromethane	ND	0.50	ug/L							02/23/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/23/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/23/15	
Ethylbenzene	ND	0.50	ug/L							02/23/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/23/15	
Isopropylbenzene	ND	0.50	ug/L							02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

m,p-Xylenes	ND	0.50	ug/L							02/23/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/23/15	
Naphthalene	ND	0.50	ug/L							02/23/15	
n-Butylbenzene	ND	0.50	ug/L							02/23/15	
n-Propylbenzene	ND	0.50	ug/L							02/23/15	
o-Xylene	ND	0.50	ug/L							02/23/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/23/15	
sec-Butylbenzene	ND	0.50	ug/L							02/23/15	
Styrene	ND	0.50	ug/L							02/23/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/23/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/23/15	
tert-Butylbenzene	ND	0.50	ug/L							02/23/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/23/15	
Toluene	ND	0.50	ug/L							02/23/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/23/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/23/15	
Vinyl Chloride	ND	0.50	ug/L							02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.6			5.0		91	70-130			02/23/15	
Surrogate: Bromofluorobenzene	48			50		95	70-130			02/23/15	

Blank Spike (A501992-BS1)

1,1,1,2-Tetrachloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1,1-Trichloroethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,1,2,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130			02/23/15	
1,1,2-Trichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			02/23/15	
1,1-Dichloropropene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,2,3-Trichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2,4-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2,4-Trimethylbenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2-Dichloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,2-Dichloropropane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3,5-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
1,3-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3-Dichloropropane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,4-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
2,2-Dichloropropane	9.5	0.50	ug/L	10		95	70-130			02/23/15	
2-Butanone	8.4	5.0	ug/L	10		84	70-130			02/23/15	
2-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
2-Hexanone	8.7	10	ug/L	10		87	70-130			02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

4-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
4-Methyl-2-pentanone	8.5	5.0	ug/L	10		85	70-130			02/23/15	
Acetone	8.2	10	ug/L	10		82	70-130			02/23/15	
Benzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Bromobenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Bromochloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromodichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Bromoform	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromomethane	14	0.50	ug/L	10		138	70-130			02/23/15	BS High
Carbon Tetrachloride	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Chloroethane	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chloroform	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Chloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
cis-1,2-Dichloroethene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
cis-1,3-Dichloropropene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Dibromochloromethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dibromomethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dichlorodifluoromethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Dichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Di-isopropyl ether (DIPE)	8.9	3.0	ug/L	10		89	70-130			02/23/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Ethylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Hexachlorobutadiene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
m,p-Xylenes	19	0.50	ug/L	20		93	70-130			02/23/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		93	70-130			02/23/15	
Naphthalene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
n-Butylbenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
n-Propylbenzene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
o-Xylene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
p-Isopropyltoluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Styrene	10	0.50	ug/L	10		100	70-130			02/23/15	
tert-Amyl Methyl Ether (TAME)	9.4	3.0	ug/L	10		94	70-130			02/23/15	
tert-Butyl alcohol (TBA)	7.3	2.0	ug/L	10		73	70-130			02/23/15	
tert-Butylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Tetrachloroethene (PCE)	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Toluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
trans-1,2-Dichloroethene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
trans-1,3-Dichloropropene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Trichloroethene (TCE)	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Trichlorofluoromethane	9.0	5.0	ug/L	10		90	70-130			02/23/15	
Vinyl Chloride	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.5			5.0		90	70-130			02/23/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

Surrogate: Bromofluorobenzene 46 50 92 70-130 02/23/15

Blank Spike Dup (A501992-BSD1)

1,1,1,2-Tetrachloroethane	9.8	0.50	ug/L	10	98	70-130	7	30	02/23/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	100	70-130	8	30	02/23/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10	102	70-130	10	30	02/23/15		
1,1,2-Trichloroethane	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
1,1-Dichloroethane	10	0.50	ug/L	10	101	70-130	10	30	02/23/15		
1,1-Dichloroethene	11	0.50	ug/L	10	109	70-130	10	30	02/23/15		
1,1-Dichloropropene	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
1,2,3-Trichlorobenzene	9.5	0.50	ug/L	10	95	70-130	4	30	02/23/15		
1,2,4-Trichlorobenzene	9.5	0.50	ug/L	10	95	70-130	6	30	02/23/15		
1,2,4-Trimethylbenzene	10	0.50	ug/L	10	102	70-130	12	30	02/23/15		
1,2-Dichlorobenzene	10	0.50	ug/L	10	101	70-130	10	30	02/23/15		
1,2-Dichloroethane	10	0.50	ug/L	10	101	70-130	9	30	02/23/15		
1,2-Dichloropropane	9.9	0.50	ug/L	10	99	70-130	10	30	02/23/15		
1,3,5-Trimethylbenzene	11	0.50	ug/L	10	106	70-130	11	30	02/23/15		
1,3-Dichlorobenzene	10	0.50	ug/L	10	102	70-130	11	30	02/23/15		
1,3-Dichloropropane	9.9	0.50	ug/L	10	99	70-130	8	30	02/23/15		
1,4-Dichlorobenzene	10	0.50	ug/L	10	102	70-130	12	30	02/23/15		
2,2-Dichloropropane	10	0.50	ug/L	10	105	70-130	10	30	02/23/15		
2-Butanone	9.5	5.0	ug/L	10	95	70-130	12	30	02/23/15		
2-Chlorotoluene	10	0.50	ug/L	10	104	70-130	12	30	02/23/15		
2-Hexanone	9.7	10	ug/L	10	97	70-130	11	30	02/23/15		
4-Chlorotoluene	10	0.50	ug/L	10	104	70-130	12	30	02/23/15		
4-Methyl-2-pentanone	9.3	5.0	ug/L	10	93	70-130	9	30	02/23/15		
Acetone	9.4	10	ug/L	10	94	70-130	14	30	02/23/15		
Benzene	10	0.50	ug/L	10	100	70-130	10	30	02/23/15		
Bromobenzene	10	0.50	ug/L	10	102	70-130	10	30	02/23/15		
Bromochloromethane	9.7	0.50	ug/L	10	97	70-130	10	30	02/23/15		
Bromodichloromethane	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
Bromoform	9.2	0.50	ug/L	10	92	70-130	5	30	02/23/15		
Bromomethane	15	0.50	ug/L	10	146	70-130	6	30	02/23/15	BS	High
Carbon Tetrachloride	11	0.50	ug/L	10	106	70-130	10	30	02/23/15		
Chlorobenzene	10	0.50	ug/L	10	100	70-130	9	30	02/23/15		
Chloroethane	11	0.50	ug/L	10	108	70-130	12	30	02/23/15		
Chloroform	10	0.50	ug/L	10	100	70-130	10	30	02/23/15		
Chloromethane	9.7	0.50	ug/L	10	97	70-130	10	30	02/23/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10	101	70-130	11	30	02/23/15		
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
Dibromochloromethane	9.8	0.50	ug/L	10	98	70-130	8	30	02/23/15		
Dibromomethane	10	0.50	ug/L	10	100	70-130	9	30	02/23/15		
Dichlorodifluoromethane	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
Dichloromethane	10	0.50	ug/L	10	101	70-130	11	30	02/23/15		

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A501992-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	6	30	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130	7	30	02/23/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	11	30	02/23/15	
Hexachlorobutadiene	10	0.50	ug/L	10		103	70-130	10	30	02/23/15	
Isopropylbenzene	11	0.50	ug/L	10		107	70-130	11	30	02/23/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130	11	30	02/23/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		102	70-130	9	30	02/23/15	
Naphthalene	7.9	0.50	ug/L	10		79	70-130	14	30	02/23/15	
n-Butylbenzene	10	0.50	ug/L	10		102	70-130	11	30	02/23/15	
n-Propylbenzene	11	0.50	ug/L	10		106	70-130	12	30	02/23/15	
o-Xylene	10	0.50	ug/L	10		104	70-130	11	30	02/23/15	
p-Isopropyltoluene	10	0.50	ug/L	10		104	70-130	13	30	02/23/15	
sec-Butylbenzene	11	0.50	ug/L	10		106	70-130	13	30	02/23/15	
Styrene	11	0.50	ug/L	10		114	70-130	13	30	02/23/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		102	70-130	8	30	02/23/15	
tert-Butyl alcohol (TBA)	8.4	2.0	ug/L	10		84	70-130	14	30	02/23/15	
tert-Butylbenzene	10	0.50	ug/L	10		105	70-130	12	30	02/23/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	9	30	02/23/15	
Toluene	10	0.50	ug/L	10		100	70-130	9	30	02/23/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		105	70-130	11	30	02/23/15	
trans-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	8	30	02/23/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130	10	30	02/23/15	
Trichlorofluoromethane	10	5.0	ug/L	10		100	70-130	11	30	02/23/15	
Vinyl Chloride	9.7	0.50	ug/L	10		97	70-130	9	30	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.8			5.0		97	70-130			02/23/15	
Surrogate: Bromofluorobenzene	49			50		97	70-130			02/23/15	

EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Alachlor	ND	1.0	ug/L							02/24/15	
Atrazine	ND	0.50	ug/L							02/24/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/24/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/24/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/24/15	
Bromacil	ND	10	ug/L							02/24/15	
Butachlor	ND	0.38	ug/L							02/24/15	
Diazinon	ND	0.25	ug/L							02/24/15	
Dimethoate	ND	10	ug/L							02/24/15	
Metolachlor	ND	0.50	ug/L							02/24/15	
Metribuzin	ND	0.50	ug/L							02/24/15	
Molinate	ND	2.0	ug/L							02/24/15	
Prometryn	ND	2.0	ug/L							02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Propachlor	ND	0.50	ug/L							02/24/15	
Simazine	ND	1.0	ug/L							02/24/15	
Thiobencarb	ND	1.0	ug/L							02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.5			5.0		110	70-130			02/24/15	

Blank Spike (A502051-BS1)

Alachlor	0.87	1.0	ug/L	1.0		87	70-130			02/24/15	
Atrazine	0.43	0.50	ug/L	0.50		87	70-130			02/24/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10		82	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		91	70-130			02/24/15	
Bromacil	0.96	10	ug/L	1.0		96	70-130			02/24/15	
Butachlor	0.87	0.38	ug/L	1.0		87	70-130			02/24/15	
Diazinon	0.16	0.25	ug/L	0.20		80	70-130			02/24/15	
Dimethoate	0.84	10	ug/L	1.0		84	70-130			02/24/15	
Metolachlor	1.8	0.50	ug/L	2.0		91	70-130			02/24/15	
Metribuzin	0.82	0.50	ug/L	1.0		82	70-130			02/24/15	
Molinate	0.91	2.0	ug/L	1.0		91	70-130			02/24/15	
Prometryn	1.5	2.0	ug/L	2.0		76	70-130			02/24/15	
Propachlor	0.46	0.50	ug/L	0.50		93	70-130			02/24/15	
Simazine	0.31	1.0	ug/L	0.35		88	70-130			02/24/15	
Thiobencarb	0.44	1.0	ug/L	0.50		87	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.4			5.0		108	70-130			02/24/15	

Blank Spike Dup (A502051-BS1)

Alachlor	0.90	1.0	ug/L	1.0		90	70-130	3	30	02/24/15	
Atrazine	0.47	0.50	ug/L	0.50		94	70-130	8	30	02/24/15	
Benzo(a)pyrene	0.085	0.10	ug/L	0.10		85	70-130	4	30	02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130	1	30	02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		94	70-130	3	30	02/24/15	
Bromacil	1.0	10	ug/L	1.0		103	70-130	7	30	02/24/15	
Butachlor	0.90	0.38	ug/L	1.0		90	70-130	3	30	02/24/15	
Diazinon	0.17	0.25	ug/L	0.20		83	70-130	4	30	02/24/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130	5	30	02/24/15	
Metolachlor	1.9	0.50	ug/L	2.0		96	70-130	5	30	02/24/15	
Metribuzin	0.93	0.50	ug/L	1.0		93	70-130	13	30	02/24/15	
Molinate	1.0	2.0	ug/L	1.0		105	70-130	14	30	02/24/15	
Prometryn	1.8	2.0	ug/L	2.0		92	70-130	19	30	02/24/15	
Propachlor	0.50	0.50	ug/L	0.50		100	70-130	7	30	02/24/15	
Simazine	0.34	1.0	ug/L	0.35		96	70-130	9	30	02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	8	30	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.8			5.0		116	70-130			02/24/15	

Matrix Spike (A502051-MS1), Source: A5B1296-01

Alachlor	0.94	1.0	ug/L	0.97	ND	98	70-130			02/24/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502051-MS1), Source: A5B1296-01

Atrazine	0.47	0.50	ug/L	0.48	ND	98	70-130			02/24/15	
Benzo(a)pyrene	0.092	0.10	ug/L	0.097	ND	95	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	2.0	3.0	ug/L	1.9	ND	103	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.4	ND	99	70-130			02/24/15	
Bromacil	1.1	10	ug/L	0.97	ND	114	70-130			02/24/15	
Butachlor	0.94	0.38	ug/L	0.97	ND	98	70-130			02/24/15	
Diazinon	0.18	0.25	ug/L	0.19	ND	94	70-130			02/24/15	
Dimethoate	0.85	10	ug/L	0.97	ND	88	70-130			02/24/15	
Metolachlor	1.9	0.50	ug/L	1.9	ND	99	70-130			02/24/15	
Metribuzin	0.92	0.50	ug/L	0.97	ND	95	70-130			02/24/15	
Molinate	0.95	2.0	ug/L	0.97	ND	98	70-130			02/24/15	
Prometryn	2.0	2.0	ug/L	1.9	ND	105	70-130			02/24/15	
Propachlor	0.49	0.50	ug/L	0.48	ND	102	70-130			02/24/15	
Simazine	0.35	1.0	ug/L	0.34	ND	104	70-130			02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.48	ND	96	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.9			4.8		101	70-130			02/24/15	

EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502038-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							02/24/15	
Aldicarb	ND	3.0	ug/L							02/24/15	
Aldicarb Sulfone	ND	2.0	ug/L							02/24/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							02/24/15	
Carbaryl	ND	5.0	ug/L							02/24/15	
Carbofuran	ND	5.0	ug/L							02/24/15	
Methiocarb	ND	2.0	ug/L							02/24/15	
Methomyl	ND	2.0	ug/L							02/24/15	
Oxamyl	ND	20	ug/L							02/24/15	
Propoxur	ND	2.0	ug/L							02/24/15	

Blank Spike (A502038-BS1)

3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120			02/24/15	
Aldicarb	4.6	3.0	ug/L	4.0		114	80-120			02/24/15	
Aldicarb Sulfone	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120			02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		97	80-120			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0		98	80-120			02/24/15	
Methiocarb	3.9	2.0	ug/L	4.0		97	80-120			02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120			02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502038-BSD1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120	2	20	02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0		113	80-120	1	20	02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120	1	20	02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		108	80-120	0	20	02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		96	80-120	1	20	02/24/15	
Carbofuran	3.8	5.0	ug/L	4.0		94	80-120	4	20	02/24/15	
Methiocarb	4.0	2.0	ug/L	4.0		99	80-120	2	20	02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120	0	20	02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120	0	20	02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120	0	20	02/24/15	

Matrix Spike (A502038-MS1), Source: A5B1073-01

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0	ND	98	65-135			02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	113	65-135			02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0	ND	108	65-135			02/24/15	
Carbaryl	3.7	5.0	ug/L	4.0	ND	94	65-135			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	97	65-135			02/24/15	
Methiocarb	3.8	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Methomyl	3.7	2.0	ug/L	4.0	ND	93	65-135			02/24/15	
Oxamyl	3.4	20	ug/L	4.0	ND	85	65-135			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	98	65-135			02/24/15	

EPA 547 - Quality Control

Batch: A501867

Prepared: 02/20/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A501867-BLK1)

Glyphosate	ND	25	ug/L							02/20/15	
Surrogate: AMPA	97			100		97	70-130			02/20/15	

Blank Spike (A501867-BS1)

Glyphosate	95	25	ug/L	100		95	70-130			02/20/15	
Surrogate: AMPA	110			100		111	70-130			02/20/15	

Blank Spike Dup (A501867-BSD1)

Glyphosate	110	25	ug/L	100		114	70-130	18	30	02/20/15	
Surrogate: AMPA	110			100		113	70-130			02/20/15	

Matrix Spike (A501867-MS1), Source: A5B1215-01

Glyphosate	150	25	ug/L	100	ND	146	70-130			02/20/15	MS1.0 High
Surrogate: AMPA	110			100		113	70-130			02/20/15	

Matrix Spike Dup (A501867-MSD1), Source: A5B1215-01

Glyphosate	130	25	ug/L	100	ND	132	70-130	10	30	02/20/15	MS1.0 High
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A501867
Prep Method: EPA 547

Prepared: 02/20/2015
Analyst: WPR

Matrix Spike Dup (A501867-MSD1), Source: A5B1215-01

Surrogate: AMPA 110 100 104 70-130 02/20/15

EPA 548.1 - Quality Control

Batch: A501985
Prep Method: EPA 548.1

Prepared: 02/20/2015
Analyst: KHH

Blank (A501985-BLK1)

Endothall ND 45 ug/L 02/21/15

Blank Spike (A501985-BS1)

Endothall 16 45 ug/L 20 81 54-105 02/21/15

Blank Spike Dup (A501985-BSD1)

Endothall 17 45 ug/L 20 87 54-105 8 46 02/21/15

Matrix Spike (A501985-MS1), Source: A5B1500-01

Endothall 4.4 45 ug/L 20 ND 22 54-105 02/21/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A501738
Prep Method: EPA 549.2

Prepared: 02/17/2015
Analyst: PYA

Blank (A501738-BLK1)

Diquat ND 4.0 ug/L 02/24/15

Blank Spike (A501738-BS1)

Diquat 3.7 4.0 ug/L 4.0 93 70-130 02/24/15

Blank Spike Dup (A501738-BSD1)

Diquat 3.6 4.0 ug/L 4.0 89 70-130 5 30 02/24/15

Matrix Spike (A501738-MS1), Source: A5B1073-01

Diquat 3.6 4.0 ug/L 4.0 ND 89 70-130 02/24/15

Matrix Spike (A501738-MS2), Source: A5B1073-02

Diquat 3.6 4.0 ug/L 4.0 ND 90 70-130 02/24/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP 2435

Vancouver

State of Oregon - NELAC WA100008 State of Washington C824-13



A5B1295



02172015

Monte6227

Turnaround: Standard

Due Date: 3/3/2015



Monterey Bay Analytical



1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

Turnaround Time Request
 Standard - 10 business days
 Rush (Surcharge may apply)
 Date needed:

A5B1295
 Montec227
 02/17/2015
 10



*Required Fields Temp: 5.0

Company/Client Name: Monterey Bay Analytical Services
 Report Attention: Mason Weidner-Holland
 Additional cc's: David Holland
 Invoice To: David Holland
 PO#: _____

Address: 4 Justin Court, Suite D
 City: Monterey State: CA Zip: 93940
 Phone: 831-375-6227 Fax: 831-641-0734
 E-mail: mweidner@mbasinc.com, dholland@mbasinc.com

Project: Cal Am
 Reporting Options:
 Trace (J-Flag) Swamp EDD Type: _____
 Regulatory Carbon Copies: SWRCB (Drinking Water) Fresno Co Madera Co Tulare Co
 Other: _____
 Regulatory Compliance: EDT to California SWRCB (Drinking Water) System Number: _____
 E-Mail Fax Mail
 How would you like to receive your completed results?
 Geotracker #: _____
 Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE										
		Date	Time			X	X	X	X	X	X	X	X	X	X	
1	MW-15M	2/14/15	10:10	GW	AB26918	X	X	X	X	X	X	X	X	X	X	X

*Please include
 excell report
 seawater*

Relinquished by: (Signature and Printed Name) D. Holland
 Company: MBAS
 Date: 2/16/15 Time: 1600
 Received by: (Signature and Printed Name) _____
 Date: _____ Time: _____

Shipping Method: AIR UPS GSO WALK-IN FED EX
 Cooling Method: None
 Payment Received at Delivery: _____
 Amount: _____
 Custody Seal: Y N
 Chilling Process Begun: Y N
 PIA#: _____
 Check / Cash
 Init. /

Payment for services rendered is not due in full until 30 days from the date invoice. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for Laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSK_LabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	<u>Yes</u> No NA	Were correct containers and preservatives received for the tests requested?	<u>Yes</u> No NA		
	If samples were taken today, is there evidence that chilling has begun?	Yes No <u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)	<u>Yes</u> No NA		
	Did all bottles arrive unbroken and intact?	<u>Yes</u> No	Was a sufficient amount of sample received?	<u>Yes</u> No		
	Did all bottle labels agree with COC?	<u>Yes</u> No	Do samples have a hold time <72 hours?	Yes <u>No</u>		
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No <u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes No <u>NA</u>		
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks Passed?	1			
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—			
	None (P) ^{White Cap}	—	—			
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y N			
	HNO_3 (P) ^{Red Cap}	—	—			
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y N			
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y N			
	NaOH + ZnAc (P)	pH > 9	Y N			
	Dissolved Oxygen 300ml (g)	—	—			
	None (AG) 608/8081/8082, 625. 632/8321, 8151, 8270	—	—	2-17-15		
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—			
	$\text{Na}_2\text{O}_3\text{S}+\text{HCl}$ (AG) ^{Lt. Pink Label} 525	—	—	2C		
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—	1C		
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524	—	—	2A, 1V		
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—	3V		
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	<u>Y</u> N	1V		
	NH_4Cl (AG) ^{Purple Label} 552	—	—			
	EDA (AG) ^{Brown Label} DBPs	—	—			
HCL (CG) 524.2.BTEX,Gas, MTBE, 8260/624	—	—	3V			
Buffer pH 4 (CG)	—	—				
None (CG)	—	—				
H_3PO_4 (CG) ^{Salmon Label}	—	—				
Other:						
Asbestos 1Liter Plastic w/ Foil	—	—				
Low Level Hg / Metals Double Baggie	—	—				
Bottled Water	—	—				
Clear Glass Jar: 250 / 500 / 1 Liter	—	—				
Soil Tube Brass / Steel / Plastic	—	—				
Tedlar Bag / Plastic Bag	—	—				
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	S P			S P		
Comments	1 HCL vial has a small bubble					

Labeled by: CB @ 1104

Labels checked by: MW @ 11:27

RUSH Paged by: @

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested			
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter-dissolved metals, diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance
MBAS Project Manager: David Holland Bottle for dissolved metals filtered in the field using 0.45 µm syringe filter			

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com, susan.jacobson@amwater.com, seekert@amwater.com, bvillalobos@geoscience-water.com <i>N Reynolds@geoscience-water.com</i>		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well <input checked="" type="checkbox"/> Soil [] Sludge [] Groundwater [X]		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size	
26918		MW-1M (Monitoring)	2/4/15	10:10am	17.2°C						27			
													Field Parameters:	
													Temp:	17.2°C
													pH:	7.02
													Sp Cond:	43.788 µS/cm
													Turb:	0.41 NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Nathan Reynolds / GEOSCIENCE <i>Nathan Salmon</i>	<i>[Signature]</i>			Is sample for regulatory purposes? Yes / No (Yes) / (No) samples arrived on ice. <i>[Signature]</i>
Relinquished by:	<i>Nathan Salmon (geoscience)</i>	<i>[Signature]</i>	2/14/15	12:35pm	
Received by:	<i>David Holland</i>	<i>[Signature]</i>	2/14/15	12:35	
Relinquished by:					
Received by:					

[] Payment received Check # Amount: Receipt # Date:

[Handwritten mark]

Calan DW - Geosience

Sample Condition Upon Receipt

26918

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

250 mL vacuum filtered for dissolved colorimetric orthophosphate
~~250 mL " " total P + H₂SO₄ to pH < 2~~ DH
 500 mL " " total P, TKN, NH₃ elect + H₂SO₄ to pH < 2 2/11/15



MBAS

Monterey Bay Analytical Services

4 Justin Court Suite D, Monterey, CA 93940

831.375.MBAS

www.MBASinc.com

ELAP Certification Number: 2385

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Page 1 of 2

Wednesday, March 18, 2015

Lab Number: AB26920

Collection Date/Time: 2/14/2015 17:10

Sample Collector: SHAW C

Submittal Date/Time: 2/15/2015 9:30

Sample ID

Sample Description: Geoscience MW-1D (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	123		2	2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	46		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	141		125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	150		10	2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	0.89		0.05	2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	44		4.0	2/23/2015	TC
Calcium	EPA200.7	mg/L	2440		5	3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	2410		5	3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		2/24/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	14905		40	2/23/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		2/27/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	10		6.00	2/17/2015	LRH
Copper, Total	EPA200.8	µg/L	40	J	50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		2/21/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		2/24/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		2/21/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		0.1	2/16/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E		2/20/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	10765		10	3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	146		10	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	118		10	2/27/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	2/25/2015	TC
Lithium	EPA200.8	µg/L	254		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	1130		5	3/6/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	1180		10	3/6/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	440		10	2/27/2015	MW
Manganese, Total	EPA200.7	µg/L	484		10	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/16/2015	HM
Nitrate as NO3	EPA300.0	mg/L	1		1	2/16/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	0.4		0.1	2/16/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	0.2		0.1	2/16/2015	TC
Odor Threshold at 60 C	SM2150B	TON	1		1	2/15/2015	DH
o-Phosphate-P	Hach 8048	mg/L	0.03		0.03	2/15/2015	DH
pH (Field Test)	SM4500-H+B	pH	6.72			2/14/2015	NR

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

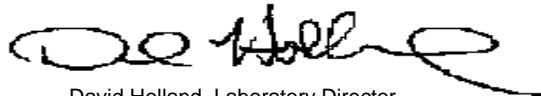
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

pH (Laboratory)	SM4500-H+B	pH (H)	7.1		0.1	2/15/2015	DH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		2/21/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.04		0.03	2/25/2015	LRH
Potassium	EPA200.7	mg/L	60		0.5	2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	59		0.1	3/6/2015	MW
QC Ratio TDS/SEC	Calculation		0.73			2/20/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		2/24/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	33		0.5	2/27/2015	MW
Sodium	EPA200.7	mg/L	5760		3	3/6/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	6150		5	3/6/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	40120		1	2/16/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	40882		1	2/14/2015	NR
Strontium, Dissolved	EPA200.8	µg/L	15666		62	3/4/2015	SM
Sulfate	EPA300.0	mg/L	1950		40	2/20/2015	MW
Temperature (Field)	SM2550	° C	19.2			2/14/2015	NR
Total Diss. Solids	SM2540C	mg/L	29100		10	2/18/2015	HM
Turbidity	EPA180.1	NTU	1.8		0.05	2/17/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.65		0.05	2/14/2015	NR
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E		2/23/2015	BSK
Zinc, Total	EPA200.8	µg/L	Not Detected		250	3/4/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26920 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6150	0.04350	267.53
Potassium	56	0.02558	1.43
Calcium	2410	0.04990	120.26
Magnesium	1180	0.08229	97.10
NH3-N	0	0.07143	0.00
		SUM	486.32

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	123	0.02000	2.46
Sulfate	1980	0.02082	41.22
Chloride	14905	0.02821	420.47
Nitrate-Nitrogen	0.2	0.07138	0.01
Phosphate-P	0.0	0.01031	0.00
Bromide	44.0	0.01252	0.55
		SUM	464.72

ANION-CATION BALANCE **2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	40120	
Cation Sum X 100	48632	121%
Anion Sum X 100	46472	116%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

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Monterey CA, 93940**

SAMPLE ID **26920 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	5760	0.04350	250.56
Potassium	60	0.02558	1.53
Calcium	2440	0.04990	121.76
Magnesium	1130	0.08229	92.99
NH3-N	0	0.07143	0.00
		SUM	466.84

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	123	0.02000	2.46
Sulfate	1980	0.02082	41.22
Chloride	14905	0.02821	420.47
Nitrate-Nitrogen	0.2	0.07138	0.01
Phosphate-P	0.0	0.01031	0.00
Bromide	44.0	0.01252	0.55
		SUM	464.72

ANION-CATION BALANCE **0** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	40120	
Cation Sum X 100	46684	116%
Anion Sum X 100	46472	116%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27199 D

25X Dilution

Date Analyzed
Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26920	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Phosphorus QC Summary (Hach 8190)

Date: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	16:25
LCSL	0.03	0.03	100	50-150	16:25
ICV	1.00	0.96	96	90-110	16:25
QCS	1.00	0.96	96	80-120	16:25
CCVB	---	<0.03	---	< 0.03	17:23
CCV	1.00	0.97	97	80-120	17:23

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26918	0.09	1.00	1.03	1.03	94	94	0.0	70-130	10	16:25	16:25

Note: The RPD % of the spiked sample AB27178 was over the acceptance criteria. Data was accepted due the recovery percents of LCSL, ICV, QCS, and Matrix Spikes.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 2/25/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.090	---	<0.5
LCS	5.0	4.9	98	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26892	0.5	5.0	5.5	5.6	100	102	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26942	686	671	2.2	5	10:03

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150227

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	0.98	97.7%	0.96	96.1%	1.7%	1	0.94	93.8%	1	0.93	92.5%
B 249.772	0.05-5ppm	0.01	0.01	1.04	103.6%	1.01	101.3%	2.3%	1	0.99	98.7%	1	1.00	99.8%
Ca 317.933	50-300ppm	-3.43	-3.51	47.7	95.4%	46.8	93.5%	1.9%	50	46.7	93.3%	50	45.77	91.5%
Ca 396.847	0.5-50ppm	-0.51	-0.65	51.9	103.8%	51.0	102.1%	1.7%	50	49.7	99.5%	50	49.76	99.5%
Cu 324.754	10ppb-100ppm	-8.30	-10.83	1070	107.0%	1050	105.0%	1.9%	1000	1028	102.8%	1000	1034.5	103.5%
Cu 327.394	10ppb-100ppm	-6.44	-7.99	1086	108.6%	1059	105.9%	2.5%	1000	1036	103.6%	1000	1057.6	105.8%
Fe 238.204	10ppb-100ppm	1.81	3.14	950	95.0%	943	94.3%	0.8%	1000	925	92.5%	1000	931.19	93.1%
Fe 259.940	10ppb-100ppm	-4.29	-1.60	1013	101.3%	993	99.3%	2.0%	1000	974	97.4%	1000	994.75	99.5%
K 766.491	0.5-750ppm	0.09	0.08	10.9	109.3%	10.5	105.0%	4.1%	10	10.6	106.3%	10	10.52	105.2%
Mg 202.583	50-1000ppm	-0.31	-0.45	52.4	104.9%	52.0	104.0%	0.8%	50	51.0	102.0%	50	51.10	102.2%
Mg 279.071	0.5-50ppm	0.01	-0.08	52.6	105.1%	51.5	103.1%	2.0%	50	51.1	102.2%	50	51.03	102.1%
Mn 257.611	10ppb-11ppm	-9.11	-11.09	985	98.5%	967	96.7%	1.8%	1000	955	95.5%	1000	969.08	96.9%
Mn 260.561	10ppb-11ppm	-8.74	-12.88	986	98.6%	971	97.1%	1.5%	1000	960	96.0%	1000	975.47	97.5%
Na 568.821	50-1000ppm	5.80	5.26	58.4	116.8%	58.1	116.2%	0.5%	50	55.6	111.3%	50	57.37	114.7%
Na 589.592	0.5-50ppm	-0.41	-0.48	55.1	110.1%	54.7	109.4%	0.6%	50	53.4	106.8%	50	53.68	107.4%
Si 251.611	0.5-200ppm	0.14	-0.10	50.0	100.0%	49.0	97.9%	2.1%	50	48.5	97.0%	50	49.52	99.0%
Si 252.411	0.5-200ppm	0.20	-0.02	49.5	99.0%	48.3	96.7%	2.4%	50	48.3	96.6%	50	49.00	98.0%
Zn 213.857	10ppb-50ppm	-19.01	14.37	960	96.0%	952	95.2%	0.8%	1000	939	93.9%	1000	935.71	93.6%

Matrix Spikes

Sample ID AB26944

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.07	1.03	95.7%	1.02	94.1%	1.5%	1	0.95	95.5%	1.8%	0.00
B 249.772	0.07	1.10	102.9%	1.09	102.1%	0.7%	1	1.03	102.9%	4.1%	0.00
Ca 317.933	46.7	93.8	94.0%	93.5	93.5%	0.3%	50	47.8	95.5%	2.4%	-3.45
Ca 396.847	51.6	95.4	87.6%	94.8	86.5%	0.6%	50	51.8	103.7%	4.1%	-0.56
Cu 324.754	-9	1073	108.1%	1054	106.3%	1.8%	1000	1084	108.4%	5.3%	-8.91
Cu 327.394	-10	1081	109.1%	1069	107.9%	1.1%	1000	1092	109.2%	5.4%	-6.63
Fe 238.204	5	940	93.5%	928	92.3%	1.2%	1000	947	94.7%	2.3%	3.25
Fe 259.940	3	1002	99.9%	1003	100.1%	0.1%	1000	1011	101.1%	3.8%	-2.41
K 766.491	2.8	13.6	108.3%	13.4	105.7%	1.9%	10	11.2	112.0%	5.2%	0.07
Mg 202.581	30.6	83.7	106.2%	82.8	104.3%	1.2%	50	54.0	107.9%	5.6%	-0.43
Mg 279.077	30.1	81.4	102.6%	80.5	101.0%	1.0%	50	53.1	106.3%	4.0%	0.00
Mn 257.611	-11	963	97.3%	960	97.0%	0.3%	1000	981	98.1%	2.7%	-10.36
Mn 260.561	-9	989	99.9%	980	98.9%	1.0%	1000	1004	100.4%	4.4%	-10.04
Na 568.821	125.5	183.1	115.3%	178.2	105.5%	2.7%	50	61.7	123.4%	10.3%	6.06
Na 589.592	115.8	144.2	56.8%	130.7	29.9%	9.8%	50	56.7	113.4%	6.0%	-0.13
Si 251.611	38.7	86.9	96.3%	86.4	95.4%	0.5%	50	50.7	101.3%	4.4%	-0.15
Si 252.411	37.7	84.9	94.3%	84.2	93.0%	0.8%	50	49.5	98.9%	2.4%	-0.13
Zn 213.857	-28	919	94.7%	919	94.7%	0.1%	1000	964	96.4%	3%	-20.71



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/16/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.023	---	<0.05
ICVL	0.050	0.053	106	80-120
ICV	0.250	0.229	91.6	80-120

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26920	0.028	0.250	0.279	0.269	100.4	96.4	3.6	80/120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/15/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.000	---	< 0.03	16:46
LCSL	0.030	0.023	76.7	50-150	16:46
ICV	1.00	0.99	99	90-110	16:47
QCS	1.00	1.01	101	80-120	16:47
CCV	1.00	1.01	101	80-120	17:02
CCVB	0.00	0.00		< 0.03	17:03

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB26920	0.03	0.20	0.23	0.21	100	90	9.1	70-130	10	17:01	17:02

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/15/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.8	99.1	95-105	10:30

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB26920	7.09	7.08	0.1	10	10:30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/16/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	845
ICV	24800	24900	100.4%	95-105	845

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB26920	40120	40180	0.1%	10	845

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 2/18/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<10	1030
ICVL	100	97	97	80-120	1030
ICV	500	491	98.2	90-110	1030

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26920	29100	30000	3.0	10	1100

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID: **20150216**

	F	Cl	NO2-N	SO4	Br	NO3-N	PO4-P
Spike amount	0.4	4	0.4	4	0.4	0.4	0.4
ICVB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ICV	1.96	20.14	2.00	20.14	1.85	1.86	1.88
Rec 90-110%	98.16	100.69	99.84	100.70	92.60	93.12	94.22
ICVL	0.19	2.09	0.18	1.71	0.23	0.22	0.19
Rec 50-150%	94.43	104.69	92.33	85.65	115.98	107.77	95.89
Sample ID AB26922	0.18	305.84	0.30	43.29	0.29	19.86	4.16
MS	2.03	329.37	2.35	63.16	2.26	21.70	7.40
Rec 80-120%	92.25	117.66	102.18	99.34	98.51	91.90	162.02
MSD	2.04	323.64	2.34	62.29	2.25	21.33	7.25
Rec 80-120%	92.98	88.98	102.01	94.99	98.20	73.51	154.48
Diff 10%	0.72	1.76	0.14	1.39	0.27	1.71	2.06
CCV	1.94	20.17	2.09	20.41	1.93	1.93	2.10
Rec 90-110%	96.97	100.86	104.63	102.07	96.27	96.57	104.76
Diff 10%	1.21	0.16	4.68	1.35	3.88	3.64	10.59
CCVB	0.02	0.00	0.00	0.00	0.00	0.00	0.00

Fluoride spike rec high all other QC acceptable

4 Justin Court Ste D, Monterey, CA 939

831.375.MBAS (6227), 831.641.0734 (F

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

2/20/2015

	Cl	SO4
Spike amount	20	20
ICVB	0.10	0.00
ICV	19.89	20.06
Rec 90-110%	99.46	100.29
ICVL	1.82	1.66
Rec 50-150%	91.15	83.01
Sample ID	AB27181	36.12
	MS	10.83
	55.65	30.38
Rec 80-120%	97.62	97.73
MSD	55.68	30.45
Rec 80-120%	97.82	98.08
Diff 10%	0.07	0.23
CCV	19.94	20.21
Rec 90-110%	99.70	101.07
Diff 10%	0.23	0.77
CCVB	0.10	0.00

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

February 27, 2015

Ceres ID: 10599

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 17, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

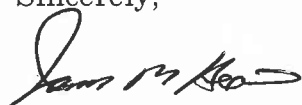
This work was authorized under M.B.A.'s Project # AB26920.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10599-001	MW-1D	2/17/2015	2/14/2015 17:10

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB26920		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH				Reviewed by:	BS		

Sample ID: Ongoing Precision and Recovery							
Client Data		Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB26920	Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
				ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	106	25-141	
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
				<i>a. Method acceptance criteria .</i>			
Analyst: JMH			Reviewed by: BS				

Sample ID: MW-1D							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10599-001		Date Received: 17-Feb-15
Project: AB26920			Sample Size: 1.048 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 14-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 17:10							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.57			IS ¹³ C-2,3,7,8-TCDD	93.9	31 - 137
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	97.3	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10599
 Temperature: _____ °C

Reports and invoices will be delivered by email in .pdf format

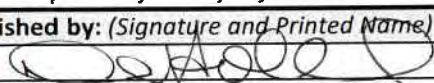
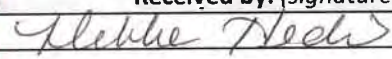
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: <u>mweidner@mbasinc.com</u>	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time	Matrix								<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
1	MW-15D	2/14/2015	17:10	Aq	2	X						AB26920
2												(2,3,7,8 TCDD only)
3												Please include excell
4												report
5												
6												
7												Seawater
8												
9												
10												
11												
12												

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/16/2015	16:00	 Debbie Neel	2-17-15	10:10

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10599</u>	Date/Time: <u>2-17-15 10:10</u>
Client Project ID: 80018 <u>MW-15D</u> <u>AB26920</u>	Received Temperature: <u>0.9°C</u> Acceptable: <u>(Y)</u> N
Chain of Custody Relinquished by signed?	<u>(Y)</u> N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	<u>(NA)</u>
Unlabeled / Illegible Samples	Y / <u>(N)</u>
Proper Containers:	<u>(Y)</u> / N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>(Y)</u> / N
Drinking Water, Sodium Thiosulfate present?	Y / N / <u>(NA)</u>
List COC discrepancies: <u>MW-1D instead of MW-15D</u>	
List Damaged Samples: <u>near 2-17-15</u>	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10599 PB: 1296 Sample #s: 1 Due Date: 3/3/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
 Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions:

- 1. Calibrate balance
- 2. Tare balance
- 3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
- 4. Weigh empty bottle and cap. Record as Bottle Wt.
- 5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10599-1	1565.82g	518.08g	1.048L

Chemist: *[Signature]* Date: 2/25/15

Method: 1613 B
 SOP #: 301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1296-MB001	Method Blank		1.000L	J 2/25/15 MB	J 2/25/15 MB	NA	J 2/25/15	NA	J 2/25/15 MB
0-1296-OPR001	OPR		1.000L	A ↓	↓	↓	↓	↓	↓
10599-1296-001	MW-1D	✓	1.048L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: 07:30 2/26/15

Samples Logged out by: J 07:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: J A

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15 J
 Extracts returned to Storage Location: _____

Method: 8290A/1613A
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	10ul	2/11/30
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20ul	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3020, 100, 20ml	143512	4/24/15
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/23/15
Nansoy	1.5g	P101614A	4/16/15
20% DemitHex	30ml	L102714A	4/27/15

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/05/15 17:08
Attention: David Holland	Received Date: 02/17/15 09:00
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B17024	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

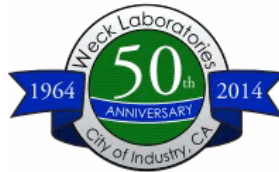
Dear David Holland :

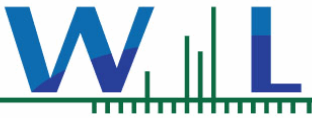
Enclosed are the results of analyses for samples received 02/17/15 09:00 with the Chain of Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

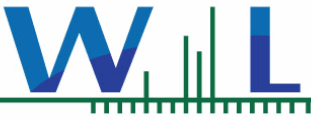
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-15D	Carol Shaw	AB26920	5B17024-01	Water	02/14/15 17:10

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

5B17024-01 MW-15D

Sampled: 02/14/15 17:10

Sampled By: Carol Shaw

Matrix: Water

Sample Note: AB26920

Anions by IC, EPA Method 9056

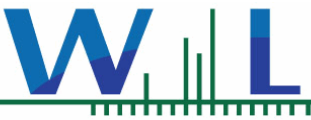
Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 14:38	



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

5B17024-01RE1 MW-15D

Sampled: 02/14/15 17:10

Sampled By: Carol Shaw

Matrix: Water

Sample Note: AB26920

Chlorinated Pesticides and/or PCBs

Method: EPA 508

Batch: W5B1002

Prepared: 02/19/15 12:24

Analyst: Maxwell Wang

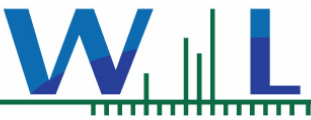
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	02/27/15 01:44	
4,4'-DDE	ND	0.010	ug/l	1	02/27/15 01:44	
4,4'-DDT	ND	0.010	ug/l	1	02/27/15 01:44	
Aldrin	ND	0.010	ug/l	1	02/27/15 01:44	
alpha-BHC	ND	0.010	ug/l	1	02/27/15 01:44	
Aroclor 1016	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1221	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1232	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1242	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1248	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1254	ND	0.10	ug/l	1	02/27/15 01:44	
Aroclor 1260	ND	0.10	ug/l	1	02/27/15 01:44	
beta-BHC	ND	0.010	ug/l	1	02/27/15 01:44	
Chlordane (tech)	ND	0.10	ug/l	1	02/27/15 01:44	
Chlorothalonil	ND	0.050	ug/l	1	02/27/15 01:44	
delta-BHC	ND	0.010	ug/l	1	02/27/15 01:44	
Dieldrin	ND	0.010	ug/l	1	02/27/15 01:44	
Endosulfan I	ND	0.010	ug/l	1	02/27/15 01:44	
Endosulfan II	ND	0.010	ug/l	1	02/27/15 01:44	
Endosulfan sulfate	ND	0.010	ug/l	1	02/27/15 01:44	
Endrin	ND	0.010	ug/l	1	02/27/15 01:44	
Endrin aldehyde	ND	0.010	ug/l	1	02/27/15 01:44	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	02/27/15 01:44	
Heptachlor	ND	0.010	ug/l	1	02/27/15 01:44	
Heptachlor epoxide	ND	0.010	ug/l	1	02/27/15 01:44	
Hexachlorobenzene	ND	0.050	ug/l	1	02/27/15 01:44	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	02/27/15 01:44	
Methoxychlor	ND	0.010	ug/l	1	02/27/15 01:44	
PCBs, Total	ND	0.50	ug/l	1	02/27/15 01:44	
Propachlor	ND	0.050	ug/l	1	02/27/15 01:44	
Toxaphene	ND	1.0	ug/l	1	02/27/15 01:44	
Trifluralin	ND	0.010	ug/l	1	02/27/15 01:44	
Surr: Decachlorobiphenyl	9 %	Conc:0.00928	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	84 %	Conc:0.0843	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

Anions by IC, EPA Method 9056 - Quality Control

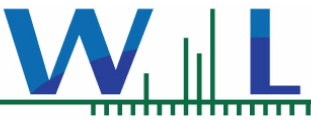
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1002 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1002-BLK1)				Analyzed: 02/27/15 00:12						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



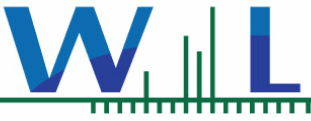
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1002 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1002-BLK1)										
Analyzed: 02/27/15 00:12										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0896		ug/l	0.100		90	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0756		ug/l	0.100		76	70-130			
LCS (W5B1002-BS1)										
Analyzed: 02/27/15 00:43										
4,4'-DDD	0.0912	0.010	ug/l	0.100		91	55-142			
4,4'-DDE	0.0893	0.010	ug/l	0.100		89	49-129			
4,4'-DDT	0.0952	0.010	ug/l	0.100		95	54-160			
Aldrin	0.0797	0.010	ug/l	0.100		80	29-115			
alpha-BHC	0.0846	0.010	ug/l	0.100		85	59-131			
beta-BHC	0.0979	0.010	ug/l	0.100		98	63-136			
delta-BHC	0.104	0.010	ug/l	0.100		104	59-137			
Dieldrin	0.0864	0.010	ug/l	0.100		86	59-135			
Endosulfan I	0.0692	0.010	ug/l	0.100		69	28-138			
Endosulfan II	0.0809	0.010	ug/l	0.100		81	53-133			
Endosulfan sulfate	0.105	0.010	ug/l	0.100		105	58-155			
Endrin	0.0922	0.010	ug/l	0.100		92	57-148			
Endrin aldehyde	0.0835	0.010	ug/l	0.100		83	45-139			
gamma-BHC (Lindane)	0.0873	0.010	ug/l	0.100		87	59-129			
Heptachlor	0.0855	0.010	ug/l	0.100		86	42-136			
Heptachlor epoxide	0.0865	0.010	ug/l	0.100		87	59-134			
Methoxychlor	0.0962	0.010	ug/l	0.100		96	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0892		ug/l	0.100		89	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0724		ug/l	0.100		72	70-130			
LCS Dup (W5B1002-BSD1)										
Analyzed: 02/27/15 01:13										
4,4'-DDD	0.0973	0.010	ug/l	0.100		97	55-142	6	25	
4,4'-DDE	0.0946	0.010	ug/l	0.100		95	49-129	6	25	
4,4'-DDT	0.101	0.010	ug/l	0.100		101	54-160	6	25	
Aldrin	0.0871	0.010	ug/l	0.100		87	29-115	9	25	
alpha-BHC	0.0926	0.010	ug/l	0.100		93	59-131	9	25	
beta-BHC	0.103	0.010	ug/l	0.100		103	63-136	5	25	
delta-BHC	0.112	0.010	ug/l	0.100		112	59-137	7	25	
Dieldrin	0.0911	0.010	ug/l	0.100		91	59-135	5	25	
Endosulfan I	0.0742	0.010	ug/l	0.100		74	28-138	7	25	
Endosulfan II	0.0847	0.010	ug/l	0.100		85	53-133	5	25	
Endosulfan sulfate	0.101	0.010	ug/l	0.100		101	58-155	3	25	

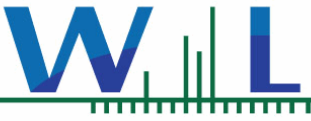


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5B1002 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B1002-BSD1)				Analyzed: 02/27/15 01:13						
Endrin	0.0971	0.010	ug/l	0.100		97	57-148	5	25	
Endrin aldehyde	0.0908	0.010	ug/l	0.100		91	45-139	8	25	
gamma-BHC (Lindane)	0.0954	0.010	ug/l	0.100		95	59-129	9	25	
Heptachlor	0.0933	0.010	ug/l	0.100		93	42-136	9	25	
Heptachlor epoxide	0.0930	0.010	ug/l	0.100		93	59-134	7	25	
Methoxychlor	0.0916	0.010	ug/l	0.100		92	56-167	5	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0895</i>		<i>ug/l</i>	<i>0.100</i>		<i>90</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0783</i>		<i>ug/l</i>	<i>0.100</i>		<i>78</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/17/15 09:00
Date Reported: 03/05/15 17:08

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1294

2/26/2015

Invoice: A504101

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1294 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/17/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 2/17/2015 - 10:00 Report Due: 3/03/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 4.0	Containers Intact COC/Labels Agree Preservation Confirmed Received On Wet Ice Packing Material - Other Sample(s) were received in temperature range. Initial receipt at BSK-FAL
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Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B1294-01
Sampled By: Coral Shaw
Sample Description: MW-15D // AB26920

Sample Date - Time: 02/14/15 - 17:10
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A501929	02/20/15	02/21/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A501929	02/20/15	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	112 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A501918	02/19/15	02/21/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A501918	02/19/15	02/21/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A501918	02/19/15	02/21/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A501918	02/19/15	02/21/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A501918	02/19/15	02/21/15	
Surrogate: DCPAA	EPA 515.3	88 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1294-01
Sampled By: Coral Shaw
Sample Description: MW-15D // AB26920

Sample Date - Time: 02/14/15 - 17:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A501992	02/23/15	02/23/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	BS1.0, CV0.0
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A501992	02/23/15	02/23/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A501992	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1294-01
Sampled By: Coral Shaw
Sample Description: MW-15D // AB26920

Sample Date - Time: 02/14/15 - 17:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics by GC-MS</u>									
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A501992	02/23/15	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	91 %	<i>Acceptable range: 70-130 %</i>						
Surrogate: Bromofluorobenzene	EPA 524.2	96 %	<i>Acceptable range: 70-130 %</i>						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502051	02/23/15	02/24/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502051	02/23/15	02/24/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502051	02/23/15	02/24/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502051	02/23/15	02/24/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502051	02/23/15	02/24/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502051	02/23/15	02/24/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502051	02/23/15	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	98 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502038	02/23/15	02/24/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502038	02/23/15	02/24/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502038	02/23/15	02/24/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A501867	02/20/15	02/20/15	
Surrogate: AMPA	EPA 547	91 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A501985	02/20/15	02/21/15	

Certificate of Analysis

Sample ID: A5B1294-01
Sampled By: Coral Shaw
Sample Description: MW-15D // AB26920

Sample Date - Time: 02/14/15 - 17:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A501738	02/17/15	02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A501929

Prepared: 02/20/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A501929-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							02/20/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike (A501929-BS1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		123	70-130			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		102	70-130			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			02/20/15	

Blank Spike Dup (A501929-BSD1)

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		121	70-130	1	20	02/21/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		105	70-130	2	20	02/21/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		110	70-130			02/21/15	

Matrix Spike (A501929-MS1), Source: A5B1118-06

Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12	ND	121	65-135			02/20/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12	ND	106	65-135			02/20/15	
Surrogate: 1-Br-2-Nitrobenzene	0.50			0.46		109	70-130			02/20/15	

EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A501918-BLK1)

2,4,5-T	ND	1.0	ug/L							02/20/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							02/20/15	
2,4-D	ND	10	ug/L							02/20/15	
Bentazon	ND	2.0	ug/L							02/20/15	
Dalapon	ND	10	ug/L							02/20/15	
Dicamba	ND	1.5	ug/L							02/20/15	
Dinoseb	ND	2.0	ug/L							02/20/15	
Pentachlorophenol	ND	0.20	ug/L							02/20/15	
Picloram	ND	1.0	ug/L							02/20/15	
Surrogate: DCPAA	58			58		100	70-130			02/20/15	

Blank Spike (A501918-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130			02/20/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		97	70-130			02/20/15	
2,4-D	0.44	10	ug/L	0.40		110	70-130			02/20/15	
Bentazon	8.5	2.0	ug/L	8.0		107	70-130			02/20/15	
Dalapon	4.1	10	ug/L	4.0		102	70-130			02/20/15	
Dicamba	6.0	1.5	ug/L	6.0		101	70-130			02/20/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			02/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			02/20/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			02/20/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A501918

Prepared: 02/19/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A501918-BS1)

Surrogate: DCPAA 57 58 98 70-130 02/20/15

Blank Spike Dup (A501918-BSD1)

2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130	0	20	02/21/15
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80		100	70-130	3	20	02/21/15
2,4-D	0.45	10	ug/L	0.40		112	70-130	2	20	02/21/15
Bentazon	8.5	2.0	ug/L	8.0		106	70-130	0	20	02/21/15
Dalapon	4.0	10	ug/L	4.0		100	70-130	2	20	02/21/15
Dicamba	6.4	1.5	ug/L	6.0		106	70-130	5	20	02/21/15
Dinoseb	0.80	2.0	ug/L	0.80		100	70-130	2	20	02/21/15
Pentachlorophenol	0.15	0.20	ug/L	0.16		96	70-130	2	20	02/21/15
Picloram	0.40	1.0	ug/L	0.40		100	70-130	0	20	02/21/15
Surrogate: DCPAA	57			58		98	70-130			02/21/15

Matrix Spike (A501918-MS1), Source: A5B1073-01

2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			02/20/15
2,4,5-TP (Silvex)	0.79	1.0	ug/L	0.80	ND	99	70-130			02/20/15
2,4-D	0.44	10	ug/L	0.40	ND	109	70-130			02/20/15
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130			02/20/15
Dalapon	4.1	10	ug/L	4.0	ND	103	70-130			02/20/15
Dicamba	6.1	1.5	ug/L	6.0	ND	101	70-130			02/20/15
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130			02/20/15
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130			02/20/15
Picloram	0.40	1.0	ug/L	0.40	ND	100	70-130			02/20/15
Surrogate: DCPAA	58			58		100	70-130			02/20/15

Matrix Spike Dup (A501918-MSD1), Source: A5B1073-01

2,4,5-T	4.0	1.0	ug/L	4.0	ND	100	70-130	2	20	02/20/15
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80	ND	100	70-130	1	20	02/20/15
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	2	20	02/20/15
Bentazon	8.5	2.0	ug/L	8.0	ND	107	70-130	0	20	02/20/15
Dalapon	4.0	10	ug/L	4.0	ND	101	70-130	2	20	02/20/15
Dicamba	6.0	1.5	ug/L	6.0	ND	100	70-130	1	20	02/20/15
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	3	20	02/20/15
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130	0	20	02/20/15
Picloram	0.38	1.0	ug/L	0.40	ND	96	70-130	4	20	02/20/15
Surrogate: DCPAA	57			58		99	70-130			02/20/15

EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15
1,1,1-Trichloroethane	ND	0.50	ug/L							02/23/15

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/23/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/23/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/23/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/23/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/23/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/23/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/23/15	
2-Butanone	ND	5.0	ug/L							02/23/15	
2-Chlorotoluene	ND	0.50	ug/L							02/23/15	
2-Hexanone	ND	10	ug/L							02/23/15	
4-Chlorotoluene	ND	0.50	ug/L							02/23/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/23/15	
Acetone	ND	10	ug/L							02/23/15	
Benzene	ND	0.50	ug/L							02/23/15	
Bromobenzene	ND	0.50	ug/L							02/23/15	
Bromochloromethane	ND	0.50	ug/L							02/23/15	
Bromodichloromethane	ND	0.50	ug/L							02/23/15	
Bromoform	ND	0.50	ug/L							02/23/15	
Bromomethane	ND	0.50	ug/L							02/23/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/23/15	
Chlorobenzene	ND	0.50	ug/L							02/23/15	
Chloroethane	ND	0.50	ug/L							02/23/15	
Chloroform	ND	0.50	ug/L							02/23/15	
Chloromethane	ND	0.50	ug/L							02/23/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Dibromochloromethane	ND	0.50	ug/L							02/23/15	
Dibromomethane	ND	0.50	ug/L							02/23/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/23/15	
Dichloromethane	ND	0.50	ug/L							02/23/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/23/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/23/15	
Ethylbenzene	ND	0.50	ug/L							02/23/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/23/15	
Isopropylbenzene	ND	0.50	ug/L							02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A501992-BLK1)

m,p-Xylenes	ND	0.50	ug/L							02/23/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/23/15	
Naphthalene	ND	0.50	ug/L							02/23/15	
n-Butylbenzene	ND	0.50	ug/L							02/23/15	
n-Propylbenzene	ND	0.50	ug/L							02/23/15	
o-Xylene	ND	0.50	ug/L							02/23/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/23/15	
sec-Butylbenzene	ND	0.50	ug/L							02/23/15	
Styrene	ND	0.50	ug/L							02/23/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/23/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/23/15	
tert-Butylbenzene	ND	0.50	ug/L							02/23/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/23/15	
Toluene	ND	0.50	ug/L							02/23/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/23/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/23/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/23/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/23/15	
Vinyl Chloride	ND	0.50	ug/L							02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.6			5.0		91	70-130			02/23/15	
Surrogate: Bromofluorobenzene	48			50		95	70-130			02/23/15	

Blank Spike (A501992-BS1)

1,1,1,2-Tetrachloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1,1-Trichloroethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,1,2,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130			02/23/15	
1,1,2-Trichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,1-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			02/23/15	
1,1-Dichloropropene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
1,2,3-Trichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2,4-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2,4-Trimethylbenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,2-Dichloroethane	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,2-Dichloropropane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3,5-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
1,3-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
1,3-Dichloropropane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
1,4-Dichlorobenzene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
2,2-Dichloropropane	9.5	0.50	ug/L	10		95	70-130			02/23/15	
2-Butanone	8.4	5.0	ug/L	10		84	70-130			02/23/15	
2-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
2-Hexanone	8.7	10	ug/L	10		87	70-130			02/23/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

4-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
4-Methyl-2-pentanone	8.5	5.0	ug/L	10		85	70-130			02/23/15	
Acetone	8.2	10	ug/L	10		82	70-130			02/23/15	
Benzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Bromobenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Bromochloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromodichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Bromoform	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Bromomethane	14	0.50	ug/L	10		138	70-130			02/23/15	BS High
Carbon Tetrachloride	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chlorobenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Chloroethane	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Chloroform	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Chloromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15	
cis-1,2-Dichloroethene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
cis-1,3-Dichloropropene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Dibromochloromethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dibromomethane	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Dichlorodifluoromethane	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Dichloromethane	9.0	0.50	ug/L	10		90	70-130			02/23/15	
Di-isopropyl ether (DIPE)	8.9	3.0	ug/L	10		89	70-130			02/23/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130			02/23/15	
Ethylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Hexachlorobutadiene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130			02/23/15	
m,p-Xylenes	19	0.50	ug/L	20		93	70-130			02/23/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		93	70-130			02/23/15	
Naphthalene	9.0	0.50	ug/L	10		90	70-130			02/23/15	
n-Butylbenzene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
n-Propylbenzene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
o-Xylene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
p-Isopropyltoluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			02/23/15	
Styrene	10	0.50	ug/L	10		100	70-130			02/23/15	
tert-Amyl Methyl Ether (TAME)	9.4	3.0	ug/L	10		94	70-130			02/23/15	
tert-Butyl alcohol (TBA)	7.3	2.0	ug/L	10		73	70-130			02/23/15	
tert-Butylbenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Tetrachloroethene (PCE)	9.6	0.50	ug/L	10		96	70-130			02/23/15	
Toluene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
trans-1,2-Dichloroethene	9.4	0.50	ug/L	10		94	70-130			02/23/15	
trans-1,3-Dichloropropene	9.1	0.50	ug/L	10		91	70-130			02/23/15	
Trichloroethene (TCE)	9.2	0.50	ug/L	10		92	70-130			02/23/15	
Trichlorofluoromethane	9.0	5.0	ug/L	10		90	70-130			02/23/15	
Vinyl Chloride	8.8	0.50	ug/L	10		88	70-130			02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.5			5.0		90	70-130			02/23/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A501992-BS1)

Surrogate: Bromofluorobenzene 46 50 92 70-130 02/23/15

Blank Spike Dup (A501992-BSD1)

1,1,1,2-Tetrachloroethane	9.8	0.50	ug/L	10	98	70-130	7	30	02/23/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	100	70-130	8	30	02/23/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10	102	70-130	10	30	02/23/15		
1,1,2-Trichloroethane	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
1,1-Dichloroethane	10	0.50	ug/L	10	101	70-130	10	30	02/23/15		
1,1-Dichloroethene	11	0.50	ug/L	10	109	70-130	10	30	02/23/15		
1,1-Dichloropropene	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
1,2,3-Trichlorobenzene	9.5	0.50	ug/L	10	95	70-130	4	30	02/23/15		
1,2,4-Trichlorobenzene	9.5	0.50	ug/L	10	95	70-130	6	30	02/23/15		
1,2,4-Trimethylbenzene	10	0.50	ug/L	10	102	70-130	12	30	02/23/15		
1,2-Dichlorobenzene	10	0.50	ug/L	10	101	70-130	10	30	02/23/15		
1,2-Dichloroethane	10	0.50	ug/L	10	101	70-130	9	30	02/23/15		
1,2-Dichloropropane	9.9	0.50	ug/L	10	99	70-130	10	30	02/23/15		
1,3,5-Trimethylbenzene	11	0.50	ug/L	10	106	70-130	11	30	02/23/15		
1,3-Dichlorobenzene	10	0.50	ug/L	10	102	70-130	11	30	02/23/15		
1,3-Dichloropropane	9.9	0.50	ug/L	10	99	70-130	8	30	02/23/15		
1,4-Dichlorobenzene	10	0.50	ug/L	10	102	70-130	12	30	02/23/15		
2,2-Dichloropropane	10	0.50	ug/L	10	105	70-130	10	30	02/23/15		
2-Butanone	9.5	5.0	ug/L	10	95	70-130	12	30	02/23/15		
2-Chlorotoluene	10	0.50	ug/L	10	104	70-130	12	30	02/23/15		
2-Hexanone	9.7	10	ug/L	10	97	70-130	11	30	02/23/15		
4-Chlorotoluene	10	0.50	ug/L	10	104	70-130	12	30	02/23/15		
4-Methyl-2-pentanone	9.3	5.0	ug/L	10	93	70-130	9	30	02/23/15		
Acetone	9.4	10	ug/L	10	94	70-130	14	30	02/23/15		
Benzene	10	0.50	ug/L	10	100	70-130	10	30	02/23/15		
Bromobenzene	10	0.50	ug/L	10	102	70-130	10	30	02/23/15		
Bromochloromethane	9.7	0.50	ug/L	10	97	70-130	10	30	02/23/15		
Bromodichloromethane	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
Bromoform	9.2	0.50	ug/L	10	92	70-130	5	30	02/23/15		
Bromomethane	15	0.50	ug/L	10	146	70-130	6	30	02/23/15	BS	High
Carbon Tetrachloride	11	0.50	ug/L	10	106	70-130	10	30	02/23/15		
Chlorobenzene	10	0.50	ug/L	10	100	70-130	9	30	02/23/15		
Chloroethane	11	0.50	ug/L	10	108	70-130	12	30	02/23/15		
Chloroform	10	0.50	ug/L	10	100	70-130	10	30	02/23/15		
Chloromethane	9.7	0.50	ug/L	10	97	70-130	10	30	02/23/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10	101	70-130	11	30	02/23/15		
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10	99	70-130	9	30	02/23/15		
Dibromochloromethane	9.8	0.50	ug/L	10	98	70-130	8	30	02/23/15		
Dibromomethane	10	0.50	ug/L	10	100	70-130	9	30	02/23/15		
Dichlorodifluoromethane	10	0.50	ug/L	10	104	70-130	10	30	02/23/15		
Dichloromethane	10	0.50	ug/L	10	101	70-130	11	30	02/23/15		

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A501992

Prepared: 02/23/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A501992-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	6	30	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130	7	30	02/23/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	11	30	02/23/15	
Hexachlorobutadiene	10	0.50	ug/L	10		103	70-130	10	30	02/23/15	
Isopropylbenzene	11	0.50	ug/L	10		107	70-130	11	30	02/23/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130	11	30	02/23/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		102	70-130	9	30	02/23/15	
Naphthalene	7.9	0.50	ug/L	10		79	70-130	14	30	02/23/15	
n-Butylbenzene	10	0.50	ug/L	10		102	70-130	11	30	02/23/15	
n-Propylbenzene	11	0.50	ug/L	10		106	70-130	12	30	02/23/15	
o-Xylene	10	0.50	ug/L	10		104	70-130	11	30	02/23/15	
p-Isopropyltoluene	10	0.50	ug/L	10		104	70-130	13	30	02/23/15	
sec-Butylbenzene	11	0.50	ug/L	10		106	70-130	13	30	02/23/15	
Styrene	11	0.50	ug/L	10		114	70-130	13	30	02/23/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		102	70-130	8	30	02/23/15	
tert-Butyl alcohol (TBA)	8.4	2.0	ug/L	10		84	70-130	14	30	02/23/15	
tert-Butylbenzene	10	0.50	ug/L	10		105	70-130	12	30	02/23/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	9	30	02/23/15	
Toluene	10	0.50	ug/L	10		100	70-130	9	30	02/23/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		105	70-130	11	30	02/23/15	
trans-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	8	30	02/23/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130	10	30	02/23/15	
Trichlorofluoromethane	10	5.0	ug/L	10		100	70-130	11	30	02/23/15	
Vinyl Chloride	9.7	0.50	ug/L	10		97	70-130	9	30	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.8			5.0		97	70-130			02/23/15	
Surrogate: Bromofluorobenzene	49			50		97	70-130			02/23/15	

EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Alachlor	ND	1.0	ug/L							02/24/15	
Atrazine	ND	0.50	ug/L							02/24/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/24/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/24/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/24/15	
Bromacil	ND	10	ug/L							02/24/15	
Butachlor	ND	0.38	ug/L							02/24/15	
Diazinon	ND	0.25	ug/L							02/24/15	
Dimethoate	ND	10	ug/L							02/24/15	
Metolachlor	ND	0.50	ug/L							02/24/15	
Metribuzin	ND	0.50	ug/L							02/24/15	
Molinate	ND	2.0	ug/L							02/24/15	
Prometryn	ND	2.0	ug/L							02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502051-BLK1)

Propachlor	ND	0.50	ug/L							02/24/15	
Simazine	ND	1.0	ug/L							02/24/15	
Thiobencarb	ND	1.0	ug/L							02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.5			5.0		110	70-130			02/24/15	

Blank Spike (A502051-BS1)

Alachlor	0.87	1.0	ug/L	1.0		87	70-130			02/24/15	
Atrazine	0.43	0.50	ug/L	0.50		87	70-130			02/24/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10		82	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		91	70-130			02/24/15	
Bromacil	0.96	10	ug/L	1.0		96	70-130			02/24/15	
Butachlor	0.87	0.38	ug/L	1.0		87	70-130			02/24/15	
Diazinon	0.16	0.25	ug/L	0.20		80	70-130			02/24/15	
Dimethoate	0.84	10	ug/L	1.0		84	70-130			02/24/15	
Metolachlor	1.8	0.50	ug/L	2.0		91	70-130			02/24/15	
Metribuzin	0.82	0.50	ug/L	1.0		82	70-130			02/24/15	
Molinate	0.91	2.0	ug/L	1.0		91	70-130			02/24/15	
Prometryn	1.5	2.0	ug/L	2.0		76	70-130			02/24/15	
Propachlor	0.46	0.50	ug/L	0.50		93	70-130			02/24/15	
Simazine	0.31	1.0	ug/L	0.35		88	70-130			02/24/15	
Thiobencarb	0.44	1.0	ug/L	0.50		87	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.4			5.0		108	70-130			02/24/15	

Blank Spike Dup (A502051-bsd1)

Alachlor	0.90	1.0	ug/L	1.0		90	70-130	3	30	02/24/15	
Atrazine	0.47	0.50	ug/L	0.50		94	70-130	8	30	02/24/15	
Benzo(a)pyrene	0.085	0.10	ug/L	0.10		85	70-130	4	30	02/24/15	
Bis(2-ethylhexyl) adipate	1.8	3.0	ug/L	2.0		90	70-130	1	30	02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		94	70-130	3	30	02/24/15	
Bromacil	1.0	10	ug/L	1.0		103	70-130	7	30	02/24/15	
Butachlor	0.90	0.38	ug/L	1.0		90	70-130	3	30	02/24/15	
Diazinon	0.17	0.25	ug/L	0.20		83	70-130	4	30	02/24/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130	5	30	02/24/15	
Metolachlor	1.9	0.50	ug/L	2.0		96	70-130	5	30	02/24/15	
Metribuzin	0.93	0.50	ug/L	1.0		93	70-130	13	30	02/24/15	
Molinate	1.0	2.0	ug/L	1.0		105	70-130	14	30	02/24/15	
Prometryn	1.8	2.0	ug/L	2.0		92	70-130	19	30	02/24/15	
Propachlor	0.50	0.50	ug/L	0.50		100	70-130	7	30	02/24/15	
Simazine	0.34	1.0	ug/L	0.35		96	70-130	9	30	02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	8	30	02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.8			5.0		116	70-130			02/24/15	

Matrix Spike (A502051-MS1), Source: A5B1296-01

Alachlor	0.94	1.0	ug/L	0.97	ND	98	70-130			02/24/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502051

Prepared: 02/23/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502051-MS1), Source: A5B1296-01

Atrazine	0.47	0.50	ug/L	0.48	ND	98	70-130			02/24/15	
Benzo(a)pyrene	0.092	0.10	ug/L	0.097	ND	95	70-130			02/24/15	
Bis(2-ethylhexyl) adipate	2.0	3.0	ug/L	1.9	ND	103	70-130			02/24/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.4	ND	99	70-130			02/24/15	
Bromacil	1.1	10	ug/L	0.97	ND	114	70-130			02/24/15	
Butachlor	0.94	0.38	ug/L	0.97	ND	98	70-130			02/24/15	
Diazinon	0.18	0.25	ug/L	0.19	ND	94	70-130			02/24/15	
Dimethoate	0.85	10	ug/L	0.97	ND	88	70-130			02/24/15	
Metolachlor	1.9	0.50	ug/L	1.9	ND	99	70-130			02/24/15	
Metribuzin	0.92	0.50	ug/L	0.97	ND	95	70-130			02/24/15	
Molinate	0.95	2.0	ug/L	0.97	ND	98	70-130			02/24/15	
Prometryn	2.0	2.0	ug/L	1.9	ND	105	70-130			02/24/15	
Propachlor	0.49	0.50	ug/L	0.48	ND	102	70-130			02/24/15	
Simazine	0.35	1.0	ug/L	0.34	ND	104	70-130			02/24/15	
Thiobencarb	0.47	1.0	ug/L	0.48	ND	96	70-130			02/24/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.9			4.8		101	70-130			02/24/15	

EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502038-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							02/24/15	
Aldicarb	ND	3.0	ug/L							02/24/15	
Aldicarb Sulfone	ND	2.0	ug/L							02/24/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							02/24/15	
Carbaryl	ND	5.0	ug/L							02/24/15	
Carbofuran	ND	5.0	ug/L							02/24/15	
Methiocarb	ND	2.0	ug/L							02/24/15	
Methomyl	ND	2.0	ug/L							02/24/15	
Oxamyl	ND	20	ug/L							02/24/15	
Propoxur	ND	2.0	ug/L							02/24/15	

Blank Spike (A502038-BS1)

3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120			02/24/15	
Aldicarb	4.6	3.0	ug/L	4.0		114	80-120			02/24/15	
Aldicarb Sulfone	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120			02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		97	80-120			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0		98	80-120			02/24/15	
Methiocarb	3.9	2.0	ug/L	4.0		97	80-120			02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120			02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120			02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502038

Prepared: 02/23/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502038-BSD1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120	2	20	02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0		113	80-120	1	20	02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120	1	20	02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		108	80-120	0	20	02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0		96	80-120	1	20	02/24/15	
Carbofuran	3.8	5.0	ug/L	4.0		94	80-120	4	20	02/24/15	
Methiocarb	4.0	2.0	ug/L	4.0		99	80-120	2	20	02/24/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120	0	20	02/24/15	
Oxamyl	3.4	20	ug/L	4.0		85	80-120	0	20	02/24/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120	0	20	02/24/15	

Matrix Spike (A502038-MS1), Source: A5B1073-01

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0	ND	98	65-135			02/24/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	113	65-135			02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0	ND	108	65-135			02/24/15	
Carbaryl	3.7	5.0	ug/L	4.0	ND	94	65-135			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	97	65-135			02/24/15	
Methiocarb	3.8	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Methomyl	3.7	2.0	ug/L	4.0	ND	93	65-135			02/24/15	
Oxamyl	3.4	20	ug/L	4.0	ND	85	65-135			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	98	65-135			02/24/15	

EPA 547 - Quality Control

Batch: A501867

Prepared: 02/20/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A501867-BLK1)

Glyphosate	ND	25	ug/L							02/20/15	
Surrogate: AMPA	97			100		97	70-130			02/20/15	

Blank Spike (A501867-BS1)

Glyphosate	95	25	ug/L	100		95	70-130			02/20/15	
Surrogate: AMPA	110			100		111	70-130			02/20/15	

Blank Spike Dup (A501867-BSD1)

Glyphosate	110	25	ug/L	100		114	70-130	18	30	02/20/15	
Surrogate: AMPA	110			100		113	70-130			02/20/15	

Matrix Spike (A501867-MS1), Source: A5B1215-01

Glyphosate	150	25	ug/L	100	ND	146	70-130			02/20/15	MS1.0 High
Surrogate: AMPA	110			100		113	70-130			02/20/15	

Matrix Spike Dup (A501867-MSD1), Source: A5B1215-01

Glyphosate	130	25	ug/L	100	ND	132	70-130	10	30	02/20/15	MS1.0 High
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BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A501867

Prepared: 02/20/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A501867-MSD1), Source: A5B1215-01

Surrogate: AMPA 110 100 104 70-130 02/20/15

EPA 548.1 - Quality Control

Batch: A501985

Prepared: 02/20/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A501985-BLK1)

Endothall ND 45 ug/L 02/21/15

Blank Spike (A501985-BS1)

Endothall 16 45 ug/L 20 81 54-105 02/21/15

Blank Spike Dup (A501985-BSD1)

Endothall 17 45 ug/L 20 87 54-105 8 46 02/21/15

Matrix Spike (A501985-MS1), Source: A5B1500-01

Endothall 4.4 45 ug/L 20 ND 22 54-105 02/21/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A501738

Prepared: 02/17/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A501738-BLK1)

Diquat ND 4.0 ug/L 02/24/15

Blank Spike (A501738-BS1)

Diquat 3.7 4.0 ug/L 4.0 93 70-130 02/24/15

Blank Spike Dup (A501738-BSD1)

Diquat 3.6 4.0 ug/L 4.0 89 70-130 5 30 02/24/15

Matrix Spike (A501738-MS1), Source: A5B1073-01

Diquat 3.6 4.0 ug/L 4.0 ND 89 70-130 02/24/15

Matrix Spike (A501738-MS2), Source: A5B1073-02

Diquat 3.6 4.0 ug/L 4.0 ND 90 70-130 02/24/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP 2435

Vancouver

State of Oregon - NELAC WA100008 State of Washington C824-13



A5B1294

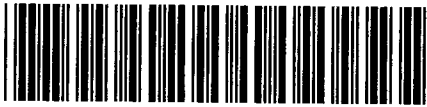


02172015

Monte6227

Turnaround: Standard

Due Date: 3/3/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

Turnaround Time Request
 Standard - 10 business days
 Rush (Surcharge may apply)
 Date needed:

A5B1294
 Montie6227

 02/17/2015
 10

*Required Fields

Temp: 7.0

Company/Client Name*: Monterey Bay Analytical Services

Report Attention*: Mason Weidner-Holland

Invoice To*: David Holland

Phone*: 831-375-6227

Fax: 831-641-0734

Address*: 4 Justin Court, Suite D

Additional cc's: David Holland

PO#:

E-mail*: mweidner@mbasinc.com, dholland@mbasinc.com

Project: Cal Am

City*: Monterey

State*: CA Zip*: 93940

Reporting Options:

Trace (-Flag) Swamp EDD Type: _____

SWRCB (Drinking Water)

EDT to California SWRCB (Drinking Water)

Sampler Name (Printed/Signature)*: Coral Shaw

Merced Co
 Madera Co
 Tulare Co
 Other: _____

System Number*: _____
 Geotracker #: _____
 Drinking Water SO=Solid

Matrix Types: SW=Surface Water BW=Battled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE											
		Date	Time			X	X	X	X	X	X	X	X	X	X		
1	MW-15D	2/14/15	17:10	GW	AB26920	X	X	X	X	X	X	X	X	X	X	X	X
<i>Please include excell report Seawater</i>																	

Relinquished by: (Signature and Printed Name) *[Signature]* Company MBAS Date 2/16/15 Time 1600
 Received by: (Signature and Printed Name) _____ Date _____ Time _____

Received for: (Signature and Printed Name) *[Signature]* Date *2/17/15* Time *1600*
 Payment Received at Delivery: _____ Date: _____

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX
 Cooling Method: Wet Blue None

Amount: _____ P/L#: _____
 Chilling Process Begun: Y N
 Payment Method: Check Cash

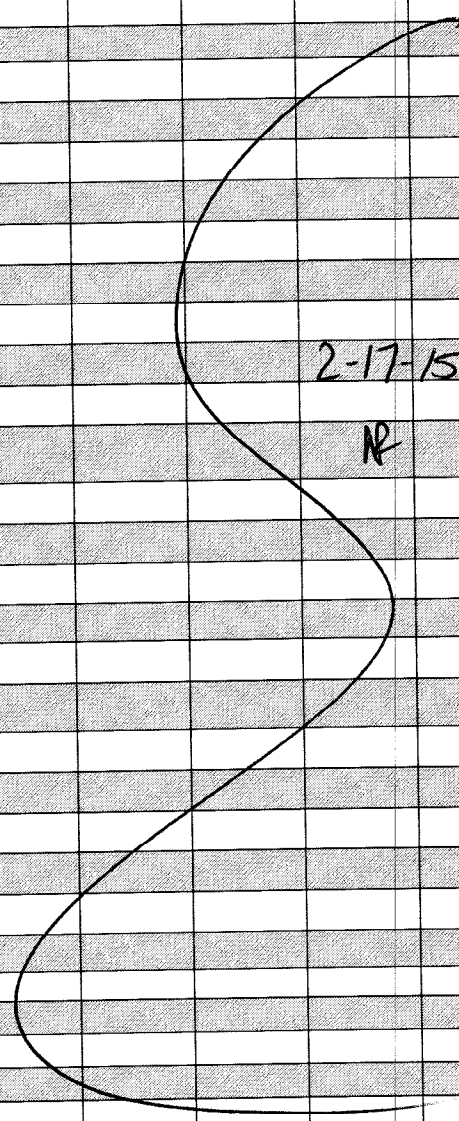
Payment for services rendered is warranted herein as due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless confirmed by a written amendment. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	<u>Yes</u> No NA	Were correct containers and preservatives received for the tests requested?	<u>Yes</u> No NA		
	If samples were taken today, is there evidence that chilling has begun?	Yes No <u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)	Yes No <u>NA</u>		
	Did all bottles arrive unbroken and intact?	<u>Yes</u> No	Was a sufficient amount of sample received?	<u>Yes</u> No		
	Did all bottle labels agree with COC?	<u>Yes</u> No	Do samples have a hold time <72 hours?	Yes <u>No</u>		
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No <u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes No <u>NA</u>		
Bottles Received <small>"—" means preservation/chlorine checks are either N/A or are performed in the lab</small>	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks Passed?	1			
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—			
	None (P) ^{White Cap}	—	—			
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y N			
	HNO_3 (P) ^{Red Cap}	—	—			
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y N			
	NaOH (P) ^{Green Cap}	Cl, pH >10	Y N			
	NaOH + ZnAc (P)	pH > 9	Y N			
	Dissolved Oxygen 300ml (g)	—	—			
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—			
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—			
	$\text{Na}_2\text{O}_3\text{S}+\text{HCl}$ (AG) ^{Lt. Pink Label} 525	—	—	2C		
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—	1C		
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524	—	—	2AIV		
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—	3V		
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	<u>Y</u> N	1V		
	NH_4Cl (AG) ^{Purple Label} 552	—	—			
	EDA (AG) ^{Brown Label} DBPs	—	—			
	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624	—	—	3V		
	Buffer pH 4 (CG)	—	—			
	None (CG)	—	—			
	H_3PO_4 (CG) ^{Salmon Label}	—	—			
	Other:					
Asbestos 1Liter Plastic w/ Foil	—	—				
Low Level Hg / Metals Double Baggie	—	—				
Bottled Water	—	—				
Clear Glass Jar: 250 / 500 / 1 Liter	—	—				
Soil Tube Brass / Steel / Plastic	—	—				
Tedlar Bag / Plastic Bag	—	—				
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	S P			S P		
	S P			S P		
Comments						



2-17-15
R

Labeled by: SB @ 1101

Labels checked by: MW @ 11:24

RUSH Paged by: _____ @ _____

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested									
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter				

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com	
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []	
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____	
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size	
26920		MW-1D (Monitoring)	2-14-15	17:10	1.6						27			
													Field Parameters:	
													Temp:	19.2°C
													pH:	6.72
													Sp Cond:	40,882 µS/cm
													Turb:	0.65 NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Nathan Reynolds / GEOSCIENCE	<i>Nathan Reynolds</i>	2-14-15	17:10	Is sample for regulatory purposes? <input checked="" type="radio"/> Yes / <input type="radio"/> No
Relinquished by:	Coral Shaw / Geoscience	<i>Coral Shaw</i>	2-15-15		
Received by:	DAVID HOLLAND	<i>David Holland</i>	2/15/15	0930	
Relinquished by:					
Received by:					

[] Payment received	Check #	Amount:	Receipt #	Date:
----------------------	---------	---------	-----------	-------

Callan DW - Geoscience

Sample Condition Upon Receipt

26920

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

500mL Filtered for dissolved total P, TKN, NH₃ elect + H₂SO₄ to pH < 2

250mL " " for colorimetric orthophosphate

DH 2/14⁵/15



California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com

ELAP Certification Number: 2385

Lab Number: AB27348

Collection Date/Time: 2/25/2015 9:30 Sample Collector: SOBOWLEW J
Submittal Date/Time: 2/25/2015 11:37 Sample ID

Sample Description: MW-3S (monitoring)

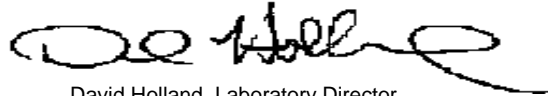
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	97		2	3/4/2015	LRH
Aluminum, Total	EPA200.8	µg/L	166		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	3/6/2015	TC
Arsenic, Total	EPA200.8	µg/L	34		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	97	J	125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	118		10	3/4/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	2.2		0.5	4/2/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	44.8		5.0	2/27/2015	DH
Calcium	EPA200.7	mg/L	628		50	2/27/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	666		50	4/2/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		3/5/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	3/4/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	11680		50	2/27/2015	DH
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		3/3/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	Not Detected	H	3	2/26/2015	LRH
Copper, Total	EPA200.8	µg/L	42	J	50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/5/2015	BSK
Dioxin	EPA 1613	pg/L	Attached	E		3/5/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/3/2015	BSK
Dissolved Oxygen (Field)	SM4500-O G	mg/L (H)	4.7		0.5	2/25/2015	JS
Endothall	EPA548.1	µg/L	Not Detected	E		2/27/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	0.4		0.5	2/27/2015	DH
Glyphosate	EPA547	µg/L	Not Detected	E		3/3/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5044		10	3/2/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	3/4/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		10	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		100	4/2/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/9/2015	TC
Lithium	EPA200.8	µg/L	144		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	844		5	2/27/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	797		10	4/2/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	Not Detected		100	4/2/2015	MW
Manganese, Total	EPA200.7	µg/L	58	J	100	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/25/2015	HM
Nitrate as NO3	EPA300.0	mg/L	29		5	2/27/2015	DH
Nitrate+Nitrite as N	EPA300.0	mg/L	6.5		0.5	2/27/2015	DH

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

Nitrite as NO ₂ -N, Dissolved	EPA300.0	mg/L	Not Detected		0.5	2/27/2015	DH
Odor Threshold at 60 C	SM2150B	TON	5		1	2/26/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.18		0.03	2/25/2015	LRH
pH (Field Test)	SM4500-H+B	pH	7.25			2/25/2015	JS
pH (Laboratory)	SM4500-H+B	pH (H)	7.2		0.1	2/25/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		3/4/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.12		0.03	3/6/2015	LRH
Potassium	EPA200.7	mg/L	168		5	2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	157		1	4/2/2015	MW
QC Ratio TDS/SEC	Calculation		0.68			3/2/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		3/1/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	19		0.5	4/2/2015	MW
Sodium	EPA200.7	mg/L	5340		50	2/27/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	5550		5	2/27/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	34180		1	2/27/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	33456		1	2/25/2015	JS
Strontium, Dissolved	EPA200.8	µg/L	7619		62	3/4/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	1533		50	2/27/2015	DH
Temperature (Field)	SM2550	° C	17.5			2/25/2015	JS
Total Diss. Solids	SM2540C	mg/L	23400		10	2/26/2015	HM
Turbidity	EPA180.1	NTU	0.15		0.05	2/26/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.96		0.05	2/25/2015	JS
Volatile Org. Compounds (524)	EPA524	µg/L	Attached	E		2/27/2015	BSK
Zinc, Total	EPA200.8	µg/L	312		250	3/4/2015	SM

Sample Comments: Odor: Salty

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27348 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	5340	0.04350	232.29
Potassium	168	0.02558	4.30
Calcium	628	0.04990	31.34
Magnesium	844	0.08229	69.45
NH3-N	0	0.07143	0.00
		SUM	337.38

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	97	0.02000	1.94
Sulfate	1533	0.02082	31.92
Chloride	11680	0.02821	329.49
Nitrate-Nitrogen	6.5	0.07138	0.46
Phosphate-P	0.1	0.01031	0.00
Bromide	44.8	0.01252	0.56
		SUM	364.38

ANION-CATION BALANCE **-4** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	34180	
Cation Sum X 100	33738	99%
Anion Sum X 100	36438	107%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27348 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	5550	0.04350	241.43
Potassium	157	0.02558	4.02
Calcium	666	0.04990	33.23
Magnesium	797	0.08229	65.59
NH3-N	0	0.07143	0.00
		SUM	344.26

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	97	0.02000	1.94
Sulfate	1533	0.02082	31.92
Chloride	11680	0.02821	329.49
Nitrate-Nitrogen	6.5	0.07138	0.46
Phosphate-P	0.1	0.01031	0.00
Bromide	44.8	0.01252	0.56
		SUM	364.38

ANION-CATION BALANCE **-3** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	34180	
Cation Sum X 100	34426	101%
Anion Sum X 100	36438	107%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

MBAS QC Summary (SM 5540C)

Date Analyzed: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.003	---	<0.05	852
ICVL	0.050	0.055	110	80-120	857
ICV	0.250	0.232	92.8	80-120	1006

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27280	0.008	0.250	0.26	0.265	100.8	102.8	1.9	80/120	10	909

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent
 Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample

AB27199 D

25X Dilution

Date Analyzed

Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference

Batch # 20150227

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	0.98	97.7%	0.96	96.1%	1.7%	1	0.94	93.8%	1	0.93	92.5%
B 249.772	0.05-5ppm	0.01	0.01	1.04	103.6%	1.01	101.3%	2.3%	1	0.99	98.7%	1	1.00	99.8%
Ca 317.933	50-300ppm	-3.43	-3.51	47.7	95.4%	46.8	93.5%	1.9%	50	46.7	93.3%	50	45.77	91.5%
Ca 396.847	0.5-50ppm	-0.51	-0.65	51.9	103.8%	51.0	102.1%	1.7%	50	49.7	99.5%	50	49.76	99.5%
Cu 324.754	10ppb-100ppm	-8.30	-10.83	1070	107.0%	1050	105.0%	1.9%	1000	1028	102.8%	1000	1034.5	103.5%
Cu 327.394	10ppb-100ppm	-6.44	-7.99	1086	108.6%	1059	105.9%	2.5%	1000	1036	103.6%	1000	1057.6	105.8%
Fe 238.204	10ppb-100ppm	1.81	3.14	950	95.0%	943	94.3%	0.8%	1000	925	92.5%	1000	931.19	93.1%
Fe 259.940	10ppb-100ppm	-4.29	-1.60	1013	101.3%	993	99.3%	2.0%	1000	974	97.4%	1000	994.75	99.5%
K 766.491	0.5-750ppm	0.09	0.08	10.9	109.3%	10.5	105.0%	4.1%	10	10.6	106.3%	10	10.52	105.2%
Mg 202.583	50-1000ppm	-0.31	-0.45	52.4	104.9%	52.0	104.0%	0.8%	50	51.0	102.0%	50	51.10	102.2%
Mg 279.071	0.5-50ppm	0.01	-0.08	52.6	105.1%	51.5	103.1%	2.0%	50	51.1	102.2%	50	51.03	102.1%
Mn 257.611	10ppb-11ppm	-9.11	-11.09	985	98.5%	967	96.7%	1.8%	1000	955	95.5%	1000	969.08	96.9%
Mn 260.561	10ppb-11ppm	-8.74	-12.88	986	98.6%	971	97.1%	1.5%	1000	960	96.0%	1000	975.47	97.5%
Na 568.821	50-1000ppm	5.80	5.26	58.4	116.8%	58.1	116.2%	0.5%	50	55.6	111.3%	50	57.37	114.7%
Na 589.592	0.5-50ppm	-0.41	-0.48	55.1	110.1%	54.7	109.4%	0.6%	50	53.4	106.8%	50	53.68	107.4%
Si 251.611	0.5-200ppm	0.14	-0.10	50.0	100.0%	49.0	97.9%	2.1%	50	48.5	97.0%	50	49.52	99.0%
Si 252.411	0.5-200ppm	0.20	-0.02	49.5	99.0%	48.3	96.7%	2.4%	50	48.3	96.6%	50	49.00	98.0%
Zn 213.857	10ppb-50ppm	-19.01	14.37	960	96.0%	952	95.2%	0.8%	1000	939	93.9%	1000	935.71	93.6%

Sample ID AB27314

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.45	1.36	91.4%	1.35	90.1%	0.9%	1	0.96	96.0%	2.4%	0.00
B 249.772	0.48	1.46	98.3%	1.47	99.4%	0.8%	1	1.02	102.5%	3.7%	0.00
Ca 317.933	95.0	139.4	88.8%	140.3	90.7%	0.7%	50	47.9	95.7%	2.5%	-3.44
Ca 396.847	97.9	115.0	34.3%	120.4	45.1%	4.6%	50	51.6	103.3%	3.8%	-0.55
Cu 324.754	-9	1036	104.6%	1039	104.9%	0.3%	1000	1074	107.4%	4.4%	-7.33
Cu 327.395	-8	1051	105.9%	1055	106.3%	0.4%	1000	1087	108.7%	4.9%	-7.33
Fe 238.204	7	899	89.1%	908	90.1%	1.1%	1000	949	94.9%	2.5%	2.34
Fe 259.940	2	979	97.6%	984	98.2%	0.6%	1000	1021	102.1%	4.7%	-0.19
K 766.491	2.6	13.2	106.7%	13.1	105.5%	0.9%	10	11.5	115.2%	8.0%	0.06
Mg 202.588	43.9	94.4	101.1%	95.3	103.0%	1.0%	50	54.2	108.3%	6.0%	-0.45
Mg 279.077	41.8	90.2	96.8%	90.7	97.8%	0.5%	50	53.0	105.9%	3.6%	0.00
Mn 257.611	356	1283	92.7%	1285	92.9%	0.1%	1000	974	97.4%	2.0%	-10.66
Mn 260.566	370	1325	95.5%	1334	96.4%	0.7%	1000	1015	101.5%	5.5%	-8.73
Na 568.827	199.4	251.5	104.3%	252.9	107.0%	0.5%	50	62.8	125.5%	12.0%	5.84
Na 589.592	131.0	164.9	67.9%	166.4	71.0%	0.9%	50	56.6	113.2%	5.8%	-0.19
Si 251.611	24.6	71.5	93.7%	71.8	94.3%	0.4%	50	50.8	101.5%	4.5%	-0.11
Si 252.411	23.7	69.0	90.6%	69.2	91.0%	0.2%	50	49.0	97.9%	1.4%	-0.13
Zn 213.857	-28	889	91.7%	900	92.9%	1.3%	1000	968	96.8%	3%	-22.49

Batch # 20150402b

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	0.01	1.06	105.9%	1.04	104.4%	1.4%	1	1.04	103.6%	1	1.0	100.5%
B 249.772	0.05-5ppm	0.01	0.01	1.06	105.9%	1.04	103.8%	1.9%	1	1.04	103.7%	1	1.0	100.2%
Ca 317.933	50-300ppm	-4.26	-4.32	51.5	103.0%	49.9	99.9%	3.1%	50	50.7	101.4%	50	48.1	96.2%
Ca 396.847	0.5-50ppm	-0.43	-0.52	52.2	104.3%	50.4	100.8%	3.4%	50	51.7	103.4%	50	49.4	98.8%
Cu 324.754	10ppb-100ppm	-6.37	-5.77	1051	105.1%	1021	102.1%	2.9%	1000	1028	102.8%	1000	989.0	98.9%
Cu 327.394	10ppb-100ppm	-4.36	-5.34	1050	105.0%	1025	102.5%	2.5%	1000	1034	103.4%	1000	989.3	98.9%
Fe 238.204	10ppb-100ppm	-0.91	-2.35	1028	102.8%	999	99.9%	2.9%	1000	1027	102.7%	1000	992.1	99.2%
Fe 259.940	10ppb-100ppm	0.16	-4.42	1035	103.5%	1001	100.1%	3.4%	1000	1030	103.0%	1000	1005.8	100.6%
K 766.491	0.5-750ppm	-0.08	-0.10	10.6	106.4%	10.3	102.9%	3.4%	10	10.4	104.0%	10	9.9	98.6%
Mg 202.583	50-1000ppm	-2.54	-2.46	52.2	104.5%	50.8	101.6%	2.8%	50	52.2	104.3%	50	49.9	99.8%
Mg 279.071	0.5-50ppm	-0.12	-0.20	51.6	103.2%	50.1	100.3%	2.9%	50	51.6	103.1%	50	49.3	98.7%
Mn 257.611	10ppb-11ppm	-5.02	-6.13	1037	103.7%	1012	101.2%	2.4%	1000	1029	102.9%	1000	999.2	99.9%
Mn 260.561	10ppb-11ppm	-5.61	-5.60	1033	103.3%	1012	101.2%	2.0%	1000	1026	102.6%	1000	1002.4	100.2%
Na 568.821	50-1000ppm	3.10	2.22	52.0	104.0%	49.5	99.0%	5.0%	50	50.5	101.1%	50	48.9	97.8%
Na 589.592	0.5-50ppm	-0.16	-0.22	52.8	105.7%	50.6	101.3%	4.2%	50	51.1	102.1%	50	49.9	99.9%
Si 251.611	0.5-200ppm	-0.10	-0.22	52.0	104.0%	50.6	101.2%	2.7%	50	51.5	103.0%	50	50.8	101.5%
Si 252.411	0.5-200ppm	-0.13	-0.20	51.7	103.5%	50.7	101.4%	2.0%	50	51.2	102.4%	50	50.5	101.1%
Zn 213.857	10ppb-50ppm	-2.25	-9.61	1023	102.3%	1002	100.2%	2.0%	1000	1017	101.7%	1000	978.8	97.9%

Sample ID AB28492

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%
							Value	Result	%Rec	
B 249.678	0.17	2.16	99.3%	2.15	98.8%	0.5%	1	0.98	98.2%	5.4%
B 249.772	0.17	2.16	99.3%	2.14	98.4%	0.8%	1	0.99	98.7%	4.9%
Ca 317.933	56.2	160.4	104.2%	160.1	103.9%	0.2%	50	49.4	98.9%	2.6%
Ca 396.847	59.9	151.2	91.2%	149.6	89.7%	1.0%	50	48.8	97.6%	5.8%
Cu 324.754	-14	1934	97.4%	1915	96.5%	1.0%	1000	969	96.9%	5.9%
Cu 327.395	-13	1934	97.3%	1913	96.3%	1.1%	1000	970	97.0%	6.3%
Fe 238.204	201	2169	98.4%	2165	98.2%	0.2%	1000	993	99.3%	3.4%
Fe 259.940	200	2176	98.8%	2171	98.6%	0.2%	1000	994	99.4%	3.5%
K 766.491	7.1	27.0	99.7%	26.7	98.1%	1.2%	10	9.8	97.7%	6.2%
Mg 202.588	39.7	142.4	102.7%	140.6	100.9%	1.3%	50	49.6	99.1%	5.1%
Mg 279.073	41.4	139.6	98.2%	138.1	96.7%	1.1%	50	49.2	98.3%	4.8%
Mn 257.611	169	2154	99.3%	2141	98.6%	0.6%	1000	990	99.0%	3.9%
Mn 260.566	168	2151	99.1%	2145	98.8%	0.3%	1000	992	99.2%	3.3%
Na 568.821	40.9	139.7	98.8%	142.3	101.4%	1.8%	50	47.0	94.0%	7.3%
Na 589.592	46.5	143.9	97.4%	142.6	96.0%	0.9%	50	48.5	97.1%	5.1%
Si 251.611	7.4	106.8	99.4%	105.7	98.3%	1.1%	50	49.4	98.9%	4.1%
Si 252.411	7.3	106.8	99.4%	105.3	97.9%	1.4%	50	49.2	98.5%	3.9%
Zn 213.857	-8	1945	97.7%	1937	97.3%	0.4%	1000	985	98.5%	3%



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/6/2015

Time: 1200

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	ND	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.530	106.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27413	ND	0.500	0.560	0.550	112	110	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	15:29
LCSL	0.03	0.03	100	50-150	15:29
ICV	1.00	1.11	111	90-110	15:29
QCS	1.00	1.07	107	80-120	15:29
CCV	1.00	1.09	109	80-120	15:29

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27348	0.18	1.00	1.23	1.24	105	106	0.8	70-130	10	15:29	15:29

Note: ICV was over the acceptance criteria. Data was accepted due the recovery percents of QCS, CCV, LCSL MS, and MSD.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/25/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.82	99.4	95-105	1700

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27348	7.18	7.19	0.1	10	1700

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Phosphorus QC Summary (Hach 8190)

Date: 3/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:42
LCSL	0.03	0.03	100	50-150	13:42
ICV	1.00	1.01	101	90-110	13:42
QCS	1.00	0.96	96	80-120	13:42
CCV	1.00	1.01	101	80-120	13:42

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27313	0.00	1.00	1.05	1.04	105	104	1.0	70-130	10	13:42	13:42

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	10:28
CCV	40	40	100	95-105	10:28

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27428	80	80	0.0	5	10:28

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/27/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	1145
ICV	24800	24900	100.4%	95-105	1145

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27420	2521	2506	0.6%	10	1145

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1445
ICVL	100	114	114	80-120	1445
ICV	500	491	98.2	90-110	1445

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27369	3091	2983	3.6	10	1445

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/9/2015
 Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.409	---	<0.5
LCS	5.0	5.1	102	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27178	0.6	5.0	5.0	5.1	88	90	2.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID:

20150227

	F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount	2	20	2	20	2	2
ICVB	0.05	0.00	0.00	0.05	0.00	0.00
ICV	2.46	18.85	1.90	19.35	1.89	1.78
Rec 90-110%	123.06	94.25	94.98	96.74	94.64	88.94
ICVL	0.25	1.54	0.18	1.70	0.19	0.16
Rec 50-150%	123.92	77.08	90.95	84.77	93.82	82.24
Sample ID AB27357	0.03	35.04	0.64	35.38	0.06	5.81
MS	2.40	52.67	2.52	53.84	1.89	7.40
Rec 80-120%	118.59	88.17	93.90	92.31	91.48	79.48
MSD	2.29	52.62	2.59	53.93	1.96	7.39
Rec 80-120%	113.22	87.88	97.68	92.78	94.85	79.03
Diff 10%	4.57	0.11	2.96	0.17	3.51	0.12
CCV	1.88	18.93	1.97	19.48	1.94	1.82
Rec 90-110%	94.25	94.67	98.29	97.41	97.09	90.97
Diff 10%	26.52	0.44	3.42	0.68	2.55	2.25
CCVB	0.00	0.00	0.00	0.00	0.00	0.00



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/26/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	10:26
ICV	1.00	1.05	105.0%	95-105	10:26

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27348	0.150	0.150	0.00%	10	10:26

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

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March 9, 2015

Ceres ID: 10607

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Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 26, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

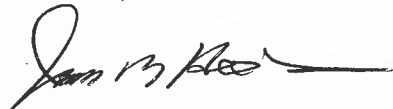
This work was authorized under M.B.A.'s Project # AB27348.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10607-001	MW-3S (monitoring)	2/26/2015	2/25/2015 9:30

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27348		Sample Size:	1.000 L	QC Batch #:	1297	Date Extracted:	4-Mar-15
					ZB-5 MS Analysis Date:	5-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.27			<u>IS</u> ¹³ C-2,3,7,8-TCDD	97.1	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	102	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH				Reviewed by:	BS		

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27348		Sample Size:	1.000 L	QC Batch #:	1297	Date Extracted:	4-Mar-15
					ZB-5 MS Analysis Date:	5-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	11.4	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	104	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.9	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-3S (monitoring)								
Client Data			Sample Data		Laboratory Data			
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10607-001		Date Received: 26-Feb-15	
Project: AB27348			Sample Size: 1.037 L		QC Batch #: 1297		Date Extracted: 4-Mar-15	
Date Collected: 25-Feb-15					ZB-5 MS Analysis Date: 5-Mar-15			
Time Collected: 9:30								
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.38			<u>IS</u> ¹³ C-2,3,7,8-TCDD	84.2	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	101	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst: JMH				Reviewed by: BS				

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
El Dorado Hills, CA 95762
Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10607
Temperature: 0.9 °C

Reports and invoices will be delivered by email in .pdf format

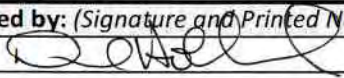
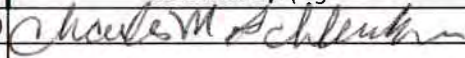
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: <u>mweidner@mbasinc.com</u>	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
E: Effluent SD: Sediment C: Clay SO: Solid
I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time	Comments									
1	MW-3S (monitoring)	2/25/2015	930	0:00	Aq	2	X						AB27348 (2,3,7,8 TCDD only) Please include excel report
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/25/2015	16:00	 Charles M. Schlenker	2-25-15	0:37 AM

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10607</u>	Date/Time: <u>2-26-15 10:30 AM</u>
Client Project ID: <u>AB27348</u>	Received <u>0.9</u> Temperature: Acceptable: <u>Y/N</u>
Chain of Custody Relinquished by signed?	<u>Y</u> /N
Custody Seals? Present?	Y/N
Intact?	Y/N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	<u>Y</u> /N <u>2/26/15</u>
Proper Containers:	<u>Y</u> /N
Preservation Acceptable (Chemical or Temperature)?	<u>Y</u> /N
Drinking Water, Sodium Thiosulfate present?	Y/N/ <u>NA</u>
List COC discrepancies:	
CMS 02-26-15	
List Damaged Samples:	
CMS 02-26-15	

Ceres ID: 10607 PB: 1297 Sample #: (Due Date: 2/12/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions

- 1 Calibrate balance
- 2 Tare balance
- 3 Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt
- 4 Weigh empty bottle and cap. Record as Bottle Wt.
- 5 Calculate sample Volume (assuming 1g = 1ml) as follows

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10607-1	1554.62g	517.55	1.037 L

Chemist J

Date 3/4/15

Method: 1613 B
 SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1297-MB001	Method Blank		1.000 L	3/4/15 NA	3/5/15 NA	NA	3/5/15	NA	3/5/15 NA
0-1297-OPR001	OPR		1.000 L	(A) ↓	↓	↓	↓	↓	↓
10607-1297-001	MW-3S (monitoring)	✓	1.037 L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 3/4/15
 Soxhlet Stop: 07:40 3/5/15

Samples Logged out by: J 08:55 3/4/15
 Samples Returned by: NA
 Note samples Depleted: 1 A

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 10:55 3/5/15 J
 Extracts returned to Storage Location: _____

Chemist: J


Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S02115A	10ml	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	Δ P	20ml	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	20,30,100,20ml	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122319A	6/18/15
N ₂ SO ₄	1.5g	P101614A	4/16/15
20% Dec Hex	30ml	L102719A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/09/15 12:56
Attention: David Holland	Received Date: 02/26/15 09:25
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B26007	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

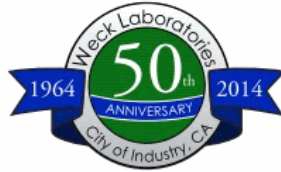
Dear David Holland :

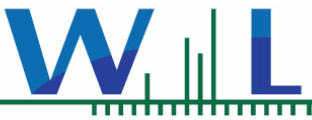
Enclosed are the results of analyses for samples received 02/26/15 09:25 with the Chain of Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

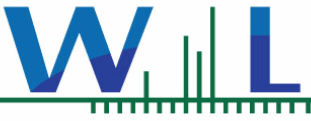
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-3S(Monitoring)	Josh Sobolew	AB27348	5B26007-01	Water	02/25/15 09:30

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

5B26007-01 MW-3S(Monitoring)

Sampled: 02/25/15 09:30

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27348

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 16:27	

Chlorinated Pesticides and/or PCBs

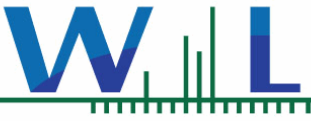
Method: EPA 508

Batch: W5B1441

Prepared: 02/27/15 09:37

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/03/15 20:00	
4,4'-DDE	ND	0.010	ug/l	1	03/03/15 20:00	
4,4'-DDT	ND	0.010	ug/l	1	03/03/15 20:00	
Aldrin	ND	0.010	ug/l	1	03/03/15 20:00	
alpha-BHC	ND	0.010	ug/l	1	03/03/15 20:00	
Aroclor 1016	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1221	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1232	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1242	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1248	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1254	ND	0.10	ug/l	1	03/03/15 20:00	
Aroclor 1260	ND	0.10	ug/l	1	03/03/15 20:00	
beta-BHC	ND	0.010	ug/l	1	03/03/15 20:00	
Chlordane (tech)	ND	0.10	ug/l	1	03/03/15 20:00	
Chlorothalonil	ND	0.050	ug/l	1	03/03/15 20:00	
delta-BHC	ND	0.010	ug/l	1	03/03/15 20:00	
Dieldrin	ND	0.010	ug/l	1	03/03/15 20:00	
Endosulfan I	ND	0.010	ug/l	1	03/03/15 20:00	
Endosulfan II	ND	0.010	ug/l	1	03/03/15 20:00	
Endosulfan sulfate	ND	0.010	ug/l	1	03/03/15 20:00	
Endrin	ND	0.010	ug/l	1	03/03/15 20:00	
Endrin aldehyde	ND	0.010	ug/l	1	03/03/15 20:00	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/03/15 20:00	
Heptachlor	ND	0.010	ug/l	1	03/03/15 20:00	
Heptachlor epoxide	ND	0.010	ug/l	1	03/03/15 20:00	
Hexachlorobenzene	ND	0.050	ug/l	1	03/03/15 20:00	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/03/15 20:00	
Methoxychlor	ND	0.010	ug/l	1	03/03/15 20:00	
PCBs, Total	ND	0.50	ug/l	1	03/03/15 20:00	
Propachlor	ND	0.050	ug/l	1	03/03/15 20:00	
Toxaphene	ND	1.0	ug/l	1	03/03/15 20:00	
Trifluralin	ND	0.010	ug/l	1	03/03/15 20:00	
Surr: Decachlorobiphenyl	42 %	Conc:0.0419	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	76 %	Conc:0.0756	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

5B26007-01 MW-3S(Monitoring)

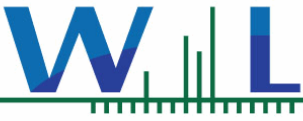
Sampled: 02/25/15 09:30

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27348

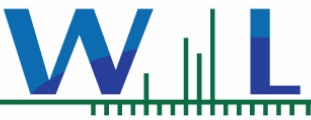
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

Anions by IC, EPA Method 9056 - Quality Control

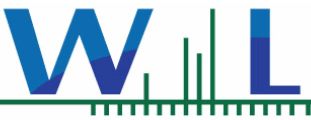
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1441 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1441-BLK1)				Analyzed: 03/03/15 17:58						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



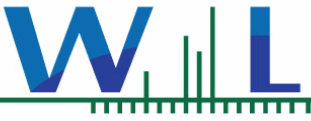
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1441 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1441-BLK1)										
Analyzed: 03/03/15 17:58										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
Surr: Decachlorobiphenyl	0.0984		ug/l	0.100		98	70-130			
Surr: Tetrachloro-meta-xylene	0.0760		ug/l	0.100		76	70-130			
LCS (W5B1441-BS1)										
Analyzed: 03/03/15 18:28										
4,4'-DDD	0.0810	0.010	ug/l	0.100		81	55-142			
4,4'-DDE	0.0792	0.010	ug/l	0.100		79	49-129			
4,4'-DDT	0.0888	0.010	ug/l	0.100		89	54-160			
Aldrin	0.0742	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.0803	0.010	ug/l	0.100		80	59-131			
beta-BHC	0.0899	0.010	ug/l	0.100		90	63-136			
delta-BHC	0.0945	0.010	ug/l	0.100		95	59-137			
Dieldrin	0.0798	0.010	ug/l	0.100		80	59-135			
Endosulfan I	0.0621	0.010	ug/l	0.100		62	28-138			
Endosulfan II	0.0733	0.010	ug/l	0.100		73	53-133			
Endosulfan sulfate	0.0959	0.010	ug/l	0.100		96	58-155			
Endrin	0.0839	0.010	ug/l	0.100		84	57-148			
Endrin aldehyde	0.0703	0.010	ug/l	0.100		70	45-139			
gamma-BHC (Lindane)	0.0815	0.010	ug/l	0.100		82	59-129			
Heptachlor	0.0790	0.010	ug/l	0.100		79	42-136			
Heptachlor epoxide	0.0798	0.010	ug/l	0.100		80	59-134			
Methoxychlor	0.0938	0.010	ug/l	0.100		94	56-167			
Surr: Decachlorobiphenyl	0.0834		ug/l	0.100		83	70-130			
Surr: Tetrachloro-meta-xylene	0.0714		ug/l	0.100		71	70-130			
LCS Dup (W5B1441-BSD1)										
Analyzed: 03/03/15 18:59										
4,4'-DDD	0.0905	0.010	ug/l	0.100		91	55-142	11	25	
4,4'-DDE	0.0890	0.010	ug/l	0.100		89	49-129	12	25	
4,4'-DDT	0.101	0.010	ug/l	0.100		101	54-160	12	25	
Aldrin	0.0803	0.010	ug/l	0.100		80	29-115	8	25	
alpha-BHC	0.0865	0.010	ug/l	0.100		86	59-131	7	25	
beta-BHC	0.0990	0.010	ug/l	0.100		99	63-136	10	25	
delta-BHC	0.105	0.010	ug/l	0.100		105	59-137	10	25	
Dieldrin	0.0876	0.010	ug/l	0.100		88	59-135	9	25	
Endosulfan I	0.0684	0.010	ug/l	0.100		68	28-138	10	25	
Endosulfan II	0.0810	0.010	ug/l	0.100		81	53-133	10	25	
Endosulfan sulfate	0.106	0.010	ug/l	0.100		106	58-155	10	25	

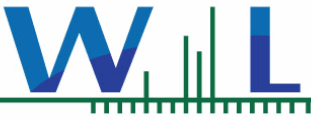


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5B1441 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B1441-BSD1)				Analyzed: 03/03/15 18:59						
Endrin	0.0922	0.010	ug/l	0.100		92	57-148	9	25	
Endrin aldehyde	0.0796	0.010	ug/l	0.100		80	45-139	12	25	
gamma-BHC (Lindane)	0.0880	0.010	ug/l	0.100		88	59-129	8	25	
Heptachlor	0.0864	0.010	ug/l	0.100		86	42-136	9	25	
Heptachlor epoxide	0.0873	0.010	ug/l	0.100		87	59-134	9	25	
Methoxychlor	0.103	0.010	ug/l	0.100		103	56-167	10	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0901</i>		<i>ug/l</i>	<i>0.100</i>		<i>90</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0740</i>		<i>ug/l</i>	<i>0.100</i>		<i>74</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:56

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B2232

3/06/2015

Invoice: A504743

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B2232 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/26/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical
Report To: David Holland
Project #: -
Received: 2/26/2015 - 10:26
Report Due: 3/12/2015

Invoice To: Monterey Bay Analytical
Invoice Attn: David Holland
Project PO#: -

Sample Receipt Conditions

Cooler: Default Cooler	Containers Intact
Temperature on Receipt °C: 0.0	COC/Labels Agree
	Received On Wet Ice
	Received On Blue Ice
	Packing Material - Other
	Initial receipt at BSK-FAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B2232-01
Sampled By: Coral Shaw
Sample Description: MW-3S (monitoring) // AB27348

Sample Date - Time: 02/25/15 - 09:30
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A502448	03/04/15	03/05/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A502448	03/04/15	03/05/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502347	03/03/15	03/04/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502347	03/03/15	03/04/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
Surrogate: DCPAA	EPA 515.3	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	

Certificate of Analysis

Sample ID: A5B2232-01
Sampled By: Coral Shaw
Sample Description: MW-3S (monitoring) // AB27348

Sample Date - Time: 02/25/15 - 09:30
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloromethane	EPA 524.2	0.50	0.50	ug/L	1	A502259	02/26/15	02/27/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502259	02/26/15	02/27/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502259	02/26/15	02/27/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502259	02/26/15	02/27/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	

Certificate of Analysis

Sample ID: A5B2232-01
Sampled By: Coral Shaw
Sample Description: MW-3S (monitoring) // AB27348

Sample Date - Time: 02/25/15 - 09:30
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	97 %							
Surrogate: Bromofluorobenzene	EPA 524.2	103 %							
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502263	02/27/15	03/01/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	03/01/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	03/01/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	03/01/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502263	02/27/15	03/01/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502263	02/27/15	03/01/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	03/01/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	03/01/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	03/01/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	105 %							
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502413	03/03/15	03/05/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502413	03/03/15	03/05/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502413	03/03/15	03/05/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502355	03/03/15	03/03/15	
Surrogate: AMPA	EPA 547	94 %							
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502241	02/26/15	02/27/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502345	03/02/15	03/03/15	



A5B2232

Cal Am

Certificate of Analysis

Sample ID: A5B2232-01

Sampled By: Coral Shaw

Sample Description: MW-3S (monitoring) // AB27348

Sample Date - Time: 02/25/15 - 09:30

Matrix: Ground Water

Sample Type: Grab

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A502448

Prepared: 03/04/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A502448-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/04/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/04/15	

Blank Spike (A502448-BS1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		95	70-130			03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		99	70-130			03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.47			0.46		102	70-130			03/04/15	

Blank Spike Dup (A502448-BSD1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		96	70-130	2	20	03/05/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	1	20	03/05/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/05/15	

Matrix Spike (A502448-MS1), Source: A5B2160-01

Dibromochloropropane (DBCP)	0.37	0.010	ug/L	0.12	0.24	107	65-135			03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	101	65-135			03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.45		98	70-130			03/04/15	

EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502347-BLK1)

2,4,5-T	ND	1.0	ug/L							03/04/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/04/15	
2,4-D	ND	10	ug/L							03/04/15	
Bentazon	ND	2.0	ug/L							03/04/15	
Dalapon	ND	10	ug/L							03/04/15	
Dicamba	ND	1.5	ug/L							03/04/15	
Dinoseb	ND	2.0	ug/L							03/04/15	
Pentachlorophenol	ND	0.20	ug/L							03/04/15	
Picloram	ND	1.0	ug/L							03/04/15	
Surrogate: DCPAA	59			58		101	70-130			03/04/15	

Blank Spike (A502347-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		103	70-130			03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		101	70-130			03/04/15	
2,4-D	0.44	10	ug/L	0.40		109	70-130			03/04/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130			03/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130			03/04/15	
Dicamba	6.1	1.5	ug/L	6.0		102	70-130			03/04/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			03/04/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			03/04/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502347-BS1)

Surrogate: DCPAA	60			58		103	70-130			03/04/15	
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Blank Spike Dup (A502347-BSD1)

2,4,5-T	4.0	1.0	ug/L	4.0		101	70-130	2	20	03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		102	70-130	0	20	03/04/15	
2,4-D	0.42	10	ug/L	0.40		106	70-130	3	20	03/04/15	
Bentazon	8.2	2.0	ug/L	8.0		103	70-130	1	20	03/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130	0	20	03/04/15	
Dicamba	6.1	1.5	ug/L	6.0		101	70-130	1	20	03/04/15	
Dinoseb	0.79	2.0	ug/L	0.80		99	70-130	1	20	03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130	1	20	03/04/15	
Picloram	0.39	1.0	ug/L	0.40		98	70-130	2	20	03/04/15	
Surrogate: DCPAA	59			58		102	70-130			03/04/15	

Matrix Spike (A502347-MS1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	104	70-130			03/04/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80	ND	98	70-130			03/04/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/04/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	101	70-130			03/04/15	
Dalapon	4.4	10	ug/L	4.0	ND	109	70-130			03/04/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	104	70-130			03/04/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130			03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130			03/04/15	
Picloram	0.40	1.0	ug/L	0.40	ND	99	70-130			03/04/15	
Surrogate: DCPAA	61			58		105	70-130			03/04/15	

Matrix Spike Dup (A502347-MSD1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80	ND	101	70-130	3	20	03/04/15	
2,4-D	0.44	10	ug/L	0.40	ND	110	70-130	2	20	03/04/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	100	70-130	1	20	03/04/15	
Dalapon	4.4	10	ug/L	4.0	ND	111	70-130	2	20	03/04/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	105	70-130	1	20	03/04/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	1	20	03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	99	70-130	1	20	03/04/15	
Picloram	0.41	1.0	ug/L	0.40	ND	102	70-130	2	20	03/04/15	
Surrogate: DCPAA	61			58		105	70-130			03/04/15	

EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/27/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/27/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/27/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/27/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/27/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/27/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/27/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/27/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/27/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/27/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/27/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/27/15	
2-Butanone	ND	5.0	ug/L							02/27/15	
2-Chlorotoluene	ND	0.50	ug/L							02/27/15	
2-Hexanone	ND	10	ug/L							02/27/15	
4-Chlorotoluene	ND	0.50	ug/L							02/27/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/27/15	
Acetone	ND	10	ug/L							02/27/15	
Benzene	ND	0.50	ug/L							02/27/15	
Bromobenzene	ND	0.50	ug/L							02/27/15	
Bromochloromethane	ND	0.50	ug/L							02/27/15	
Bromodichloromethane	ND	0.50	ug/L							02/27/15	
Bromoform	ND	0.50	ug/L							02/27/15	
Bromomethane	ND	0.50	ug/L							02/27/15	
Carbon disulfide	ND	10	ug/L							02/27/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/27/15	
Chlorobenzene	ND	0.50	ug/L							02/27/15	
Chloroethane	ND	0.50	ug/L							02/27/15	
Chloroform	ND	0.50	ug/L							02/27/15	
Chloromethane	ND	0.50	ug/L							02/27/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/27/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/27/15	
Dibromochloromethane	ND	0.50	ug/L							02/27/15	
Dibromomethane	ND	0.50	ug/L							02/27/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/27/15	
Dichloromethane	ND	0.50	ug/L							02/27/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/27/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/27/15	
Ethylbenzene	ND	0.50	ug/L							02/27/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

Isopropylbenzene	ND	0.50	ug/L							02/27/15	
m,p-Xylenes	ND	0.50	ug/L							02/27/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/27/15	
Naphthalene	ND	0.50	ug/L							02/27/15	
n-Butylbenzene	ND	0.50	ug/L							02/27/15	
n-Propylbenzene	ND	0.50	ug/L							02/27/15	
o-Xylene	ND	0.50	ug/L							02/27/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/27/15	
sec-Butylbenzene	ND	0.50	ug/L							02/27/15	
Styrene	ND	0.50	ug/L							02/27/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/27/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/27/15	
tert-Butylbenzene	ND	0.50	ug/L							02/27/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/27/15	
Toluene	ND	0.50	ug/L							02/27/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/27/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/27/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/27/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/27/15	
Vinyl Chloride	ND	0.50	ug/L							02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.6			5.0		93	70-130			02/27/15	
Surrogate: Bromofluorobenzene	50			50		99	70-130			02/27/15	

Blank Spike (A502259-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		104	70-130			02/27/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			02/27/15	
1,1-Dichloroethene	11	0.50	ug/L	10		105	70-130			02/27/15	
1,1-Dichloropropene	10	0.50	ug/L	10		102	70-130			02/27/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
1,2-Dichloroethane	10	0.50	ug/L	10		101	70-130			02/27/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			02/27/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		106	70-130			02/27/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			02/27/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
2,2-Dichloropropane	11	0.50	ug/L	10		108	70-130			02/27/15	
2-Butanone	11	5.0	ug/L	10		105	70-130			02/27/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502259-BS1)

2-Hexanone	10	10	ug/L	10		105	70-130			02/27/15	
4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
4-Methyl-2-pentanone	11	5.0	ug/L	10		106	70-130			02/27/15	
Acetone	11	10	ug/L	10		112	70-130			02/27/15	
Benzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Bromobenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			02/27/15	
Bromodichloromethane	10	0.50	ug/L	10		103	70-130			02/27/15	
Bromoform	12	0.50	ug/L	10		125	70-130			02/27/15	
Bromomethane	7.1	0.50	ug/L	10		71	70-130			02/27/15	
Carbon disulfide	11	10	ug/L	10		114	70-130			02/27/15	
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			02/27/15	
Chlorobenzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Chloroethane	10	0.50	ug/L	10		104	70-130			02/27/15	
Chloroform	10	0.50	ug/L	10		102	70-130			02/27/15	
Chloromethane	10	0.50	ug/L	10		104	70-130			02/27/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			02/27/15	
cis-1,3-Dichloropropene	9.7	0.50	ug/L	10		97	70-130			02/27/15	
Dibromochloromethane	11	0.50	ug/L	10		110	70-130			02/27/15	
Dibromomethane	10	0.50	ug/L	10		102	70-130			02/27/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		109	70-130			02/27/15	
Dichloromethane	10	0.50	ug/L	10		104	70-130			02/27/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		101	70-130			02/27/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		105	70-130			02/27/15	
Ethylbenzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Hexachlorobutadiene	10	0.50	ug/L	10		101	70-130			02/27/15	
Isopropylbenzene	10	0.50	ug/L	10		101	70-130			02/27/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130			02/27/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		105	70-130			02/27/15	
Naphthalene	10	0.50	ug/L	10		103	70-130			02/27/15	
n-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			02/27/15	
o-Xylene	10	0.50	ug/L	10		102	70-130			02/27/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
Styrene	12	0.50	ug/L	10		123	70-130			02/27/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130			02/27/15	
tert-Butyl alcohol (TBA)	9.6	2.0	ug/L	10		96	70-130			02/27/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		103	70-130			02/27/15	
Toluene	10	0.50	ug/L	10		102	70-130			02/27/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			02/27/15	
trans-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		101	70-130			02/27/15	
Trichlorofluoromethane	11	5.0	ug/L	10		107	70-130			02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502259-BS1)

Vinyl Chloride	10	0.50	ug/L	10		105	70-130			02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.2			5.0		105	70-130			02/27/15	
Surrogate: Bromofluorobenzene	52			50		104	70-130			02/27/15	

Blank Spike Dup (A502259-BSD1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130	0	30	02/27/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130	1	30	02/27/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		105	70-130	1	30	02/27/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
1,1-Dichloroethene	11	0.50	ug/L	10		107	70-130	1	30	02/27/15	
1,1-Dichloropropene	10	0.50	ug/L	10		104	70-130	3	30	02/27/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	1	30	02/27/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		101	70-130	1	30	02/27/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	0	30	02/27/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130	2	30	02/27/15	
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,2-Dichloropropane	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		105	70-130	1	30	02/27/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
2,2-Dichloropropane	11	0.50	ug/L	10		109	70-130	1	30	02/27/15	
2-Butanone	10	5.0	ug/L	10		101	70-130	4	30	02/27/15	
2-Chlorotoluene	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
2-Hexanone	10	10	ug/L	10		100	70-130	4	30	02/27/15	
4-Chlorotoluene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		102	70-130	4	30	02/27/15	
Acetone	11	10	ug/L	10		107	70-130	5	30	02/27/15	
Benzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Bromobenzene	10	0.50	ug/L	10		100	70-130	1	30	02/27/15	
Bromochloromethane	10	0.50	ug/L	10		105	70-130	2	30	02/27/15	
Bromodichloromethane	10	0.50	ug/L	10		104	70-130	0	30	02/27/15	
Bromoform	12	0.50	ug/L	10		118	70-130	5	30	02/27/15	
Bromomethane	8.3	0.50	ug/L	10		83	70-130	15	30	02/27/15	
Carbon disulfide	11	10	ug/L	10		114	70-130	0	30	02/27/15	
Carbon Tetrachloride	10	0.50	ug/L	10		104	70-130	2	30	02/27/15	
Chlorobenzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Chloroethane	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
Chloroform	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Chloromethane	11	0.50	ug/L	10		106	70-130	1	30	02/27/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	2	30	02/27/15	
Dibromochloromethane	11	0.50	ug/L	10		109	70-130	1	30	02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502259-BSD1)

Dibromomethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		114	70-130	4	30	02/27/15	
Dichloromethane	11	0.50	ug/L	10		105	70-130	2	30	02/27/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		102	70-130	1	30	02/27/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		106	70-130	0	30	02/27/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130	3	30	02/27/15	
Isopropylbenzene	10	0.50	ug/L	10		103	70-130	2	30	02/27/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130	0	30	02/27/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		105	70-130	1	30	02/27/15	
Naphthalene	9.8	0.50	ug/L	10		98	70-130	4	30	02/27/15	
n-Butylbenzene	10	0.50	ug/L	10		100	70-130	2	30	02/27/15	
n-Propylbenzene	10	0.50	ug/L	10		103	70-130	2	30	02/27/15	
o-Xylene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
p-Isopropyltoluene	10	0.50	ug/L	10		101	70-130	3	30	02/27/15	
sec-Butylbenzene	10	0.50	ug/L	10		101	70-130	3	30	02/27/15	
Styrene	12	0.50	ug/L	10		124	70-130	1	30	02/27/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130	0	30	02/27/15	
tert-Butyl alcohol (TBA)	9.4	2.0	ug/L	10		94	70-130	2	30	02/27/15	
tert-Butylbenzene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	1	30	02/27/15	
Toluene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		105	70-130	1	30	02/27/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Trichlorofluoromethane	11	5.0	ug/L	10		108	70-130	1	30	02/27/15	
Vinyl Chloride	11	0.50	ug/L	10		108	70-130	3	30	02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.3			5.0		106	70-130			02/27/15	
Surrogate: Bromofluorobenzene	52			50		104	70-130			02/27/15	

EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Alachlor	ND	1.0	ug/L							02/28/15	
Atrazine	ND	0.50	ug/L							02/28/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/28/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/28/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/28/15	
Bromacil	ND	10	ug/L							02/28/15	
Butachlor	ND	0.38	ug/L							02/28/15	
Diazinon	ND	0.25	ug/L							02/28/15	
Dimethoate	ND	10	ug/L							02/28/15	
Metolachlor	ND	0.50	ug/L							02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Metribuzin	ND	0.50	ug/L							02/28/15	
Molinate	ND	2.0	ug/L							02/28/15	
Prometryn	ND	2.0	ug/L							02/28/15	
Propachlor	ND	0.50	ug/L							02/28/15	
Simazine	ND	1.0	ug/L							02/28/15	
Thiobencarb	ND	1.0	ug/L							02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		99	70-130			02/28/15	

Blank Spike (A502263-BS1)

Alachlor	1.0	1.0	ug/L	1.0		100	70-130			02/28/15	
Atrazine	0.49	0.50	ug/L	0.50		98	70-130			02/28/15	
Benzo(a)pyrene	0.071	0.10	ug/L	0.10		71	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		95	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130			02/28/15	
Bromacil	1.1	10	ug/L	1.0		111	70-130			02/28/15	
Butachlor	1.0	0.38	ug/L	1.0		100	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20		84	70-130			02/28/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130			02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		100	70-130			02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130			02/28/15	
Molinate	0.99	2.0	ug/L	1.0		99	70-130			02/28/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			02/28/15	
Propachlor	0.49	0.50	ug/L	0.50		99	70-130			02/28/15	
Simazine	0.32	1.0	ug/L	0.35		93	70-130			02/28/15	
Thiobencarb	0.48	1.0	ug/L	0.50		96	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		97	70-130			02/28/15	

Blank Spike Dup (A502263-BSD1)

Alachlor	0.98	1.0	ug/L	1.0		98	70-130	2	30	02/28/15	
Atrazine	0.48	0.50	ug/L	0.50		96	70-130	2	30	02/28/15	
Benzo(a)pyrene	0.086	0.10	ug/L	0.10		86	70-130	19	30	02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		94	70-130	1	30	02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130	1	30	02/28/15	
Bromacil	1.1	10	ug/L	1.0		108	70-130	3	30	02/28/15	
Butachlor	0.98	0.38	ug/L	1.0		98	70-130	2	30	02/28/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130	2	30	02/28/15	
Dimethoate	0.95	10	ug/L	1.0		95	70-130	8	30	02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		98	70-130	2	30	02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130	0	30	02/28/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	3	30	02/28/15	
Prometryn	1.8	2.0	ug/L	2.0		90	70-130	14	30	02/28/15	
Propachlor	0.50	0.50	ug/L	0.50		99	70-130	1	30	02/28/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130	5	30	02/28/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	1	30	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.7			5.0		95	70-130			02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502263-MS1), Source: A5B1765-06

Alachlor	0.93	1.0	ug/L	1.0	ND	93	70-130			02/28/15	
Atrazine	0.48	0.50	ug/L	0.50	ND	96	70-130			02/28/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10	ND	82	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0	ND	93	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.5	3.0	ug/L	1.5	ND	99	70-130			02/28/15	
Bromacil	0.99	10	ug/L	1.0	ND	99	70-130			02/28/15	
Butachlor	0.93	0.38	ug/L	1.0	ND	93	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20	ND	84	70-130			02/28/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			02/28/15	
Metolachlor	1.9	0.50	ug/L	2.0	ND	93	70-130			02/28/15	
Metribuzin	0.92	0.50	ug/L	1.0	ND	92	70-130			02/28/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			02/28/15	
Prometryn	1.9	2.0	ug/L	2.0	ND	94	70-130			02/28/15	
Propachlor	0.50	0.50	ug/L	0.50	ND	99	70-130			02/28/15	
Simazine	0.33	1.0	ug/L	0.35	ND	95	70-130			02/28/15	
Thiobencarb	0.46	1.0	ug/L	0.50	ND	91	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.1			5.0		102	70-130			02/28/15	

EPA 531.1 - Quality Control

Batch: A502413

Prepared: 03/03/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502413-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/05/15	
Aldicarb	ND	3.0	ug/L							03/05/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/05/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/05/15	
Carbaryl	ND	5.0	ug/L							03/05/15	
Carbofuran	ND	5.0	ug/L							03/05/15	
Methiocarb	ND	2.0	ug/L							03/05/15	
Methomyl	ND	2.0	ug/L							03/05/15	
Oxamyl	ND	20	ug/L							03/05/15	
Propoxur	ND	2.0	ug/L							03/05/15	

Blank Spike (A502413-BS1)

3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		101	80-120			03/04/15	
Aldicarb	4.3	3.0	ug/L	4.0		106	80-120			03/04/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			03/04/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		103	80-120			03/04/15	
Carbaryl	3.9	5.0	ug/L	4.0		98	80-120			03/04/15	
Carbofuran	4.0	5.0	ug/L	4.0		100	80-120			03/04/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120			03/04/15	
Methomyl	4.3	2.0	ug/L	4.0		107	80-120			03/04/15	
Oxamyl	3.9	20	ug/L	4.0		98	80-120			03/04/15	
Propoxur	3.9	2.0	ug/L	4.0		97	80-120			03/04/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502413

Prepared: 03/03/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502413-BSD1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		97	80-120	4	20	03/05/15	
Aldicarb	4.1	3.0	ug/L	4.0		101	80-120	5	20	03/05/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120	0	20	03/05/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		102	80-120	1	20	03/05/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	4	20	03/05/15	
Carbofuran	4.0	5.0	ug/L	4.0		100	80-120	0	20	03/05/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120	0	20	03/05/15	
Methomyl	4.3	2.0	ug/L	4.0		107	80-120	0	20	03/05/15	
Oxamyl	4.0	20	ug/L	4.0		99	80-120	1	20	03/05/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120	1	20	03/05/15	

Matrix Spike (A502413-MS1), Source: A5B2074-01

3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0	ND	96	65-135			03/05/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	114	65-135			03/05/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0	ND	103	65-135			03/05/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0	ND	104	65-135			03/05/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	104	65-135			03/05/15	
Carbofuran	4.1	5.0	ug/L	4.0	ND	103	65-135			03/05/15	
Methiocarb	4.1	2.0	ug/L	4.0	ND	103	65-135			03/05/15	
Methomyl	4.3	2.0	ug/L	4.0	ND	107	65-135			03/05/15	
Oxamyl	4.0	20	ug/L	4.0	ND	101	65-135			03/05/15	
Propoxur	4.1	2.0	ug/L	4.0	ND	102	65-135			03/05/15	

EPA 547 - Quality Control

Batch: A502355

Prepared: 03/03/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502355-BLK1)

Glyphosate	ND	25	ug/L							03/03/15	
Surrogate: AMPA	110			100		112	70-130			03/03/15	

Blank Spike (A502355-BS1)

Glyphosate	120	25	ug/L	100		120	70-130			03/03/15	
Surrogate: AMPA	94			100		94	70-130			03/03/15	

Blank Spike Dup (A502355-BSD1)

Glyphosate	110	25	ug/L	100		110	70-130	9	30	03/03/15	
Surrogate: AMPA	130			100		126	70-130			03/03/15	

Matrix Spike (A502355-MS1), Source: A5B2244-01

Glyphosate	120	25	ug/L	100	ND	121	70-130			03/03/15	
Surrogate: AMPA	110			100		106	70-130			03/03/15	

Matrix Spike Dup (A502355-MSD1), Source: A5B2244-01

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502355

Prepared: 03/03/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502355-MSD1), Source: A5B2244-01

Glyphosate	160	25	ug/L	100	ND	158	70-130	27	30	03/03/15	MS1.0 High
Surrogate: AMPA	98			100		96	70-130			03/03/15	

EPA 548.1 - Quality Control

Batch: A502241

Prepared: 02/26/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502241-BLK1)

Endothall	ND	45	ug/L							02/27/15	
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Blank Spike (A502241-BS1)

Endothall	16	45	ug/L	20		79	54-105			02/27/15	
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Blank Spike Dup (A502241-BSD1)

Endothall	14	45	ug/L	20		71	54-105	11	46	02/27/15	
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Matrix Spike (A502241-MS1), Source: A5B1841-01

Endothall	18	45	ug/L	20	ND	88	54-105			02/27/15	
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EPA 549.2 - Quality Control

Batch: A502345

Prepared: 03/02/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502345-BLK1)

Diquat	ND	4.0	ug/L							03/03/15	
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Blank Spike (A502345-BS1)

Diquat	3.6	4.0	ug/L	4.0		91	70-130			03/03/15	
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Blank Spike Dup (A502345-BSD1)

Diquat	3.4	4.0	ug/L	4.0		84	70-130	7	30	03/03/15	
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Matrix Spike (A502345-MS1), Source: A5B1978-01

Diquat	3.1	4.0	ug/L	4.0	ND	77	70-130			03/03/15	
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Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

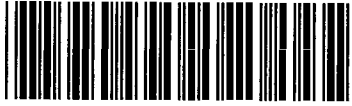
State of California - ELAP 2435

Vancouver

State of Oregon - NELAC WA100008 State of Washington C824-13



A5B2232



02262015

Monte6227

Turnaround: Standard

Due Date: 3/12/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed:

A5B2232
 Monte6227

02/26/2015
 10



*Required Fields

Temp: 0.0

Company/Client Name*: Monterey Bay Analytical Services	Report Attention*: Mason Weidner-Holland Additional cc's: David Holland	Invoice To*: David Holland PO#:	Phone*: 831-375-6227	Fax: 831-641-0734
--	---	--	--------------------------------	-----------------------------

Address*: 4 Justin Court, Suite D	City*: Monterey	State*: CA	Zip*: 93940
---	---------------------------	----------------------	-----------------------

Project: Cal Am	Project #:	How would you like to receive your completed results*? <input checked="" type="checkbox"/> E-Mail <input type="checkbox"/> Fax <input type="checkbox"/> Mail
Reporting Options: <input type="checkbox"/> Trace (J-Flag) <input type="checkbox"/> Swamp <input type="checkbox"/> EDD Type: _____	Regulatory Carbon Copies <input type="checkbox"/> SWRCB (Drinking Water) <input type="checkbox"/> Merced Co <input type="checkbox"/> Fresno Co <input type="checkbox"/> Madera Co <input type="checkbox"/> Tulare Co <input type="checkbox"/> Other: _____	Regulatory Compliance <input type="checkbox"/> EDT to California SWRCB (Drinking Water) System Number*: _____ <input type="checkbox"/> Geotracker #: _____
Sampler Name (Printed/Signature)*: Josh Sobolew		

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
	MW-3S (monitoring)	2/25/15	0930	GW	AB27348	X	X	X	X	X	X	X	X
Please include excell report													

Relinquished by: (Signature and Printed Name) D. Holland	Company MBAS	Date 2/25/15	Time 1600	Received by: (Signature and Printed Name) 	Company
Relinquished by: (Signature and Printed Name) 	Company	Date	Time	Received by: (Signature and Printed Name) 	Company
Received for Lab by: (Signature and Printed Name) Michelle Weiss	Date 2/26/15	Time 10:26	Payment Received at Delivery:		
Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____	Cooling Method: Wet Blue None	Amount:	PIA#:	Check / Cash	Init.

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		Yes	No	NA	Were correct containers and preservatives received for the tests requested?		Yes	No	NA
	If samples were taken today, is there evidence that chilling has begun?		Yes	No	NA	Were there bubbles in the VOA vials? (Volatiles Only)		Yes	No	NA
	Did all bottles arrive unbroken and intact?		Yes	No		Was a sufficient amount of sample received?		Yes	No	
	Did all bottle labels agree with COC?		Yes	No		Do samples have a hold time <72 hours?		Yes	No	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes	No	NA	Was PM notified of discrepancies? PM: _____ By/Time: _____		Yes	No	NA
Bottles Received "_" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?							
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—							
	None (P) ^{White Cap}	—	—							
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y	N						
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y	N						
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y	N						
	HNO_3 (P) ^{Red Cap}	—	—							
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y	N						
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y	N						
	$\text{NaOH} + \text{ZnAc}$ (P)	pH > 9	Y	N						
	Dissolved Oxygen 300ml (g)	—	—							
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—							
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—							
	$\text{Na}_2\text{O}_3 + \text{HCl}$ (AG) ^{Lt. Pink Label} 525	—	—			2C				
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—			1C				
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524	—	—			2A,4V				
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—							
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	Y	N		1V				
	NH_4Cl (AG) ^{Purple Label} 552	—	—							
	EDA (AG) ^{Brown Label} DBPs	—	—							
	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624	—	—			3V				
	Buffer pH 4 (CG)	—	—							
	None (CG)	—	—							
	H_3PO_4 (CG) ^{Salmon Label}	—	—							
	Other:									
Asbestos 1Liter Plastic w/ Foil	—	—								
Low Level Hg / Metals Double Baggie	—	—								
Bottled Water	—	—								
Clear Glass Jar: 250 / 500 / 1 Liter	—	—								
Soil Tube Brass / Steel / Plastic	—	—								
Tedlar Bag / Plastic Bag	—	—								
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials			
	S P				S P					
	S P				S P					
Comments										

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested												
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter							
Field Parameters:												
						Temp: 17.5 °C						
						pH: 7.25						
						Sp Cond: 23456 uS/cm						
						Turb: 0.96 NTU						
						DO 4.7						
						Cond, 29668 uS/cm						

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2	Residual	Routine	Other	Repeat		Special	Type	Size
27348		MW-35 <i>(Monitoring)</i>	2/25/15	09:30	8.1							27		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Josh Sobolew	<i>Josh Sobolew</i>	2/25/15	9:30 AM	Is sample for regulatory purposes? Yes / No (Yes) 2mL 1:1 HNO ₃ to each 125mL pH < 2 <i>by</i> 2/25/15
Relinquished by:	Josh Sobolew	<i>Josh Sobolew</i>	2/25/15	11:37 AM	
Received by:	MBAS	<i>[Signature]</i>	2/25/15	11:37	
Relinquished by:					
Received by:					

[] Payment received	Check #	Amount:	Receipt #	Date:
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27348

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

vacuum filtered pre-rinsed 0.45 μ membrane filter
 500mL + Na₂S₂O₃ + H₂SO₄ to pH < 2 for diss. TKN, NH₃
 250mL + H₂SO₄ to pH < 2 for diss. total P
 250mL unpreserved for ^{diss.} color. orthophosphate
 LJ 2/25/15



California American Water
 P.O. Box 951, Monterey, CA 93942-0951
 ph: 831-646-3259 / 831-646-3269
 Susy Jacobson

4 Justin Court Suite D, Monterey, CA 93940
 831.375.MBAS
 www.MBASinc.com

ELAP Certification Number: 2385

Lab Number: AB27313

Collection Date/Time: 2/24/2015 9:15 Sample Collector: SHAW C
 Submittal Date/Time: 2/24/2015 13:18 Sample ID

Sample Description: MW-3M (monitoring)

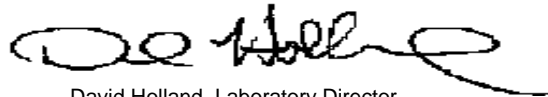
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	105		2	3/4/2015	LRH
Aluminum, Total	EPA200.8	µg/L	166		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	3/6/2015	TC
Arsenic, Total	EPA200.8	µg/L	37		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	79	J	125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	128		10	3/4/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	1.01		0.5	2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	53.8		5.0	2/26/2015	DH
Calcium	EPA200.7	mg/L	826		5	3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	844		5	4/2/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		3/5/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	3/4/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	14686		50.0	2/26/2015	DH
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		3/4/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	Not Detected		3	2/24/2015	LRH
Copper, Total	EPA200.8	µg/L	62		50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/5/2015	BSK
Dioxin	EPA 1613	pg/L	Attached	E		3/5/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/3/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		2/27/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	0.5		1	2/26/2015	DH
Glyphosate	EPA547	µg/L	Not Detected	E		3/3/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6378		10	3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	3/4/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		10	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		100	4/2/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/9/2015	TC
Lithium	EPA200.8	µg/L	159		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	1050		5	3/6/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	1020		10	4/2/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	Not Detected		100	4/2/2015	MW
Manganese, Total	EPA200.7	µg/L	14		10	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/25/2015	HM
Nitrate as NO3	EPA300.0	mg/L	5		1	2/26/2015	DH
Nitrate+Nitrite as N	EPA300.0	mg/L	1.2		0.1	2/26/2015	DH
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.1	2/26/2015	DH

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
 H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
 D = Method deviates from standard method due to insufficient sample for MS/MSD

Odor Threshold at 60 C	SM2150B	TON	3		1	2/24/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.05		0.03	2/25/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.89			2/24/2015	CS
pH (Laboratory)	SM4500-H+B	pH (H)	7.2		0.1	2/24/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		3/4/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	Not Detected		0.03	3/6/2015	LRH
Potassium	EPA200.7	mg/L	197		0.5	2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	197		0.1	4/2/2015	MW
QC Ratio TDS/SEC	Calculation		0.69			2/26/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		3/1/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	21		5	4/2/2015	MW
Sodium	EPA200.7	mg/L	7232		0.5	2/27/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	6930		5	4/2/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	41090		1	2/24/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	42340		1	2/24/2015	CS
Strontium, Dissolved	EPA200.8	µg/L	9500		62	3/4/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	1960		50	2/26/2015	DH
Temperature (Field)	SM2550	° C	16.3			2/24/2015	CS
Total Diss. Solids	SM2540C	mg/L	28500		10	2/24/2015	HM
Turbidity	EPA180.1	NTU	0.10		0.05	2/24/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.42		0.05	2/24/2015	CS
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E		2/27/2015	BSK
Zinc, Total	EPA200.8	µg/L	297		250	3/4/2015	SM

Sample Comments: Odor: Salty

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27313 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	7232	0.04350	314.59
Potassium	197	0.02558	5.04
Calcium	826	0.04990	41.22
Magnesium	1050	0.08229	86.40
NH3-N	0	0.07143	0.00
		SUM	447.25

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	105	0.02000	2.10
Sulfate	1960	0.02082	40.81
Chloride	14686	0.02821	414.29
Nitrate-Nitrogen	1.2	0.07138	0.09
Phosphate-P	0.1	0.01031	0.00
Bromide	53.8	0.01252	0.67
		SUM	457.96

ANION-CATION BALANCE **-1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	41090	
Cation Sum X 100	44725	109%
Anion Sum X 100	45796	111%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27313 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6930	0.04350	301.46
Potassium	197	0.02558	5.04
Calcium	844	0.04990	42.12
Magnesium	1020	0.08229	83.94
NH3-N	0	0.07143	0.00
		SUM	432.55

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	105	0.02000	2.10
Sulfate	1960	0.02082	40.81
Chloride	14686	0.02821	414.29
Nitrate-Nitrogen	1.2	0.07138	0.09
Phosphate-P	0.1	0.01031	0.00
Bromide	53.8	0.01252	0.67
		SUM	457.96

ANION-CATION BALANCE **-3** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	41090	
Cation Sum X 100	43255	105%
Anion Sum X 100	45796	111%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27199 D

25X Dilution

Date Analyzed
Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference

Batch # 20150306

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	0.99	99.4%	1.01	101.2%	1.8%	1	1.00	100.3%	1	1.0	97.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.1%	1.01	101.4%	0.3%	1	1.01	101.1%	1	1.0	98.5%
Ca 317.933	50-300ppm	-4.97	-5.13	46.7	93.3%	47.0	93.9%	0.6%	50	49.4	98.8%	50	45.5	91.0%
Ca 396.847	0.5-50ppm	-0.13	-0.37	47.7	95.5%	48.4	96.8%	1.4%	50	49.3	98.7%	50	47.0	94.1%
Cu 324.754	10ppb-100ppm	-0.89	-4.68	966	96.6%	977	97.7%	1.1%	1000	990	99.0%	1000	963.7	96.4%
Cu 327.394	10ppb-100ppm	1.63	-4.30	972	97.2%	982	98.2%	1.1%	1000	1001	100.1%	1000	967.4	96.7%
Fe 238.204	10ppb-100ppm	8.47	6.24	941	94.1%	935	93.5%	0.6%	1000	986	98.6%	1000	944.6	94.5%
Fe 259.940	10ppb-100ppm	6.42	4.25	949	94.9%	955	95.5%	0.7%	1000	987	98.7%	1000	952.2	95.2%
K 766.491	0.5-750ppm	0.05	0.02	9.8	97.9%	9.9	99.4%	1.6%	10	10.1	101.3%	10	9.8	98.1%
Mg 202.583	50-1000ppm	-1.18	-1.41	48.8	97.6%	49.6	99.1%	1.6%	50	50.9	101.8%	50	48.4	96.9%
Mg 279.071	0.5-50ppm	0.10	-0.11	47.5	95.1%	48.0	96.0%	1.0%	50	49.8	99.6%	50	47.3	94.5%
Mn 257.611	10ppb-11ppm	-1.07	-3.61	949	94.9%	954	95.4%	0.5%	1000	993	99.3%	1000	952.8	95.3%
Mn 260.561	10ppb-11ppm	0.50	-3.29	955	95.5%	958	95.8%	0.4%	1000	990	99.0%	1000	956.0	95.6%
Na 568.821	50-1000ppm	3.72	3.75	51.4	102.8%	51.9	103.9%	1.0%	50	51.5	103.1%	50	51.2	102.3%
Na 589.592	0.5-50ppm	0.02	-0.11	49.0	98.1%	49.1	98.3%	0.2%	50	50.0	100.1%	50	48.9	97.7%
Si 251.611	0.5-200ppm	0.02	-0.23	48.6	97.1%	49.0	97.9%	0.8%	50	49.8	99.7%	50	49.0	97.9%
Si 252.411	0.5-200ppm	0.02	-0.26	48.3	96.6%	48.7	97.5%	0.9%	50	49.3	98.7%	50	48.5	97.0%
Zn 213.857	10ppb-50ppm	0.15	-12.62	971	97.1%	971	97.1%	0.0%	1000	986	98.6%	1000	950.4	95.0%

Sample ID AB27428

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.02	0.96	94.1%	0.95	93.3%	0.9%	1	0.93	93.3%	7.3%	0.00
B 249.772	0.01	0.99	97.2%	0.98	96.9%	0.3%	1	0.97	96.8%	4.4%	0.01
Ca 317.933	25.2	74.3	98.2%	74.4	98.4%	0.1%	50	49.9	99.8%	1.0%	-5.05
Ca 396.847	27.5	69.5	84.0%	69.6	84.2%	0.2%	50	47.6	95.1%	3.6%	-0.23
Cu 324.754	5	929	92.4%	927	92.2%	0.3%	1000	944	94.4%	4.8%	-3.95
Cu 327.395	4	944	94.0%	948	94.3%	0.4%	1000	955	95.5%	4.7%	-3.35
Fe 238.204	32	955	92.4%	959	92.8%	0.4%	1000	962	96.2%	2.4%	2.50
Fe 259.940	37	966	92.9%	970	93.3%	0.4%	1000	978	97.8%	0.9%	2.43
K 766.491	3.9	13.1	92.0%	13.0	91.1%	0.7%	10	9.6	96.0%	5.4%	0.04
Mg 202.588	12.8	61.4	97.1%	61.2	96.9%	0.2%	50	49.5	99.0%	2.9%	-1.31
Mg 279.077	13.1	58.4	90.5%	58.2	90.1%	0.3%	50	47.3	94.5%	5.2%	-0.03
Mn 257.611	-5	938	94.2%	935	94.0%	0.3%	1000	979	97.9%	1.5%	-3.27
Mn 260.566	-2	942	94.3%	951	95.3%	1.0%	1000	987	98.7%	0.3%	-1.50
Na 568.827	13.6	60.8	94.4%	61.2	95.1%	0.6%	50	50.6	101.3%	1.8%	4.29
Na 589.592	10.8	55.9	90.2%	55.6	89.6%	0.6%	50	48.2	96.3%	3.8%	0.24
Si 251.611	31.6	77.9	92.7%	77.6	92.0%	0.4%	50	48.9	97.8%	1.9%	-0.12
Si 252.411	30.8	76.3	91.0%	76.2	90.8%	0.2%	50	47.9	95.9%	2.9%	-0.10
Zn 213.857	1	940	93.9%	948	94.7%	0.9%	1000	1001	100.1%	1%	-3.93

Batch # 20150402b

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	0.01	1.06	105.9%	1.04	104.4%	1.4%	1	1.04	103.6%	1	1.0	100.5%
B 249.772	0.05-5ppm	0.01	0.01	1.06	105.9%	1.04	103.8%	1.9%	1	1.04	103.7%	1	1.0	100.2%
Ca 317.933	50-300ppm	-4.26	-4.32	51.5	103.0%	49.9	99.9%	3.1%	50	50.7	101.4%	50	48.1	96.2%
Ca 396.847	0.5-50ppm	-0.43	-0.52	52.2	104.3%	50.4	100.8%	3.4%	50	51.7	103.4%	50	49.4	98.8%
Cu 324.754	10ppb-100ppm	-6.37	-5.77	1051	105.1%	1021	102.1%	2.9%	1000	1028	102.8%	1000	989.0	98.9%
Cu 327.394	10ppb-100ppm	-4.36	-5.34	1050	105.0%	1025	102.5%	2.5%	1000	1034	103.4%	1000	989.3	98.9%
Fe 238.204	10ppb-100ppm	-0.91	-2.35	1028	102.8%	999	99.9%	2.9%	1000	1027	102.7%	1000	992.1	99.2%
Fe 259.940	10ppb-100ppm	0.16	-4.42	1035	103.5%	1001	100.1%	3.4%	1000	1030	103.0%	1000	1005.8	100.6%
K 766.491	0.5-750ppm	-0.08	-0.10	10.6	106.4%	10.3	102.9%	3.4%	10	10.4	104.0%	10	9.9	98.6%
Mg 202.583	50-1000ppm	-2.54	-2.46	52.2	104.5%	50.8	101.6%	2.8%	50	52.2	104.3%	50	49.9	99.8%
Mg 279.071	0.5-50ppm	-0.12	-0.20	51.6	103.2%	50.1	100.3%	2.9%	50	51.6	103.1%	50	49.3	98.7%
Mn 257.611	10ppb-11ppm	-5.02	-6.13	1037	103.7%	1012	101.2%	2.4%	1000	1029	102.9%	1000	999.2	99.9%
Mn 260.561	10ppb-11ppm	-5.61	-5.60	1033	103.3%	1012	101.2%	2.0%	1000	1026	102.6%	1000	1002.4	100.2%
Na 568.821	50-1000ppm	3.10	2.22	52.0	104.0%	49.5	99.0%	5.0%	50	50.5	101.1%	50	48.9	97.8%
Na 589.592	0.5-50ppm	-0.16	-0.22	52.8	105.7%	50.6	101.3%	4.2%	50	51.1	102.1%	50	49.9	99.9%
Si 251.611	0.5-200ppm	-0.10	-0.22	52.0	104.0%	50.6	101.2%	2.7%	50	51.5	103.0%	50	50.8	101.5%
Si 252.411	0.5-200ppm	-0.13	-0.20	51.7	103.5%	50.7	101.4%	2.0%	50	51.2	102.4%	50	50.5	101.1%
Zn 213.857	10ppb-50ppm	-2.25	-9.61	1023	102.3%	1002	100.2%	2.0%	1000	1017	101.7%	1000	978.8	97.9%

Matrix Spikes

Sample ID AB28492

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.17	2.16	99.3%	2.15	98.8%	0.5%	1	0.98	98.2%	5.4%	0.01
B 249.772	0.17	2.16	99.3%	2.14	98.4%	0.8%	1	0.99	98.7%	4.9%	0.01
Ca 317.933	56.2	160.4	104.2%	160.1	103.9%	0.2%	50	49.4	98.9%	2.6%	-4.27
Ca 396.847	59.9	151.2	91.2%	149.6	89.7%	1.0%	50	48.8	97.6%	5.8%	-0.45
Cu 324.754	-14	1934	97.4%	1915	96.5%	1.0%	1000	969	96.9%	5.9%	-4.50
Cu 327.394	-13	1934	97.3%	1913	96.3%	1.1%	1000	970	97.0%	6.3%	-4.38
Fe 238.204	201	2169	98.4%	2165	98.2%	0.2%	1000	993	99.3%	3.4%	-0.04
Fe 259.940	200	2176	98.8%	2171	98.6%	0.2%	1000	994	99.4%	3.5%	0.56
K 766.491	7.1	27.0	99.7%	26.7	98.1%	1.2%	10	9.8	97.7%	6.2%	-0.08
Mg 202.581	39.7	142.4	102.7%	140.6	100.9%	1.3%	50	49.6	99.1%	5.1%	-2.48
Mg 279.077	41.4	139.6	98.2%	138.1	96.7%	1.1%	50	49.2	98.3%	4.8%	-0.13
Mn 257.611	169	2154	99.3%	2141	98.6%	0.6%	1000	990	99.0%	3.9%	-4.89
Mn 260.561	168	2151	99.1%	2145	98.8%	0.3%	1000	992	99.2%	3.3%	-4.88
Na 568.821	40.9	139.7	98.8%	142.3	101.4%	1.8%	50	47.0	94.0%	7.3%	1.12
Na 589.592	46.5	143.9	97.4%	142.6	96.0%	0.9%	50	48.5	97.1%	5.1%	-0.18
Si 251.611	7.4	106.8	99.4%	105.7	98.3%	1.1%	50	49.4	98.9%	4.1%	-0.16
Si 252.411	7.3	106.8	99.4%	105.3	97.9%	1.4%	50	49.2	98.5%	3.9%	-0.15
Zn 213.857	-8	1945	97.7%	1937	97.3%	0.4%	1000	985	98.5%	3%	-2.03



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	10:28
CCV	40	40	100	95-105	10:28

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27428	80	80	0.0	5	10:28

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	15:29
LCSL	0.03	0.03	100	50-150	15:29
ICV	1.00	1.11	111	90-110	15:29
QCS	1.00	1.07	107	80-120	15:29
CCV	1.00	1.09	109	80-120	15:29

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27348	0.18	1.00	1.23	1.24	105	106	0.8	70-130	10	15:29	15:29

Note: ICV was over the acceptance criteria. Data was accepted due the recovery percents of QCS, CCV, LCSL MS, and MSD.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Phosphorus QC Summary (Hach 8190)

Date: 3/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:42
LCSL	0.03	0.03	100	50-150	13:42
ICV	1.00	1.01	101	90-110	13:42
QCS	1.00	0.96	96	80-120	13:42
CCV	1.00	1.01	101	80-120	13:42

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27313	0.00	1.00	1.05	1.04	105	104	1.0	70-130	10	13:42	13:42

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.003	---	<0.05	852
ICVL	0.050	0.055	110	80-120	857
ICV	0.250	0.232	92.8	80-120	1006

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27280	0.008	0.250	0.26	0.265	100.8	102.8	1.9	80/120	10	909

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/6/2015

Time: 1200

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	ND	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.530	106.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27413	ND	0.500	0.560	0.550	112	110	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/24/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.83	99.6	95-105	1630

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27319	7.73	7.73	0.0	10	1630

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/24/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1410	1410	100.0%	95-105	1320
ICV	24800	24915	100.5%	95-105	1320

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27314	1494	1505	0.7%	10	1400

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/9/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.409	---	<0.5
LCS	5.0	5.1	102	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27178	0.6	5.0	5.0	5.1	88	90	2.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID:

20150225

	F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount	2	20	2	20	2	2
ICVB	0.00	1.14	0.00	0.01	0.00	0.00
ICV	2.17	21.30	1.91	20.47	2.31	2.08
Rec 90-110%	108.61	106.52	95.70	102.37	115.55	103.91
ICVL	0.26	2.69	0.16	1.92	0.33	0.30
Rec 50-150%	128.12	134.35	81.54	95.94	162.86	148.69
Sample ID AB27314	0.45	114.65	0.22	236.60	0.43	0.10
MS	2.65	137.17	2.25	259.36	2.50	2.21
Rec 80-120%	110.10	112.57	101.26	113.82	103.38	105.35
MSD	2.62	137.12	2.23	259.01	2.59	2.19
Rec 80-120%	108.57	112.33	100.69	112.08	108.14	104.26
Diff 10%	1.16	0.04	0.51	0.13	3.74	0.98
CCV	2.10	32.65	2.07	23.37	2.21	2.07
Rec 90-110%	105.03	163.24	103.50	116.84	110.54	103.48
Diff 10%	3.36	42.05	7.83	13.20	4.43	0.41
CCVB	0.05	0.72	0.00	0.09	0.00	0.00



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/24/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	15:28
ICV	1.00	1.03	103.0%	95-105	15:28

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27313	0.100	0.100	0.00%	10	15:28

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

*Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762*

March 9, 2015

Ceres ID: 10606

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 26, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

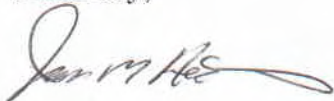
This work was authorized under M.B.A.'s Project # AB27313.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10606-001	MW-3M (monitoring)	2/26/2015	2/24/2015 9:15

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27313		Sample Size:	1.000 L	QC Batch #:	1297	Date Extracted:	4-Mar-15
					ZB-5 MS Analysis Date:	5-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.27			IS ¹³ C-2,3,7,8-TCDD	97.1	31 - 137	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	102	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery							
Client Data		Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27313	Sample Size:	1.000 L	QC Batch #:	1297	Date Extracted:	4-Mar-15
				ZB-5 MS Analysis Date:	5-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	11.4	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	104	25-141	
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.9	3.7-15.8	
				<i>a. Method acceptance criteria .</i>			
Analyst: JMH			Reviewed by: BS				

Sample ID: MW-3M (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10606-001		Date Received: 26-Feb-15
Project: AB27313			Sample Size: 1.036 L		QC Batch #: 1297		Date Extracted: 4-Mar-15
Date Collected: 24-Feb-15					ZB-5 MS Analysis Date: 5-Mar-15		
Time Collected: 9:15							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.25			<u>IS</u> ¹³ C-2,3,7,8-TCDD	90.3	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	99.7	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10606
 Temperature: 0.8 °C

Reports and invoices will be delivered by email in .pdf format

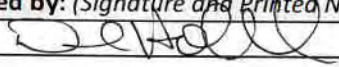
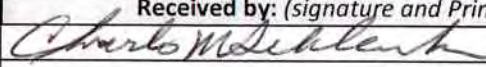
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: mweidner@mbasinc.com	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection		Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time									<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
												Comments
1	MW-3M (monitoring)	2/24/2015	915 0:00 0915	Aq	2	X						AB27313
2												(2,3,7,8 TCDD only)
3												Please include excel
4												report
5												
6												
7												
8												
9												
10												
11												
12												

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/25/2015	16:00	 Charles Weidner	2-25-15	10:30 AM

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10606</u>	Date/Time: <u>2/25/15 10:37AM</u>
Client Project ID: <u>AB27313</u>	Received Temperature: <u>0.8</u> Acceptable: <input checked="" type="radio"/> Y <input type="radio"/> N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals? Present?	<input type="radio"/> Y / <input type="radio"/> N
	Intact? <input type="radio"/> Y / <input type="radio"/> N
	NA: <input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	<input checked="" type="radio"/> Y / <input type="radio"/> N <u>2/25/15</u>
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present?	<input type="radio"/> Y / <input type="radio"/> N / <input checked="" type="radio"/> NA
List COC discrepancies:	
<u>CMS 02-26-15</u>	
List Damaged Samples:	
<u>CMS 2-26-15</u>	

Ceres ID: 10606 PB: 1297 Sample #s: 1 Due Date: 3/12/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10606-1	1551.74g	515.77	1.036L

Chemist J

Date 3/4/15

Method: 1613 B
 SOP #: 301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness				chem/date/witness
0-1297-MB001	Method Blank		1.000L	3/4/15 JA	3/5/15 JA	NA	3/5/15	NA	3/5/15 JA
0-1297-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10606-1297-001	MW-3M (monitoring)	✓	1.036L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 3/4/15
 Soxhlet Stop: 07:40 3/5/15

Samples Logged out by: JA 08:55 3/4/15
 Samples Returned by: NA
 Note samples Depleted: 1A

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 10:55 3/5/15 JA
 Extracts returned to Storage Location: _____

Chemist: JA

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10ul	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	A	20ul	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	20, 30, 100, 20ml	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Bas.c gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/18/15
N ₂ SO ₄	1.5g	P101614A	4/16/15
20% Dec Hex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/09/15 12:59
Attention: David Holland	Received Date: 02/26/15 09:25
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B26006	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear David Holland :

Enclosed are the results of analyses for samples received 02/26/15 09:25 with the Chain of Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

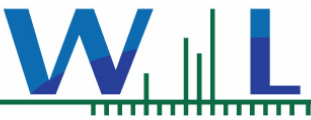
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-3M(Monitoring)	Coral Shaw	AB27313	5B26006-01	Water	02/24/15 09:15

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

5B26006-01 MW-3M(Monitoring)

Sampled: 02/24/15 09:15

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27313

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 16:10	

Chlorinated Pesticides and/or PCBs

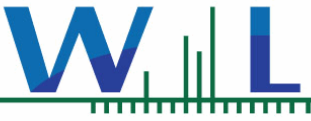
Method: EPA 508

Batch: W5B1441

Prepared: 02/27/15 09:37

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/04/15 09:02	
4,4'-DDE	ND	0.010	ug/l	1	03/04/15 09:02	
4,4'-DDT	ND	0.010	ug/l	1	03/04/15 09:02	
Aldrin	ND	0.010	ug/l	1	03/04/15 09:02	
alpha-BHC	ND	0.010	ug/l	1	03/04/15 09:02	
Aroclor 1016	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1221	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1232	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1242	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1248	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1254	ND	0.10	ug/l	1	03/04/15 09:02	
Aroclor 1260	ND	0.10	ug/l	1	03/04/15 09:02	
beta-BHC	ND	0.010	ug/l	1	03/04/15 09:02	
Chlordane (tech)	ND	0.10	ug/l	1	03/04/15 09:02	
Chlorothalonil	ND	0.050	ug/l	1	03/04/15 09:02	
delta-BHC	ND	0.010	ug/l	1	03/04/15 09:02	
Dieldrin	ND	0.010	ug/l	1	03/04/15 09:02	
Endosulfan I	ND	0.010	ug/l	1	03/04/15 09:02	
Endosulfan II	ND	0.010	ug/l	1	03/04/15 09:02	
Endosulfan sulfate	ND	0.010	ug/l	1	03/04/15 09:02	
Endrin	ND	0.010	ug/l	1	03/04/15 09:02	
Endrin aldehyde	ND	0.010	ug/l	1	03/04/15 09:02	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/04/15 09:02	
Heptachlor	ND	0.010	ug/l	1	03/04/15 09:02	
Heptachlor epoxide	ND	0.010	ug/l	1	03/04/15 09:02	
Hexachlorobenzene	ND	0.050	ug/l	1	03/04/15 09:02	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/04/15 09:02	
Methoxychlor	ND	0.010	ug/l	1	03/04/15 09:02	
PCBs, Total	ND	0.50	ug/l	1	03/04/15 09:02	
Propachlor	ND	0.050	ug/l	1	03/04/15 09:02	
Toxaphene	ND	1.0	ug/l	1	03/04/15 09:02	
Trifluralin	ND	0.010	ug/l	1	03/04/15 09:02	
Surr: Decachlorobiphenyl	56 %	Conc:0.0563	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	71 %	Conc:0.0707	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

5B26006-01 MW-3M(Monitoring)

Sampled: 02/24/15 09:15

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27313

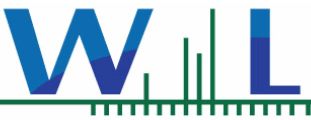
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

Anions by IC, EPA Method 9056 - Quality Control

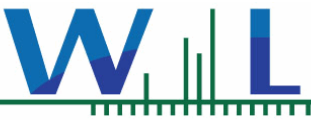
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1441 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1441-BLK1)				Analyzed: 03/03/15 17:58						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



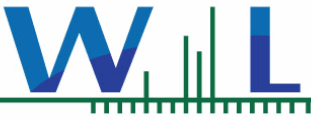
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1441 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1441-BLK1)										
Analyzed: 03/03/15 17:58										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
Surr: Decachlorobiphenyl	0.0984		ug/l	0.100		98	70-130			
Surr: Tetrachloro-meta-xylene	0.0760		ug/l	0.100		76	70-130			
LCS (W5B1441-BS1)										
Analyzed: 03/03/15 18:28										
4,4'-DDD	0.0810	0.010	ug/l	0.100		81	55-142			
4,4'-DDE	0.0792	0.010	ug/l	0.100		79	49-129			
4,4'-DDT	0.0888	0.010	ug/l	0.100		89	54-160			
Aldrin	0.0742	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.0803	0.010	ug/l	0.100		80	59-131			
beta-BHC	0.0899	0.010	ug/l	0.100		90	63-136			
delta-BHC	0.0945	0.010	ug/l	0.100		95	59-137			
Dieldrin	0.0798	0.010	ug/l	0.100		80	59-135			
Endosulfan I	0.0621	0.010	ug/l	0.100		62	28-138			
Endosulfan II	0.0733	0.010	ug/l	0.100		73	53-133			
Endosulfan sulfate	0.0959	0.010	ug/l	0.100		96	58-155			
Endrin	0.0839	0.010	ug/l	0.100		84	57-148			
Endrin aldehyde	0.0703	0.010	ug/l	0.100		70	45-139			
gamma-BHC (Lindane)	0.0815	0.010	ug/l	0.100		82	59-129			
Heptachlor	0.0790	0.010	ug/l	0.100		79	42-136			
Heptachlor epoxide	0.0798	0.010	ug/l	0.100		80	59-134			
Methoxychlor	0.0938	0.010	ug/l	0.100		94	56-167			
Surr: Decachlorobiphenyl	0.0834		ug/l	0.100		83	70-130			
Surr: Tetrachloro-meta-xylene	0.0714		ug/l	0.100		71	70-130			
LCS Dup (W5B1441-BSD1)										
Analyzed: 03/03/15 18:59										
4,4'-DDD	0.0905	0.010	ug/l	0.100		91	55-142	11	25	
4,4'-DDE	0.0890	0.010	ug/l	0.100		89	49-129	12	25	
4,4'-DDT	0.101	0.010	ug/l	0.100		101	54-160	12	25	
Aldrin	0.0803	0.010	ug/l	0.100		80	29-115	8	25	
alpha-BHC	0.0865	0.010	ug/l	0.100		86	59-131	7	25	
beta-BHC	0.0990	0.010	ug/l	0.100		99	63-136	10	25	
delta-BHC	0.105	0.010	ug/l	0.100		105	59-137	10	25	
Dieldrin	0.0876	0.010	ug/l	0.100		88	59-135	9	25	
Endosulfan I	0.0684	0.010	ug/l	0.100		68	28-138	10	25	
Endosulfan II	0.0810	0.010	ug/l	0.100		81	53-133	10	25	
Endosulfan sulfate	0.106	0.010	ug/l	0.100		106	58-155	10	25	

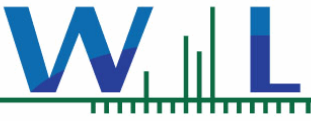


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5B1441 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B1441-BSD1)				Analyzed: 03/03/15 18:59						
Endrin	0.0922	0.010	ug/l	0.100		92	57-148	9	25	
Endrin aldehyde	0.0796	0.010	ug/l	0.100		80	45-139	12	25	
gamma-BHC (Lindane)	0.0880	0.010	ug/l	0.100		88	59-129	8	25	
Heptachlor	0.0864	0.010	ug/l	0.100		86	42-136	9	25	
Heptachlor epoxide	0.0873	0.010	ug/l	0.100		87	59-134	9	25	
Methoxychlor	0.103	0.010	ug/l	0.100		103	56-167	10	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0901</i>		<i>ug/l</i>	<i>0.100</i>		<i>90</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0740</i>		<i>ug/l</i>	<i>0.100</i>		<i>74</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/26/15 09:25
Date Reported: 03/09/15 12:59

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B2231

3/06/2015

Invoice: A504741

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B2231 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/26/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
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Client: Monterey Bay Analytical
Report To: David Holland
Project #: -
Received: 2/26/2015 - 10:26
Report Due: 3/12/2015

Invoice To: Monterey Bay Analytical
Invoice Attn: David Holland
Project PO#: -

Sample Receipt Conditions

Cooler: Default Cooler	Containers Intact
Temperature on Receipt °C: 0.0	COC/Labels Agree
	Received On Wet Ice
	Received On Blue Ice
	Packing Material - Other
	Initial receipt at BSK-FAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B2231-01
Sampled By: Coral Shaw
Sample Description: MW-3M (monitoring) // AB27313

Sample Date - Time: 02/24/15 - 09:15
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A502448	03/04/15	03/05/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A502448	03/04/15	03/05/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502347	03/03/15	03/04/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502347	03/03/15	03/04/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
Surrogate: DCPAA	EPA 515.3	95 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	

Certificate of Analysis

Sample ID: A5B2231-01
Sampled By: Coral Shaw
Sample Description: MW-3M (monitoring) // AB27313

Sample Date - Time: 02/24/15 - 09:15
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A502259	02/26/15	02/27/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502259	02/26/15	02/27/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502259	02/26/15	02/27/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502259	02/26/15	02/27/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502259	02/26/15	02/27/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502259	02/26/15	02/27/15	

Certificate of Analysis

Sample ID: A5B2231-01
Sampled By: Coral Shaw
Sample Description: MW-3M (monitoring) // AB27313

Sample Date - Time: 02/24/15 - 09:15
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	95 %							
Surrogate: Bromofluorobenzene	EPA 524.2	101 %							
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502263	02/27/15	03/01/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	03/01/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	03/01/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	03/01/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502263	02/27/15	03/01/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502263	02/27/15	03/01/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	03/01/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	03/01/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	03/01/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	03/01/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	03/01/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	101 %							
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502413	03/03/15	03/05/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502413	03/03/15	03/05/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502413	03/03/15	03/05/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502413	03/03/15	03/05/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502413	03/03/15	03/05/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502355	03/03/15	03/03/15	
Surrogate: AMPA	EPA 547	101 %							
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502241	02/26/15	02/27/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502345	03/02/15	03/03/15	



A5B2231

Cal Am

Certificate of Analysis

Sample ID: A5B2231-01

Sampled By: Coral Shaw

Sample Description: MW-3M (monitoring) // AB27313

Sample Date - Time: 02/24/15 - 09:15

Matrix: Ground Water

Sample Type: Grab

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A502448

Prepared: 03/04/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A502448-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/04/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/04/15	

Blank Spike (A502448-BS1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		95	70-130			03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		99	70-130			03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.47			0.46		102	70-130			03/04/15	

Blank Spike Dup (A502448-BSD1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		96	70-130	2	20	03/05/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	1	20	03/05/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/05/15	

Matrix Spike (A502448-MS1), Source: A5B2160-01

Dibromochloropropane (DBCP)	0.37	0.010	ug/L	0.12	0.24	107	65-135			03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	101	65-135			03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.45		98	70-130			03/04/15	

EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502347-BLK1)

2,4,5-T	ND	1.0	ug/L							03/04/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/04/15	
2,4-D	ND	10	ug/L							03/04/15	
Bentazon	ND	2.0	ug/L							03/04/15	
Dalapon	ND	10	ug/L							03/04/15	
Dicamba	ND	1.5	ug/L							03/04/15	
Dinoseb	ND	2.0	ug/L							03/04/15	
Pentachlorophenol	ND	0.20	ug/L							03/04/15	
Picloram	ND	1.0	ug/L							03/04/15	
Surrogate: DCPAA	59			58		101	70-130			03/04/15	

Blank Spike (A502347-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		103	70-130			03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		101	70-130			03/04/15	
2,4-D	0.44	10	ug/L	0.40		109	70-130			03/04/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130			03/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130			03/04/15	
Dicamba	6.1	1.5	ug/L	6.0		102	70-130			03/04/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			03/04/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			03/04/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502347-BS1)

Surrogate: DCPAA 60 58 103 70-130 03/04/15

Blank Spike Dup (A502347-BSD1)

2,4,5-T	4.0	1.0	ug/L	4.0		101	70-130	2	20	03/04/15
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		102	70-130	0	20	03/04/15
2,4-D	0.42	10	ug/L	0.40		106	70-130	3	20	03/04/15
Bentazon	8.2	2.0	ug/L	8.0		103	70-130	1	20	03/04/15
Dalapon	4.0	10	ug/L	4.0		101	70-130	0	20	03/04/15
Dicamba	6.1	1.5	ug/L	6.0		101	70-130	1	20	03/04/15
Dinoseb	0.79	2.0	ug/L	0.80		99	70-130	1	20	03/04/15
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130	1	20	03/04/15
Picloram	0.39	1.0	ug/L	0.40		98	70-130	2	20	03/04/15
Surrogate: DCPAA	59			58		102	70-130			03/04/15

Matrix Spike (A502347-MS1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	104	70-130			03/04/15
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80	ND	98	70-130			03/04/15
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/04/15
Bentazon	8.0	2.0	ug/L	8.0	ND	101	70-130			03/04/15
Dalapon	4.4	10	ug/L	4.0	ND	109	70-130			03/04/15
Dicamba	6.3	1.5	ug/L	6.0	ND	104	70-130			03/04/15
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130			03/04/15
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130			03/04/15
Picloram	0.40	1.0	ug/L	0.40	ND	99	70-130			03/04/15
Surrogate: DCPAA	61			58		105	70-130			03/04/15

Matrix Spike Dup (A502347-MSD1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/04/15
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80	ND	101	70-130	3	20	03/04/15
2,4-D	0.44	10	ug/L	0.40	ND	110	70-130	2	20	03/04/15
Bentazon	8.0	2.0	ug/L	8.0	ND	100	70-130	1	20	03/04/15
Dalapon	4.4	10	ug/L	4.0	ND	111	70-130	2	20	03/04/15
Dicamba	6.3	1.5	ug/L	6.0	ND	105	70-130	1	20	03/04/15
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	1	20	03/04/15
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	99	70-130	1	20	03/04/15
Picloram	0.41	1.0	ug/L	0.40	ND	102	70-130	2	20	03/04/15
Surrogate: DCPAA	61			58		105	70-130			03/04/15

EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/27/15
1,1,1-Trichloroethane	ND	0.50	ug/L							02/27/15

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/27/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/27/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/27/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/27/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/27/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/27/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/27/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/27/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/27/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/27/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/27/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/27/15	
2-Butanone	ND	5.0	ug/L							02/27/15	
2-Chlorotoluene	ND	0.50	ug/L							02/27/15	
2-Hexanone	ND	10	ug/L							02/27/15	
4-Chlorotoluene	ND	0.50	ug/L							02/27/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/27/15	
Acetone	ND	10	ug/L							02/27/15	
Benzene	ND	0.50	ug/L							02/27/15	
Bromobenzene	ND	0.50	ug/L							02/27/15	
Bromochloromethane	ND	0.50	ug/L							02/27/15	
Bromodichloromethane	ND	0.50	ug/L							02/27/15	
Bromoform	ND	0.50	ug/L							02/27/15	
Bromomethane	ND	0.50	ug/L							02/27/15	
Carbon disulfide	ND	10	ug/L							02/27/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/27/15	
Chlorobenzene	ND	0.50	ug/L							02/27/15	
Chloroethane	ND	0.50	ug/L							02/27/15	
Chloroform	ND	0.50	ug/L							02/27/15	
Chloromethane	ND	0.50	ug/L							02/27/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/27/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/27/15	
Dibromochloromethane	ND	0.50	ug/L							02/27/15	
Dibromomethane	ND	0.50	ug/L							02/27/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/27/15	
Dichloromethane	ND	0.50	ug/L							02/27/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/27/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/27/15	
Ethylbenzene	ND	0.50	ug/L							02/27/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502259-BLK1)

Isopropylbenzene	ND	0.50	ug/L							02/27/15	
m,p-Xylenes	ND	0.50	ug/L							02/27/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/27/15	
Naphthalene	ND	0.50	ug/L							02/27/15	
n-Butylbenzene	ND	0.50	ug/L							02/27/15	
n-Propylbenzene	ND	0.50	ug/L							02/27/15	
o-Xylene	ND	0.50	ug/L							02/27/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/27/15	
sec-Butylbenzene	ND	0.50	ug/L							02/27/15	
Styrene	ND	0.50	ug/L							02/27/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/27/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/27/15	
tert-Butylbenzene	ND	0.50	ug/L							02/27/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/27/15	
Toluene	ND	0.50	ug/L							02/27/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/27/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/27/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/27/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/27/15	
Vinyl Chloride	ND	0.50	ug/L							02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.6			5.0		93	70-130			02/27/15	
Surrogate: Bromofluorobenzene	50			50		99	70-130			02/27/15	

Blank Spike (A502259-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		104	70-130			02/27/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			02/27/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			02/27/15	
1,1-Dichloroethene	11	0.50	ug/L	10		105	70-130			02/27/15	
1,1-Dichloropropene	10	0.50	ug/L	10		102	70-130			02/27/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
1,2-Dichloroethane	10	0.50	ug/L	10		101	70-130			02/27/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			02/27/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		106	70-130			02/27/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/27/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			02/27/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
2,2-Dichloropropane	11	0.50	ug/L	10		108	70-130			02/27/15	
2-Butanone	11	5.0	ug/L	10		105	70-130			02/27/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502259-BS1)

2-Hexanone	10	10	ug/L	10		105	70-130			02/27/15	
4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
4-Methyl-2-pentanone	11	5.0	ug/L	10		106	70-130			02/27/15	
Acetone	11	10	ug/L	10		112	70-130			02/27/15	
Benzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Bromobenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			02/27/15	
Bromodichloromethane	10	0.50	ug/L	10		103	70-130			02/27/15	
Bromoform	12	0.50	ug/L	10		125	70-130			02/27/15	
Bromomethane	7.1	0.50	ug/L	10		71	70-130			02/27/15	
Carbon disulfide	11	10	ug/L	10		114	70-130			02/27/15	
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			02/27/15	
Chlorobenzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Chloroethane	10	0.50	ug/L	10		104	70-130			02/27/15	
Chloroform	10	0.50	ug/L	10		102	70-130			02/27/15	
Chloromethane	10	0.50	ug/L	10		104	70-130			02/27/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			02/27/15	
cis-1,3-Dichloropropene	9.7	0.50	ug/L	10		97	70-130			02/27/15	
Dibromochloromethane	11	0.50	ug/L	10		110	70-130			02/27/15	
Dibromomethane	10	0.50	ug/L	10		102	70-130			02/27/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		109	70-130			02/27/15	
Dichloromethane	10	0.50	ug/L	10		104	70-130			02/27/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		101	70-130			02/27/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		105	70-130			02/27/15	
Ethylbenzene	10	0.50	ug/L	10		102	70-130			02/27/15	
Hexachlorobutadiene	10	0.50	ug/L	10		101	70-130			02/27/15	
Isopropylbenzene	10	0.50	ug/L	10		101	70-130			02/27/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130			02/27/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		105	70-130			02/27/15	
Naphthalene	10	0.50	ug/L	10		103	70-130			02/27/15	
n-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			02/27/15	
o-Xylene	10	0.50	ug/L	10		102	70-130			02/27/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			02/27/15	
Styrene	12	0.50	ug/L	10		123	70-130			02/27/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130			02/27/15	
tert-Butyl alcohol (TBA)	9.6	2.0	ug/L	10		96	70-130			02/27/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		103	70-130			02/27/15	
Toluene	10	0.50	ug/L	10		102	70-130			02/27/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			02/27/15	
trans-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130			02/27/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		101	70-130			02/27/15	
Trichlorofluoromethane	11	5.0	ug/L	10		107	70-130			02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502259-BS1)

Vinyl Chloride	10	0.50	ug/L	10		105	70-130			02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.2			5.0		105	70-130			02/27/15	
Surrogate: Bromofluorobenzene	52			50		104	70-130			02/27/15	

Blank Spike Dup (A502259-BSD1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		103	70-130	0	30	02/27/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130	1	30	02/27/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		105	70-130	1	30	02/27/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
1,1-Dichloroethene	11	0.50	ug/L	10		107	70-130	1	30	02/27/15	
1,1-Dichloropropene	10	0.50	ug/L	10		104	70-130	3	30	02/27/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	1	30	02/27/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		101	70-130	1	30	02/27/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	0	30	02/27/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130	2	30	02/27/15	
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,2-Dichloropropane	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		105	70-130	1	30	02/27/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
2,2-Dichloropropane	11	0.50	ug/L	10		109	70-130	1	30	02/27/15	
2-Butanone	10	5.0	ug/L	10		101	70-130	4	30	02/27/15	
2-Chlorotoluene	10	0.50	ug/L	10		102	70-130	1	30	02/27/15	
2-Hexanone	10	10	ug/L	10		100	70-130	4	30	02/27/15	
4-Chlorotoluene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		102	70-130	4	30	02/27/15	
Acetone	11	10	ug/L	10		107	70-130	5	30	02/27/15	
Benzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Bromobenzene	10	0.50	ug/L	10		100	70-130	1	30	02/27/15	
Bromochloromethane	10	0.50	ug/L	10		105	70-130	2	30	02/27/15	
Bromodichloromethane	10	0.50	ug/L	10		104	70-130	0	30	02/27/15	
Bromoform	12	0.50	ug/L	10		118	70-130	5	30	02/27/15	
Bromomethane	8.3	0.50	ug/L	10		83	70-130	15	30	02/27/15	
Carbon disulfide	11	10	ug/L	10		114	70-130	0	30	02/27/15	
Carbon Tetrachloride	10	0.50	ug/L	10		104	70-130	2	30	02/27/15	
Chlorobenzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Chloroethane	10	0.50	ug/L	10		102	70-130	2	30	02/27/15	
Chloroform	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Chloromethane	11	0.50	ug/L	10		106	70-130	1	30	02/27/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	2	30	02/27/15	
Dibromochloromethane	11	0.50	ug/L	10		109	70-130	1	30	02/27/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502259

Prepared: 02/27/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502259-BSD1)

Dibromomethane	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		114	70-130	4	30	02/27/15	
Dichloromethane	11	0.50	ug/L	10		105	70-130	2	30	02/27/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		102	70-130	1	30	02/27/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		106	70-130	0	30	02/27/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130	3	30	02/27/15	
Isopropylbenzene	10	0.50	ug/L	10		103	70-130	2	30	02/27/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130	0	30	02/27/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		105	70-130	1	30	02/27/15	
Naphthalene	9.8	0.50	ug/L	10		98	70-130	4	30	02/27/15	
n-Butylbenzene	10	0.50	ug/L	10		100	70-130	2	30	02/27/15	
n-Propylbenzene	10	0.50	ug/L	10		103	70-130	2	30	02/27/15	
o-Xylene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
p-Isopropyltoluene	10	0.50	ug/L	10		101	70-130	3	30	02/27/15	
sec-Butylbenzene	10	0.50	ug/L	10		101	70-130	3	30	02/27/15	
Styrene	12	0.50	ug/L	10		124	70-130	1	30	02/27/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130	0	30	02/27/15	
tert-Butyl alcohol (TBA)	9.4	2.0	ug/L	10		94	70-130	2	30	02/27/15	
tert-Butylbenzene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	1	30	02/27/15	
Toluene	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		105	70-130	1	30	02/27/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130	2	30	02/27/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		103	70-130	1	30	02/27/15	
Trichlorofluoromethane	11	5.0	ug/L	10		108	70-130	1	30	02/27/15	
Vinyl Chloride	11	0.50	ug/L	10		108	70-130	3	30	02/27/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.3			5.0		106	70-130			02/27/15	
Surrogate: Bromofluorobenzene	52			50		104	70-130			02/27/15	

EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Alachlor	ND	1.0	ug/L							02/28/15	
Atrazine	ND	0.50	ug/L							02/28/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/28/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/28/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/28/15	
Bromacil	ND	10	ug/L							02/28/15	
Butachlor	ND	0.38	ug/L							02/28/15	
Diazinon	ND	0.25	ug/L							02/28/15	
Dimethoate	ND	10	ug/L							02/28/15	
Metolachlor	ND	0.50	ug/L							02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Metribuzin	ND	0.50	ug/L							02/28/15	
Molinate	ND	2.0	ug/L							02/28/15	
Prometryn	ND	2.0	ug/L							02/28/15	
Propachlor	ND	0.50	ug/L							02/28/15	
Simazine	ND	1.0	ug/L							02/28/15	
Thiobencarb	ND	1.0	ug/L							02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		99	70-130			02/28/15	

Blank Spike (A502263-BS1)

Alachlor	1.0	1.0	ug/L	1.0		100	70-130			02/28/15	
Atrazine	0.49	0.50	ug/L	0.50		98	70-130			02/28/15	
Benzo(a)pyrene	0.071	0.10	ug/L	0.10		71	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		95	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130			02/28/15	
Bromacil	1.1	10	ug/L	1.0		111	70-130			02/28/15	
Butachlor	1.0	0.38	ug/L	1.0		100	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20		84	70-130			02/28/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130			02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		100	70-130			02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130			02/28/15	
Molinate	0.99	2.0	ug/L	1.0		99	70-130			02/28/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			02/28/15	
Propachlor	0.49	0.50	ug/L	0.50		99	70-130			02/28/15	
Simazine	0.32	1.0	ug/L	0.35		93	70-130			02/28/15	
Thiobencarb	0.48	1.0	ug/L	0.50		96	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		97	70-130			02/28/15	

Blank Spike Dup (A502263-BSD1)

Alachlor	0.98	1.0	ug/L	1.0		98	70-130	2	30	02/28/15	
Atrazine	0.48	0.50	ug/L	0.50		96	70-130	2	30	02/28/15	
Benzo(a)pyrene	0.086	0.10	ug/L	0.10		86	70-130	19	30	02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		94	70-130	1	30	02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130	1	30	02/28/15	
Bromacil	1.1	10	ug/L	1.0		108	70-130	3	30	02/28/15	
Butachlor	0.98	0.38	ug/L	1.0		98	70-130	2	30	02/28/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130	2	30	02/28/15	
Dimethoate	0.95	10	ug/L	1.0		95	70-130	8	30	02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		98	70-130	2	30	02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130	0	30	02/28/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	3	30	02/28/15	
Prometryn	1.8	2.0	ug/L	2.0		90	70-130	14	30	02/28/15	
Propachlor	0.50	0.50	ug/L	0.50		99	70-130	1	30	02/28/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130	5	30	02/28/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	1	30	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.7			5.0		95	70-130			02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502263-MS1), Source: A5B1765-06

Alachlor	0.93	1.0	ug/L	1.0	ND	93	70-130			02/28/15	
Atrazine	0.48	0.50	ug/L	0.50	ND	96	70-130			02/28/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10	ND	82	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0	ND	93	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.5	3.0	ug/L	1.5	ND	99	70-130			02/28/15	
Bromacil	0.99	10	ug/L	1.0	ND	99	70-130			02/28/15	
Butachlor	0.93	0.38	ug/L	1.0	ND	93	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20	ND	84	70-130			02/28/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			02/28/15	
Metolachlor	1.9	0.50	ug/L	2.0	ND	93	70-130			02/28/15	
Metribuzin	0.92	0.50	ug/L	1.0	ND	92	70-130			02/28/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			02/28/15	
Prometryn	1.9	2.0	ug/L	2.0	ND	94	70-130			02/28/15	
Propachlor	0.50	0.50	ug/L	0.50	ND	99	70-130			02/28/15	
Simazine	0.33	1.0	ug/L	0.35	ND	95	70-130			02/28/15	
Thiobencarb	0.46	1.0	ug/L	0.50	ND	91	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.1			5.0		102	70-130			02/28/15	

EPA 531.1 - Quality Control

Batch: A502413

Prepared: 03/03/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502413-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/05/15	
Aldicarb	ND	3.0	ug/L							03/05/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/05/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/05/15	
Carbaryl	ND	5.0	ug/L							03/05/15	
Carbofuran	ND	5.0	ug/L							03/05/15	
Methiocarb	ND	2.0	ug/L							03/05/15	
Methomyl	ND	2.0	ug/L							03/05/15	
Oxamyl	ND	20	ug/L							03/05/15	
Propoxur	ND	2.0	ug/L							03/05/15	

Blank Spike (A502413-BS1)

3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		101	80-120			03/04/15	
Aldicarb	4.3	3.0	ug/L	4.0		106	80-120			03/04/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			03/04/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		103	80-120			03/04/15	
Carbaryl	3.9	5.0	ug/L	4.0		98	80-120			03/04/15	
Carbofuran	4.0	5.0	ug/L	4.0		100	80-120			03/04/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120			03/04/15	
Methomyl	4.3	2.0	ug/L	4.0		107	80-120			03/04/15	
Oxamyl	3.9	20	ug/L	4.0		98	80-120			03/04/15	
Propoxur	3.9	2.0	ug/L	4.0		97	80-120			03/04/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502413

Prepared: 03/03/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502413-BSD1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		97	80-120	4	20	03/05/15	
Aldicarb	4.1	3.0	ug/L	4.0		101	80-120	5	20	03/05/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120	0	20	03/05/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		102	80-120	1	20	03/05/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	4	20	03/05/15	
Carbofuran	4.0	5.0	ug/L	4.0		100	80-120	0	20	03/05/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120	0	20	03/05/15	
Methomyl	4.3	2.0	ug/L	4.0		107	80-120	0	20	03/05/15	
Oxamyl	4.0	20	ug/L	4.0		99	80-120	1	20	03/05/15	
Propoxur	3.9	2.0	ug/L	4.0		98	80-120	1	20	03/05/15	

Matrix Spike (A502413-MS1), Source: A5B2074-01

3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0	ND	96	65-135			03/05/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	114	65-135			03/05/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0	ND	103	65-135			03/05/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0	ND	104	65-135			03/05/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	104	65-135			03/05/15	
Carbofuran	4.1	5.0	ug/L	4.0	ND	103	65-135			03/05/15	
Methiocarb	4.1	2.0	ug/L	4.0	ND	103	65-135			03/05/15	
Methomyl	4.3	2.0	ug/L	4.0	ND	107	65-135			03/05/15	
Oxamyl	4.0	20	ug/L	4.0	ND	101	65-135			03/05/15	
Propoxur	4.1	2.0	ug/L	4.0	ND	102	65-135			03/05/15	

EPA 547 - Quality Control

Batch: A502355

Prepared: 03/03/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502355-BLK1)

Glyphosate	ND	25	ug/L							03/03/15	
Surrogate: AMPA	110			100		112	70-130			03/03/15	

Blank Spike (A502355-BS1)

Glyphosate	120	25	ug/L	100		120	70-130			03/03/15	
Surrogate: AMPA	94			100		94	70-130			03/03/15	

Blank Spike Dup (A502355-BSD1)

Glyphosate	110	25	ug/L	100		110	70-130	9	30	03/03/15	
Surrogate: AMPA	130			100		126	70-130			03/03/15	

Matrix Spike (A502355-MS1), Source: A5B2244-01

Glyphosate	120	25	ug/L	100	ND	121	70-130			03/03/15	
Surrogate: AMPA	110			100		106	70-130			03/03/15	

Matrix Spike Dup (A502355-MSD1), Source: A5B2244-01

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502355

Prepared: 03/03/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502355-MSD1), Source: A5B2244-01

Glyphosate	160	25	ug/L	100	ND	158	70-130	27	30	03/03/15	MS1.0 High
Surrogate: AMPA	98			100		96	70-130			03/03/15	

EPA 548.1 - Quality Control

Batch: A502241

Prepared: 02/26/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502241-BLK1)

Endothall	ND	45	ug/L							02/27/15	
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Blank Spike (A502241-BS1)

Endothall	16	45	ug/L	20		79	54-105			02/27/15	
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Blank Spike Dup (A502241-BSD1)

Endothall	14	45	ug/L	20		71	54-105	11	46	02/27/15	
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Matrix Spike (A502241-MS1), Source: A5B1841-01

Endothall	18	45	ug/L	20	ND	88	54-105			02/27/15	
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EPA 549.2 - Quality Control

Batch: A502345

Prepared: 03/02/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502345-BLK1)

Diquat	ND	4.0	ug/L							03/03/15	
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Blank Spike (A502345-BS1)

Diquat	3.6	4.0	ug/L	4.0		91	70-130			03/03/15	
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Blank Spike Dup (A502345-BSD1)

Diquat	3.4	4.0	ug/L	4.0		84	70-130	7	30	03/03/15	
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Matrix Spike (A502345-MS1), Source: A5B1978-01

Diquat	3.1	4.0	ug/L	4.0	ND	77	70-130			03/03/15	
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Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

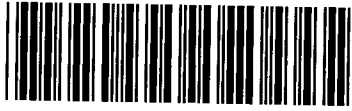
State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5B2231



02262015

Monte6227

Turnaround: Standard

Due Date: 3/12/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

Turnaround Time Request	
<input checked="" type="checkbox"/>	Standard - 10 business days
<input type="checkbox"/>	Rush (Surcharge may apply)
Date needed:	

A5B2231
 Monte6227

02/26/2015

10



*Required Fields

Temp: 10

Company/Client Name*: Monterey Bay Analytical Services	Report Attention*: Mason Weidner-Holland Additional cc's: David Holland	Invoice To*: David Holland PO#:	Phone*: 831-375-6227	Fax: 831-641-0734
E-mail*: mweidner@mbasinc.com, dholland@mbasinc.com				

Address*: 4 Justin Court, Suite D	City*: Monterey	State*: CA	Zip*: 93940
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Project: Cal Am	Project #:	How would you like to receive your completed results?*
Reporting Options: <input type="checkbox"/> Trace (J-Flag) <input type="checkbox"/> Swamp <input type="checkbox"/> EDD Type: _____	Regulatory Carbon Copies: <input type="checkbox"/> SWRCB (Drinking Water) <input type="checkbox"/> Merced Co <input type="checkbox"/> Fresno Co <input type="checkbox"/> Madera Co <input type="checkbox"/> Tulare Co <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> E-Mail <input type="checkbox"/> Fax <input type="checkbox"/> Mail
Sampler Name (Printed/Signature)*: Coral Shaw	Regulatory Compliance: <input type="checkbox"/> EDT to California SWRCB (Drinking Water) System Number*: _____ <input type="checkbox"/> Geotracker #: _____	

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
	MW-3M (monitoring)	2/24/15	0915	GW	AB27313	X	X	X	X	X	X	X	X
<p>Please include report in pdf and excel format</p>													

Relinquished by: (Signature and Printed Name) D. Holland	Company MBAS	Date 2/25/15	Time 1600	Received by: (Signature and Printed Name) _____	Company
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Relinquished by: (Signature and Printed Name) _____	Company	Date	Time	Received by: (Signature and Printed Name) _____	Company
--	---------	------	------	--	---------

Received for Lab by: (Signature and Printed Name) Michelle Weiss	Date 2/26/15	Time 10:26	Payment Received at Delivery:	Check / Cash
Shipping Method: <input checked="" type="checkbox"/> ONTRAC <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> WALK-IN <input type="checkbox"/> FED EX Courier: _____	Amount:	PIA#:	Init.	

Shipping Method: <input checked="" type="checkbox"/> ONTRAC <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> WALK-IN <input type="checkbox"/> FED EX Courier: _____	Cooling Method: <input checked="" type="checkbox"/> Wet <input checked="" type="checkbox"/> Blue <input type="checkbox"/> None	Custody Seal: <input checked="" type="checkbox"/> YDN	Chilling Process Begun: <input checked="" type="checkbox"/> YDN
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Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		<u>Yes</u> No NA		Were correct containers and preservatives received for the tests requested?		<u>Yes</u> No NA	
	If samples were taken today, is there evidence that chilling has begun?		Yes No <u>NA</u>		Were there bubbles in the VOA vials? (Volatiles Only)		Yes <u>No</u> NA	
	Did all bottles arrive unbroken and intact?		<u>Yes</u> No		Was a sufficient amount of sample received?		<u>Yes</u> No	
	Did all bottle labels agree with COC?		<u>Yes</u> No		Do samples have a hold time <72 hours?		Yes <u>No</u>	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes No <u>NA</u>		Was PM notified of discrepancies? PM: _____ By/Time: _____		Yes No <u>NA</u>	
Bottles Received "_" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?					
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—					
	None (P) ^{White Cap}	—	—					
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y N					
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y N					
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y N					
	HNO_3 (P) ^{Red Cap}	—	—					
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y N					
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y N					
	NaOH + ZnAc (P)	pH > 9	Y N					
	Dissolved Oxygen 300ml (g)	—	—					
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—					
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—					
	$\text{Na}_2\text{O}_3\text{S}+\text{HCl}$ (AG) ^{Lt. Pink Label} 525	—	—		2C			
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—		1C			
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524	—	—		2A, 4V			
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—					
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	<u>Y</u> N		1V			
	NH_4Cl (AG) ^{Purple Label} 552	—	—					
	EDA (AG) ^{Brown Label} DBPs	—	—					
	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624	—	—		3V			
	Buffer pH 4 (CG)	—	—					
	None (CG)	—	—					
	H_3PO_4 (CG) ^{Salmon Label}	—	—					
	Other:							
	Asbestos 1Liter Plastic w/ Foil	—	—					
	Low Level Hg / Metals Double Baggie	—	—					
	Bottled Water	—	—					
Clear Glass Jar: 250 / 500 / 1 Liter	—	—						
Soil Tube Brass / Steel / Plastic	—	—						
Tedlar Bag / Plastic Bag	—	—						
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials	
	S P			S P				
Comments	S P			S P				

2/26/15
MUV

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested									
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter				

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com	
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []	
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____	
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size	
27313		MW-3M (monitoring)	2-24-15	09:15	1.2						27			
													Field Parameters:	
													Temp:	16.3°C
													pH:	6.89
													Sp Cond:	42340.45/cm
													Turb:	0.42 NTU

Printed Name	Signature	Date	Time	Comment
Sampled by: Coral Shaw/Geoscience		2-24-15	09:15	Is sample for regulatory purposes? Yes / No 2ML 1:1 HNO ₃ to each 125mL PH < 2 by 2/24/15
Relinquished by: Coral Shaw/Geoscience		2-24-15	12:45	
Received by: Josh Sobolew/Geoscience		2/24/15	12:45	
Relinquished by: Josh Sobolew/Geoscience		2/24/15	1:18 PM	
Received by: MBAS		2/24/15	13:10	

[] Payment received	Check #	Amount:	Receipt #	Date:
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Sample Condition Upon Receipt

COC Info

27313

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

vacuum filter 0.45 μ membrane filter preserved
 500mL + Na₂S₂O₃ + H₂SO₄ pH < 2 for TKN, NH₃
 250mL + H₂SO₄ pH < 2 for TP
 250mL unpreserved for colorimetric orthophosphate



California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com

ELAP Certification Number: 2385

Lab Number: AB27199

Collection Date/Time: 2/21/2015 16:55 Sample Collector: SHAW C
Submittal Date/Time: 2/22/2015 10:10 Sample ID

Sample Description: MW-3D (monitoring)

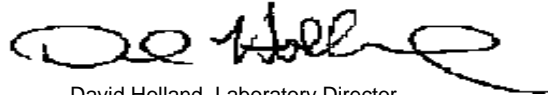
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	114		2	2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	44		12	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	162		125	3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	139		10	2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	1.06		0.05	3/6/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	44.1		10	2/23/2015	TC
Calcium	EPA200.7	mg/L	2470		5	4/2/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	2370		0.5	3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		2/25/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	16069		100	2/23/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		2/26/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	6	H	3	2/23/2015	LRH
Copper, Total	EPA200.8	µg/L	56		50	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/4/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/3/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		2/27/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		0.1	2/23/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E		2/25/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	12063		10	4/3/2015	DH
Hydroxide	SM2320B	mg/L	Not Detected		5	2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	2/26/2015	WECK
Iron	EPA200.7	µg/L	169		10	4/2/2015	MW
Iron, Dissolved	EPA200.7	µg/L	142		10	3/6/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/9/2015	TC
Lithium	EPA200.8	µg/L	250		12	3/4/2015	SM
Magnesium	EPA200.7	mg/L	1430		0.5	4/2/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	1290		1	3/6/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	259		10	3/6/2015	MW
Manganese, Total	EPA200.7	µg/L	289		10	4/2/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	2/23/2015	HM
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	2/23/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	0.1		0.1	2/23/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.1	2/23/2015	TC

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

Odor Threshold at 60 C	SM2150B	TON	3	H	1	2/23/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.06		0.03	2/23/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.55			2/21/2015	CS
pH (Laboratory)	SM4500-H+B	pH (H)	6.9		0.1	2/22/2015	MWH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		2/27/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.04		0.03	3/6/2015	LRH
Potassium	EPA200.7	mg/L	64.4		0.5	4/2/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	55.7		0.1	3/6/2015	MW
QC Ratio TDS/SEC	Calculation		0.74			3/2/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		2/25/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	32		0.5	3/6/2015	MW
Sodium	EPA200.7	mg/L	6960		5	4/2/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	6110		0.5	3/6/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	44020		1	2/24/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	41740		1	2/21/2015	CS
Strontium, Dissolved	EPA200.8	µg/L	16370		62	3/4/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	2058		100	2/23/2015	TC
Temperature (Field)	SM2550	° C	19.6			2/21/2015	CS
Total Diss. Solids	SM2540C	mg/L	32600		10	2/23/2015	HM
Turbidity	EPA180.1	NTU	1.0	H	0.05	2/23/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.38		0.05	2/21/2015	CS
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E		2/25/2015	BSK
Zinc, Total	EPA200.8	µg/L	Not Detected		250	3/4/2015	SM

Sample Comments: Odor: Salty

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27199 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6960	0.04350	302.76
Potassium	64.4	0.02558	1.65
Calcium	2470	0.04990	123.25
Magnesium	1460	0.08229	120.14
NH3-N	0	0.07143	0.00
		SUM	547.80

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	114	0.02000	2.28
Sulfate	2058	0.02082	42.85
Chloride	16069	0.02821	453.31
Nitrate-Nitrogen	0.1	0.07138	0.01
Phosphate-P	0.1	0.01031	0.00
Bromide	44.1	0.01252	0.55
		SUM	498.99

ANION-CATION BALANCE **5** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	44020	
Cation Sum X 100	54780	124%
Anion Sum X 100	49899	113%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27199 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6110	0.04350	265.79
Potassium	55.7	0.02558	1.42
Calcium	2370	0.04990	118.26
Magnesium	1290	0.08229	106.15
NH3-N	0	0.07143	0.00
		SUM	491.63

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	114	0.02000	2.28
Sulfate	2058	0.02082	42.85
Chloride	16069	0.02821	453.31
Nitrate-Nitrogen	0.1	0.07138	0.01
Phosphate-P	0.1	0.01031	0.00
Bromide	44.1	0.01252	0.55
		SUM	498.99

ANION-CATION BALANCE **-1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	44020	
Cation Sum X 100	49163	112%
Anion Sum X 100	49899	113%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51
CCV 2	40	40	100	95-105	15:27

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27267	124	123	0.8	5	12:30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27199 D

25X Dilution

Date Analyzed
Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference

Batch # 20150306

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	0.99	99.4%	1.01	101.2%	1.8%	1	1.00	100.3%	1	1.0	97.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.1%	1.01	101.4%	0.3%	1	1.01	101.1%	1	1.0	98.5%
Ca 317.933	50-300ppm	-4.97	-5.13	46.7	93.3%	47.0	93.9%	0.6%	50	49.4	98.8%	50	45.5	91.0%
Ca 396.847	0.5-50ppm	-0.13	-0.37	47.7	95.5%	48.4	96.8%	1.4%	50	49.3	98.7%	50	47.0	94.1%
Cu 324.754	10ppb-100ppm	-0.89	-4.68	966	96.6%	977	97.7%	1.1%	1000	990	99.0%	1000	963.7	96.4%
Cu 327.394	10ppb-100ppm	1.63	-4.30	972	97.2%	982	98.2%	1.1%	1000	1001	100.1%	1000	967.4	96.7%
Fe 238.204	10ppb-100ppm	8.47	6.24	941	94.1%	935	93.5%	0.6%	1000	986	98.6%	1000	944.6	94.5%
Fe 259.940	10ppb-100ppm	6.42	4.25	949	94.9%	955	95.5%	0.7%	1000	987	98.7%	1000	952.2	95.2%
K 766.491	0.5-750ppm	0.05	0.02	9.8	97.9%	9.9	99.4%	1.6%	10	10.1	101.3%	10	9.8	98.1%
Mg 202.581	50-1000ppm	-1.18	-1.41	48.8	97.6%	49.6	99.1%	1.6%	50	50.9	101.8%	50	48.4	96.9%
Mg 279.071	0.5-50ppm	0.10	-0.11	47.5	95.1%	48.0	96.0%	1.0%	50	49.8	99.6%	50	47.3	94.5%
Mn 257.611	10ppb-11ppm	-1.07	-3.61	949	94.9%	954	95.4%	0.5%	1000	993	99.3%	1000	952.8	95.3%
Mn 260.561	10ppb-11ppm	0.50	-3.29	955	95.5%	958	95.8%	0.4%	1000	990	99.0%	1000	956.0	95.6%
Na 568.821	50-1000ppm	3.72	3.75	51.4	102.8%	51.9	103.9%	1.0%	50	51.5	103.1%	50	51.2	102.3%
Na 589.592	0.5-50ppm	0.02	-0.11	49.0	98.1%	49.1	98.3%	0.2%	50	50.0	100.1%	50	48.9	97.7%
Si 251.611	0.5-200ppm	0.02	-0.23	48.6	97.1%	49.0	97.9%	0.8%	50	49.8	99.7%	50	49.0	97.9%
Si 252.411	0.5-200ppm	0.02	-0.26	48.3	96.6%	48.7	97.5%	0.9%	50	49.3	98.7%	50	48.5	97.0%
Zn 213.857	10ppb-50ppm	0.15	-12.62	971	97.1%	971	97.1%	0.0%	1000	986	98.6%	1000	950.4	95.0%

Sample ID AB27428

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.02	0.96	94.1%	0.95	93.3%	0.9%	1	0.93	93.3%	7.3%	0.00
B 249.772	0.01	0.99	97.2%	0.98	96.9%	0.3%	1	0.97	96.8%	4.4%	0.01
Ca 317.933	25.2	74.3	98.2%	74.4	98.4%	0.1%	50	49.9	99.8%	1.0%	-5.05
Ca 396.847	27.5	69.5	84.0%	69.6	84.2%	0.2%	50	47.6	95.1%	3.6%	-0.23
Cu 324.754	5	929	92.4%	927	92.2%	0.3%	1000	944	94.4%	4.8%	-3.95
Cu 327.395	4	944	94.0%	948	94.3%	0.4%	1000	955	95.5%	4.7%	-3.35
Fe 238.204	32	955	92.4%	959	92.8%	0.4%	1000	962	96.2%	2.4%	2.50
Fe 259.940	37	966	92.9%	970	93.3%	0.4%	1000	978	97.8%	0.9%	2.43
K 766.491	3.9	13.1	92.0%	13.0	91.1%	0.7%	10	9.6	96.0%	5.4%	0.04
Mg 202.588	12.8	61.4	97.1%	61.2	96.9%	0.2%	50	49.5	99.0%	2.9%	-1.31
Mg 279.077	13.1	58.4	90.5%	58.2	90.1%	0.3%	50	47.3	94.5%	5.2%	-0.03
Mn 257.611	-5	938	94.2%	935	94.0%	0.3%	1000	979	97.9%	1.5%	-3.27
Mn 260.566	-2	942	94.3%	951	95.3%	1.0%	1000	987	98.7%	0.3%	-1.50
Na 568.827	13.6	60.8	94.4%	61.2	95.1%	0.6%	50	50.6	101.3%	1.8%	4.29
Na 589.592	10.8	55.9	90.2%	55.6	89.6%	0.6%	50	48.2	96.3%	3.8%	0.24
Si 251.611	31.6	77.9	92.7%	77.6	92.0%	0.4%	50	48.9	97.8%	1.9%	-0.12
Si 252.411	30.8	76.3	91.0%	76.2	90.8%	0.2%	50	47.9	95.9%	2.9%	-0.10
Zn 213.857	1	940	93.9%	948	94.7%	0.9%	1000	1001	100.1%	1%	-3.93



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27199	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150402b

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	0.01	1.06	105.9%	1.04	104.4%	1.4%	1	1.04	103.6%	1	1.0	100.5%
B 249.772	0.05-5ppm	0.01	0.01	1.06	105.9%	1.04	103.8%	1.9%	1	1.04	103.7%	1	1.0	100.2%
Ca 317.933	50-300ppm	-4.26	-4.32	51.5	103.0%	49.9	99.9%	3.1%	50	50.7	101.4%	50	48.1	96.2%
Ca 396.841	0.5-50ppm	-0.43	-0.52	52.2	104.3%	50.4	100.8%	3.4%	50	51.7	103.4%	50	49.4	98.8%
Cu 324.754	10ppb-100ppm	-6.37	-5.77	1051	105.1%	1021	102.1%	2.9%	1000	1028	102.8%	1000	989.0	98.9%
Cu 327.394	10ppb-100ppm	-4.36	-5.34	1050	105.0%	1025	102.5%	2.5%	1000	1034	103.4%	1000	989.3	98.9%
Fe 238.204	10ppb-100ppm	-0.91	-2.35	1028	102.8%	999	99.9%	2.9%	1000	1027	102.7%	1000	992.1	99.2%
Fe 259.940	10ppb-100ppm	0.16	-4.42	1035	103.5%	1001	100.1%	3.4%	1000	1030	103.0%	1000	1005.8	100.6%
K 766.491	0.5-750ppm	-0.08	-0.10	10.6	106.4%	10.3	102.9%	3.4%	10	10.4	104.0%	10	9.9	98.6%
Mg 202.581	50-1000ppm	-2.54	-2.46	52.2	104.5%	50.8	101.6%	2.8%	50	52.2	104.3%	50	49.9	99.8%
Mg 279.071	0.5-50ppm	-0.12	-0.20	51.6	103.2%	50.1	100.3%	2.9%	50	51.6	103.1%	50	49.3	98.7%
Mn 257.611	10ppb-11ppm	-5.02	-6.13	1037	103.7%	1012	101.2%	2.4%	1000	1029	102.9%	1000	999.2	99.9%
Mn 260.561	10ppb-11ppm	-5.61	-5.60	1033	103.3%	1012	101.2%	2.0%	1000	1026	102.6%	1000	1002.4	100.2%
Na 568.821	50-1000ppm	3.10	2.22	52.0	104.0%	49.5	99.0%	5.0%	50	50.5	101.1%	50	48.9	97.8%
Na 589.592	0.5-50ppm	-0.16	-0.22	52.8	105.7%	50.6	101.3%	4.2%	50	51.1	102.1%	50	49.9	99.9%
Si 251.611	0.5-200ppm	-0.10	-0.22	52.0	104.0%	50.6	101.2%	2.7%	50	51.5	103.0%	50	50.8	101.5%
Si 252.411	0.5-200ppm	-0.13	-0.20	51.7	103.5%	50.7	101.4%	2.0%	50	51.2	102.4%	50	50.5	101.1%
Zn 213.857	10ppb-50ppm	-2.25	-9.61	1023	102.3%	1002	100.2%	2.0%	1000	1017	101.7%	1000	978.8	97.9%

Matrix Spikes

Sample ID AB28492

Analyte/ WL	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.17	2.16	99.3%	2.15	98.8%	0.5%	1	0.98	98.2%	5.4%	0.01
B 249.772	0.17	2.16	99.3%	2.14	98.4%	0.8%	1	0.99	98.7%	4.9%	0.01
Ca 317.933	56.2	160.4	104.2%	160.1	103.9%	0.2%	50	49.4	98.9%	2.6%	-4.27
Ca 396.847	59.9	151.2	91.2%	149.6	89.7%	1.0%	50	48.8	97.6%	5.8%	-0.45
Cu 324.754	-14	1934	97.4%	1915	96.5%	1.0%	1000	969	96.9%	5.9%	-4.50
Cu 327.394	-13	1934	97.3%	1913	96.3%	1.1%	1000	970	97.0%	6.3%	-4.38
Fe 238.204	201	2169	98.4%	2165	98.2%	0.2%	1000	993	99.3%	3.4%	-0.04
Fe 259.940	200	2176	98.8%	2171	98.6%	0.2%	1000	994	99.4%	3.5%	0.56
K 766.491	7.1	27.0	99.7%	26.7	98.1%	1.2%	10	9.8	97.7%	6.2%	-0.08
Mg 202.581	39.7	142.4	102.7%	140.6	100.9%	1.3%	50	49.6	99.1%	5.1%	-2.48
Mg 279.077	41.4	139.6	98.2%	138.1	96.7%	1.1%	50	49.2	98.3%	4.8%	-0.13
Mn 257.611	169	2154	99.3%	2141	98.6%	0.6%	1000	990	99.0%	3.9%	-4.89
Mn 260.561	168	2151	99.1%	2145	98.8%	0.3%	1000	992	99.2%	3.3%	-4.88
Na 568.821	40.9	139.7	98.8%	142.3	101.4%	1.8%	50	47.0	94.0%	7.3%	1.12
Na 589.592	46.5	143.9	97.4%	142.6	96.0%	0.9%	50	48.5	97.1%	5.1%	-0.18
Si 251.611	7.4	106.8	99.4%	105.7	98.3%	1.1%	50	49.4	98.9%	4.1%	-0.16
Si 252.411	7.3	106.8	99.4%	105.3	97.9%	1.4%	50	49.2	98.5%	3.9%	-0.15
Zn 213.857	-8	1945	97.7%	1937	97.3%	0.4%	1000	985	98.5%	3%	-2.03



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Phosphorus QC Summary (Hach 8190)

Date: 3/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:42
LCSL	0.03	0.03	100	50-150	13:42
ICV	1.00	1.01	101	90-110	13:42
QCS	1.00	0.96	96	80-120	13:42
CCV	1.00	1.01	101	80-120	13:42

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27313	0.00	1.00	1.05	1.04	105	104	1.0	70-130	10	13:42	13:42

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/20/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	11:48
ICV	1.00	1.05	105.0%	95-105	11:48

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27178	0.65	0.65	0.00%	10	11:48

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/23/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.002	---	<0.05	936
ICVL	0.050	0.057	114	80-120	936
ICV	0.250	0.253	101.2	80-120	936

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27199	0.045	0.250	0.306	0.32	104.4	110	4.5	80/120	10	936

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent
 Difference; Rec = Recovery



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27199	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/23/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	12:09
LCSL	0.03	0.04	133	50-150	12:09
ICV	1.00	1.05	105	90-110	12:09
QCS	1.00	1.06	106	80-120	12:09
CCV	1.00	104.00	10400	80-120	12:09

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27199	0.06	1.00	1.06	1.07	100	101	0.9	70-130	10	12:09	12:09

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/22/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.85	99.9	95-105	11:00

Sample ID	Sample (pH Units)	Time
AB27199	6.9	11:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/24/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1410	1410	100.0%	95-105	1320
ICV	24800	24915	100.5%	95-105	1320

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27267	1051	1050	0.1%	10	1345

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/9/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.409	---	<0.5
LCS	5.0	5.1	102	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27178	0.6	5.0	5.0	5.1	88	90	2.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/23/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:58
ICV	1.00	1.05	105.0%	95-105	16:58

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27199	1.0	1.0	0.00%	10	16:58

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

February 27, 2015

Ceres ID: 10605

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 24, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

This work was authorized under M.B.A.'s Project # AB27199.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10605-001	MW-3D (monitoring)	2/24/2015	2/21/2015 16:55

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27199		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery									
Client Data			Sample Data		Laboratory Data				
Name:	Monterey Bay Analytical		Matrix:	Aqueous		Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27199		Sample Size:	1.000 L		QC Batch #:	1296	Date Extracted:	25-Feb-15
						ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers		
2,3,7,8-TCDD	10.1	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	106	25-141			
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8			
				<i>a. Method acceptance criteria .</i>					
Analyst: JMH			Reviewed by: BS						

Sample ID: MW-3D (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10605-001		Date Received: 24-Feb-15
Project: AB27199			Sample Size: 1.032 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 21-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 16:55							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.17			<u>IS</u> ¹³ C-2,3,7,8-TCDD	88.5	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	92.9	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
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 Tel: (916)932-5011

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Ceres Project ID: 14605
 Temperature: 0.9 °C

Reports and invoices will be delivered by email in .pdf format

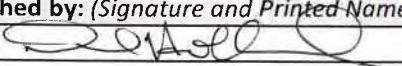
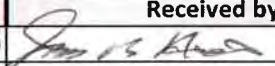
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Monterey Bay Analytical</u> Contact Name: <u>David Holland</u> Address: <u>4 Justin Court Ste D Monterey CA 93940</u> Ph: <u>831-375-6227</u> Email: <u>mweidner@mbasinc.com</u>	Company Name: <u>Same</u> Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

- A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time	Matrix									<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
1	MW-3D (monitoring)	2/21/2015	1655	0:00	Aq	2	X						AB27199
2													(2,3,7,8 TCDD only)
3													Please include excel report
4													
5													
6													
7													
8													
9													
10													
11													
12													



Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/23/2015	16:00	 J. M. Medina	2/24/15	16:15

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.

Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: 10605	Date/Time: 2/24/15 10:15
Client Project ID: AB27199	Received Temperature: 0.4 °C Acceptable: <input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals? Present?	Y / N
	Intact?
	Y / N
NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	Y / <input checked="" type="radio"/> N
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present?	Y / N / <input checked="" type="radio"/> NA
List COC discrepancies:	
	
List Damaged Samples:	
	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10605 PB: 1296 Sample #s: 1 Due Date: 3/10/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10605-1	1548.61g	516.30g	1.032L

Chemist: J

Date: 2/25/15

Method: 1613B
 SOP #: 301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1296-MB001	Method Blank		1.000L	J 2/25/15 MB	J 2/26/15 MB	NA	J 2/26/15	NA	J 2/26/15 MB
0-1296-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10605-1296-001	MW-3D (monitoring)	✓	1.022L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: _____

Samples Logged out by: J 07:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: 1

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15 J
 Extracts returned to Storage Location: _____


Method: 8290A/1613B
 SOP #: 302.1/301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	10ul	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20ul	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3020, 100, 20ml	143512	4/24/15
Si-gel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/23/15
Na2SO4	1.5g	P101614A	4/16/15
20% DemitHex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/09/15 16:28
Attention: David Holland	Received Date: 02/24/15 08:45
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B24006	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear David Holland :

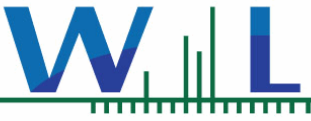
Enclosed are the results of analyses for samples received 02/24/15 08:45 with the Chain of Custody document. The samples were received in good condition, at 1.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

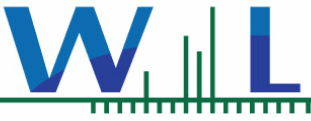
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-3D(Monitoring)	Coral Shaw	AB27199	5B24006-01	Water	02/21/15 16:55

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

5B24006-01 MW-3D(Monitoring)

Sampled: 02/21/15 16:55

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27199

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 15:31	

Chlorinated Pesticides and/or PCBs

Method: EPA 508

Batch: W5B1201

Prepared: 02/24/15 08:29

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	02/26/15 23:11	
4,4'-DDE	ND	0.010	ug/l	1	02/26/15 23:11	
4,4'-DDT	ND	0.010	ug/l	1	02/26/15 23:11	
Aldrin	ND	0.010	ug/l	1	02/26/15 23:11	
alpha-BHC	ND	0.010	ug/l	1	02/26/15 23:11	
Aroclor 1016	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1221	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1232	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1242	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1248	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1254	ND	0.10	ug/l	1	02/26/15 23:11	
Aroclor 1260	ND	0.10	ug/l	1	02/26/15 23:11	
beta-BHC	ND	0.010	ug/l	1	02/26/15 23:11	
Chlordane (tech)	ND	0.10	ug/l	1	02/26/15 23:11	
Chlorothalonil	ND	0.050	ug/l	1	02/26/15 23:11	
delta-BHC	ND	0.010	ug/l	1	02/26/15 23:11	
Dieldrin	ND	0.010	ug/l	1	02/26/15 23:11	
Endosulfan I	ND	0.010	ug/l	1	02/26/15 23:11	
Endosulfan II	ND	0.010	ug/l	1	02/26/15 23:11	
Endosulfan sulfate	ND	0.010	ug/l	1	02/26/15 23:11	
Endrin	ND	0.010	ug/l	1	02/26/15 23:11	
Endrin aldehyde	ND	0.010	ug/l	1	02/26/15 23:11	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	02/26/15 23:11	
Heptachlor	ND	0.010	ug/l	1	02/26/15 23:11	
Heptachlor epoxide	ND	0.010	ug/l	1	02/26/15 23:11	
Hexachlorobenzene	ND	0.050	ug/l	1	02/26/15 23:11	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	02/26/15 23:11	
Methoxychlor	ND	0.010	ug/l	1	02/26/15 23:11	
PCBs, Total	ND	0.50	ug/l	1	02/26/15 23:11	
Propachlor	ND	0.050	ug/l	1	02/26/15 23:11	
Toxaphene	ND	1.0	ug/l	1	02/26/15 23:11	
Trifluralin	ND	0.010	ug/l	1	02/26/15 23:11	
Surr: Decachlorobiphenyl	11 %	Conc:0.0110	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	81 %	Conc:0.0806	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

5B24006-01 MW-3D(Monitoring)

Sampled: 02/21/15 16:55

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27199

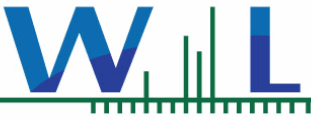
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Anions by IC, EPA Method 9056 - Quality Control

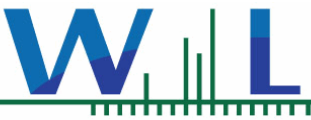
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1201 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1201-BLK1)				Analyzed: 02/26/15 20:38						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



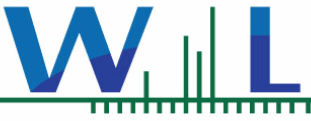
Monterey Bay Analytical Services
 4 Justin Court, Suite D
 Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1201 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1201-BLK1)										
Analyzed: 02/26/15 20:38										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0918		ug/l	0.100		92	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0773		ug/l	0.100		77	70-130			
LCS (W5B1201-BS1)										
Analyzed: 02/26/15 21:08										
4,4'-DDD	0.0964	0.010	ug/l	0.100		96	55-142			
4,4'-DDE	0.0907	0.010	ug/l	0.100		91	49-129			
4,4'-DDT	0.0974	0.010	ug/l	0.100		97	54-160			
Aldrin	0.0792	0.010	ug/l	0.100		79	29-115			
alpha-BHC	0.0844	0.010	ug/l	0.100		84	59-131			
beta-BHC	0.102	0.010	ug/l	0.100		102	63-136			
delta-BHC	0.108	0.010	ug/l	0.100		108	59-137			
Dieldrin	0.0902	0.010	ug/l	0.100		90	59-135			
Endosulfan I	0.0706	0.010	ug/l	0.100		71	28-138			
Endosulfan II	0.0844	0.010	ug/l	0.100		84	53-133			
Endosulfan sulfate	0.112	0.010	ug/l	0.100		112	58-155			
Endrin	0.0940	0.010	ug/l	0.100		94	57-148			
Endrin aldehyde	0.0816	0.010	ug/l	0.100		82	45-139			
gamma-BHC (Lindane)	0.0876	0.010	ug/l	0.100		88	59-129			
Heptachlor	0.0841	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0882	0.010	ug/l	0.100		88	59-134			
Methoxychlor	0.103	0.010	ug/l	0.100		103	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0950		ug/l	0.100		95	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0751		ug/l	0.100		75	70-130			
LCS Dup (W5B1201-BSD1)										
Analyzed: 02/26/15 21:39										
4,4'-DDD	0.0960	0.010	ug/l	0.100		96	55-142	0.4	25	
4,4'-DDE	0.0929	0.010	ug/l	0.100		93	49-129	2	25	
4,4'-DDT	0.0985	0.010	ug/l	0.100		99	54-160	1	25	
Aldrin	0.0840	0.010	ug/l	0.100		84	29-115	6	25	
alpha-BHC	0.0900	0.010	ug/l	0.100		90	59-131	6	25	
beta-BHC	0.104	0.010	ug/l	0.100		104	63-136	2	25	
delta-BHC	0.110	0.010	ug/l	0.100		110	59-137	2	25	
Dieldrin	0.0906	0.010	ug/l	0.100		91	59-135	0.5	25	
Endosulfan I	0.0717	0.010	ug/l	0.100		72	28-138	1	25	
Endosulfan II	0.0841	0.010	ug/l	0.100		84	53-133	0.4	25	
Endosulfan sulfate	0.110	0.010	ug/l	0.100		110	58-155	2	25	

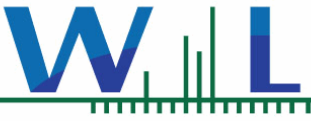


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5B1201 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B1201-BSD1)				Analyzed: 02/26/15 21:39						
Endrin	0.0948	0.010	ug/l	0.100		95	57-148	0.8	25	
Endrin aldehyde	0.0837	0.010	ug/l	0.100		84	45-139	3	25	
gamma-BHC (Lindane)	0.0924	0.010	ug/l	0.100		92	59-129	5	25	
Heptachlor	0.0896	0.010	ug/l	0.100		90	42-136	6	25	
Heptachlor epoxide	0.0902	0.010	ug/l	0.100		90	59-134	2	25	
Methoxychlor	0.101	0.010	ug/l	0.100		101	56-167	2	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0877</i>		<i>ug/l</i>	<i>0.100</i>		<i>88</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0769</i>		<i>ug/l</i>	<i>0.100</i>		<i>77</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1925

3/09/2015

Invoice: A504882

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1925 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/24/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
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Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 2/24/2015 - 10:00 Report Due: 3/10/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 2.8	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Sample(s) were received in temperature range. Initial receipt at BSK-FAL
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Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- BS2.0 Blank spike recovery for this analyte was biased low. Associated result may be biased low; reanalysis not feasible.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B1925-01
Sampled By: Coral Shaw
Sample Description: MW-3D (monitoring) // AB27199

Sample Date - Time: 02/21/15 - 16:55
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A502346	03/03/15	03/04/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A502346	03/03/15	03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	98 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502167	02/25/15	02/27/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502167	02/25/15	02/27/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502167	02/25/15	02/27/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502167	02/25/15	02/27/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502167	02/25/15	02/27/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502167	02/25/15	02/27/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502167	02/25/15	02/27/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502167	02/25/15	02/27/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502167	02/25/15	02/27/15	
Surrogate: DCPAA	EPA 515.3	120 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	

Certificate of Analysis

Sample ID: A5B1925-01
Sampled By: Coral Shaw
Sample Description: MW-3D (monitoring) // AB27199

Sample Date - Time: 02/21/15 - 16:55
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502118	02/25/15	02/25/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	BS1.0
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502118	02/25/15	02/25/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502118	02/25/15	02/25/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	

Certificate of Analysis

Sample ID: A5B1925-01
Sampled By: Coral Shaw
Sample Description: MW-3D (monitoring) // AB27199

Sample Date - Time: 02/21/15 - 16:55
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	86 %							
Surrogate: Bromofluorobenzene	EPA 524.2	92 %							
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502263	02/27/15	02/28/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	02/28/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	02/28/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	02/28/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502263	02/27/15	02/28/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502263	02/27/15	02/28/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	02/28/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	02/28/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	02/28/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	103 %							
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/25/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/25/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502103	02/24/15	02/25/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A502147	02/25/15	02/25/15	
Surrogate: AMPA	EPA 547	98 %							
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A502241	02/26/15	02/27/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502063	02/24/15	03/03/15	BS2.0



A5B1925

Cal Am

Certificate of Analysis

Sample ID: A5B1925-01

Sampled By: Coral Shaw

Sample Description: MW-3D (monitoring) // AB27199

Sample Date - Time: 02/21/15 - 16:55

Matrix: Ground Water

Sample Type: Grab

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A502346

Prepared: 03/03/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A502346-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/03/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/03/15	

Blank Spike (A502346-BS1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		94	70-130			03/03/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		99	70-130			03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/03/15	

Blank Spike Dup (A502346-BSD1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		95	70-130	1	20	03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		96	70-130	2	20	03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		97	70-130			03/04/15	

Matrix Spike (A502346-MS1), Source: A5B1720-01

Dibromochloropropane (DBCP)	0.66	0.010	ug/L	0.13	0.44	171	65-135			03/03/15	MS1.0 High
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.13	ND	101	65-135			03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.43			0.46		95	70-130			03/03/15	

EPA 515.3 - Quality Control

Batch: A502167

Prepared: 02/25/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502167-BLK1)

2,4,5-T	ND	1.0	ug/L							02/27/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							02/27/15	
2,4-D	ND	10	ug/L							02/27/15	
Bentazon	ND	2.0	ug/L							02/27/15	
Dalapon	ND	10	ug/L							02/27/15	
Dicamba	ND	1.5	ug/L							02/27/15	
Dinoseb	ND	2.0	ug/L							02/27/15	
Pentachlorophenol	ND	0.20	ug/L							02/27/15	
Picloram	ND	1.0	ug/L							02/27/15	
Surrogate: DCPAA	58			58		100	70-130			02/27/15	

Blank Spike (A502167-BS1)

2,4,5-T	3.9	1.0	ug/L	4.0		98	70-130			02/27/15	
2,4,5-TP (Silvex)	0.75	1.0	ug/L	0.80		93	70-130			02/27/15	
2,4-D	0.39	10	ug/L	0.40		99	70-130			02/27/15	
Bentazon	8.5	2.0	ug/L	8.0		107	70-130			02/27/15	
Dalapon	4.1	10	ug/L	4.0		103	70-130			02/27/15	
Dicamba	6.0	1.5	ug/L	6.0		100	70-130			02/27/15	
Dinoseb	0.81	2.0	ug/L	0.80		102	70-130			02/27/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			02/27/15	
Picloram	0.41	1.0	ug/L	0.40		102	70-130			02/27/15	



A5B1925

Cal Am

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502167

Prepared: 02/25/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502167-BS1)

Surrogate: DCPAA	59			58		101	70-130			02/27/15	
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Blank Spike Dup (A502167-BSD1)

2,4,5-T	3.9	1.0	ug/L	4.0		97	70-130	1	20	02/27/15	
2,4,5-TP (Silvex)	0.75	1.0	ug/L	0.80		94	70-130	0	20	02/27/15	
2,4-D	0.39	10	ug/L	0.40		96	70-130	2	20	02/27/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130	0	20	02/27/15	
Dalapon	4.0	10	ug/L	4.0		100	70-130	3	20	02/27/15	
Dicamba	5.9	1.5	ug/L	6.0		99	70-130	1	20	02/27/15	
Dinoseb	0.82	2.0	ug/L	0.80		103	70-130	1	20	02/27/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130	0	20	02/27/15	
Picloram	0.40	1.0	ug/L	0.40		101	70-130	1	20	02/27/15	
Surrogate: DCPAA	58			58		100	70-130			02/27/15	

Matrix Spike (A502167-MS1), Source: A5B1379-01

2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			02/27/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80	ND	97	70-130			02/27/15	
2,4-D	0.42	10	ug/L	0.40	ND	105	70-130			02/27/15	
Bentazon	8.7	2.0	ug/L	8.0	ND	109	70-130			02/27/15	
Dalapon	4.5	10	ug/L	4.0	ND	112	70-130			02/27/15	
Dicamba	6.2	1.5	ug/L	6.0	ND	104	70-130			02/27/15	
Dinoseb	0.85	2.0	ug/L	0.80	ND	107	70-130			02/27/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	102	70-130			02/27/15	
Picloram	0.42	1.0	ug/L	0.40	ND	104	70-130			02/27/15	
Surrogate: DCPAA	62			58		107	70-130			02/27/15	

Matrix Spike Dup (A502167-MSD1), Source: A5B1379-01

2,4,5-T	4.0	1.0	ug/L	4.0	ND	99	70-130	3	20	02/27/15	
2,4,5-TP (Silvex)	0.68	1.0	ug/L	0.80	ND	85	70-130	13	20	02/27/15	
2,4-D	0.40	10	ug/L	0.40	ND	101	70-130	4	20	02/27/15	
Bentazon	8.7	2.0	ug/L	8.0	ND	108	70-130	1	20	02/27/15	
Dalapon	4.3	10	ug/L	4.0	ND	109	70-130	3	20	02/27/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	101	70-130	3	20	02/27/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	102	70-130	5	20	02/27/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130	4	20	02/27/15	
Picloram	0.41	1.0	ug/L	0.40	ND	104	70-130	0	20	02/27/15	
Surrogate: DCPAA	59			58		102	70-130			02/27/15	

EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/25/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/25/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/25/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/25/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/25/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/25/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/25/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/25/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/25/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/25/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/25/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/25/15	
2-Butanone	ND	5.0	ug/L							02/25/15	
2-Chlorotoluene	ND	0.50	ug/L							02/25/15	
2-Hexanone	ND	10	ug/L							02/25/15	
4-Chlorotoluene	ND	0.50	ug/L							02/25/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/25/15	
Acetone	ND	10	ug/L							02/25/15	
Benzene	ND	0.50	ug/L							02/25/15	
Bromobenzene	ND	0.50	ug/L							02/25/15	
Bromochloromethane	ND	0.50	ug/L							02/25/15	
Bromodichloromethane	ND	0.50	ug/L							02/25/15	
Bromoform	ND	0.50	ug/L							02/25/15	
Bromomethane	ND	0.50	ug/L							02/25/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/25/15	
Chlorobenzene	ND	0.50	ug/L							02/25/15	
Chloroethane	ND	0.50	ug/L							02/25/15	
Chloroform	ND	0.50	ug/L							02/25/15	
Chloromethane	ND	0.50	ug/L							02/25/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/25/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/25/15	
Dibromochloromethane	ND	0.50	ug/L							02/25/15	
Dibromomethane	ND	0.50	ug/L							02/25/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/25/15	
Dichloromethane	ND	0.50	ug/L							02/25/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/25/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/25/15	
Ethylbenzene	ND	0.50	ug/L							02/25/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/25/15	
Isopropylbenzene	ND	0.50	ug/L							02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

m,p-Xylenes	ND	0.50	ug/L							02/25/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/25/15	
Naphthalene	ND	0.50	ug/L							02/25/15	
n-Butylbenzene	ND	0.50	ug/L							02/25/15	
n-Propylbenzene	ND	0.50	ug/L							02/25/15	
o-Xylene	ND	0.50	ug/L							02/25/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/25/15	
sec-Butylbenzene	ND	0.50	ug/L							02/25/15	
Styrene	ND	0.50	ug/L							02/25/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/25/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/25/15	
tert-Butylbenzene	ND	0.50	ug/L							02/25/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/25/15	
Toluene	ND	0.50	ug/L							02/25/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/25/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/25/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/25/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/25/15	
Vinyl Chloride	ND	0.50	ug/L							02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.4			5.0		88	70-130			02/25/15	
Surrogate: Bromofluorobenzene	47			50		94	70-130			02/25/15	

Blank Spike (A502118-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		107	70-130			02/25/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1-Dichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,1-Dichloroethene	11	0.50	ug/L	10		110	70-130			02/25/15	
1,1-Dichloropropene	11	0.50	ug/L	10		106	70-130			02/25/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		101	70-130			02/25/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
1,2,4-Trimethylbenzene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130			02/25/15	
1,2-Dichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,2-Dichloropropane	10	0.50	ug/L	10		103	70-130			02/25/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		105	70-130			02/25/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
1,3-Dichloropropane	10	0.50	ug/L	10		103	70-130			02/25/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
2,2-Dichloropropane	11	0.50	ug/L	10		110	70-130			02/25/15	
2-Butanone	10	5.0	ug/L	10		105	70-130			02/25/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/25/15	
2-Hexanone	10	10	ug/L	10		104	70-130			02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502118-BS1)

4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		104	70-130			02/25/15	
Acetone	11	10	ug/L	10		113	70-130			02/25/15	
Benzene	10	0.50	ug/L	10		104	70-130			02/25/15	
Bromobenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
Bromochloromethane	10	0.50	ug/L	10		104	70-130			02/25/15	
Bromodichloromethane	10	0.50	ug/L	10		101	70-130			02/25/15	
Bromoform	11	0.50	ug/L	10		110	70-130			02/25/15	
Bromomethane	11	0.50	ug/L	10		112	70-130			02/25/15	
Carbon Tetrachloride	11	0.50	ug/L	10		105	70-130			02/25/15	
Chlorobenzene	10	0.50	ug/L	10		103	70-130			02/25/15	
Chloroethane	11	0.50	ug/L	10		107	70-130			02/25/15	
Chloroform	10	0.50	ug/L	10		102	70-130			02/25/15	
Chloromethane	11	0.50	ug/L	10		111	70-130			02/25/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			02/25/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		104	70-130			02/25/15	
Dibromochloromethane	11	0.50	ug/L	10		106	70-130			02/25/15	
Dibromomethane	10	0.50	ug/L	10		103	70-130			02/25/15	
Dichlorodifluoromethane	12	0.50	ug/L	10		123	70-130			02/25/15	
Dichloromethane	10	0.50	ug/L	10		104	70-130			02/25/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		104	70-130			02/25/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		107	70-130			02/25/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130			02/25/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			02/25/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
m,p-Xylenes	20	0.50	ug/L	20		101	70-130			02/25/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		106	70-130			02/25/15	
Naphthalene	10	0.50	ug/L	10		102	70-130			02/25/15	
n-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
n-Propylbenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
o-Xylene	10	0.50	ug/L	10		102	70-130			02/25/15	
p-Isopropyltoluene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
Styrene	14	0.50	ug/L	10		140	70-130			02/25/15	BS High
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		101	70-130			02/25/15	
tert-Butyl alcohol (TBA)	11	2.0	ug/L	10		108	70-130			02/25/15	
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		100	70-130			02/25/15	
Toluene	10	0.50	ug/L	10		102	70-130			02/25/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130			02/25/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10		107	70-130			02/25/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			02/25/15	
Trichlorofluoromethane	11	5.0	ug/L	10		109	70-130			02/25/15	
Vinyl Chloride	11	0.50	ug/L	10		114	70-130			02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			02/25/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502118-BS1)

Surrogate: Bromofluorobenzene 51 50 101 70-130 02/25/15

Blank Spike Dup (A502118-BSD1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10	103	70-130	1	30	02/25/15
1,1,1-Trichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	101	70-130	1	30	02/25/15
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10	106	70-130	1	30	02/25/15
1,1,2-Trichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,1-Dichloroethane	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,1-Dichloroethene	11	0.50	ug/L	10	109	70-130	0	30	02/25/15
1,1-Dichloropropene	11	0.50	ug/L	10	106	70-130	0	30	02/25/15
1,2,3-Trichlorobenzene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
1,2,4-Trichlorobenzene	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
1,2,4-Trimethylbenzene	9.8	0.50	ug/L	10	98	70-130	1	30	02/25/15
1,2-Dichlorobenzene	9.8	0.50	ug/L	10	98	70-130	0	30	02/25/15
1,2-Dichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,2-Dichloropropane	10	0.50	ug/L	10	103	70-130	0	30	02/25/15
1,3,5-Trimethylbenzene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,3-Dichlorobenzene	9.9	0.50	ug/L	10	99	70-130	2	30	02/25/15
1,3-Dichloropropane	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,4-Dichlorobenzene	9.9	0.50	ug/L	10	99	70-130	0	30	02/25/15
2,2-Dichloropropane	11	0.50	ug/L	10	109	70-130	1	30	02/25/15
2-Butanone	10	5.0	ug/L	10	101	70-130	3	30	02/25/15
2-Chlorotoluene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
2-Hexanone	10	10	ug/L	10	101	70-130	3	30	02/25/15
4-Chlorotoluene	9.9	0.50	ug/L	10	99	70-130	0	30	02/25/15
4-Methyl-2-pentanone	10	5.0	ug/L	10	102	70-130	3	30	02/25/15
Acetone	11	10	ug/L	10	108	70-130	5	30	02/25/15
Benzene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
Bromobenzene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
Bromochloromethane	11	0.50	ug/L	10	107	70-130	3	30	02/25/15
Bromodichloromethane	10	0.50	ug/L	10	102	70-130	1	30	02/25/15
Bromoform	11	0.50	ug/L	10	111	70-130	1	30	02/25/15
Bromomethane	11	0.50	ug/L	10	114	70-130	2	30	02/25/15
Carbon Tetrachloride	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
Chlorobenzene	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
Chloroethane	11	0.50	ug/L	10	108	70-130	1	30	02/25/15
Chloroform	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
Chloromethane	11	0.50	ug/L	10	114	70-130	2	30	02/25/15
cis-1,2-Dichloroethene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
cis-1,3-Dichloropropene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
Dibromochloromethane	11	0.50	ug/L	10	105	70-130	1	30	02/25/15
Dibromomethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
Dichlorodifluoromethane	12	0.50	ug/L	10	120	70-130	2	30	02/25/15
Dichloromethane	11	0.50	ug/L	10	105	70-130	2	30	02/25/15

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502118-BSD1)

Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		106	70-130	2	30	02/25/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		108	70-130	1	30	02/25/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	0	30	02/25/15	
Hexachlorobutadiene	10	0.50	ug/L	10		102	70-130	2	30	02/25/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130	0	30	02/25/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		107	70-130	1	30	02/25/15	
Naphthalene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
n-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	02/25/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130	1	30	02/25/15	
o-Xylene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130	1	30	02/25/15	
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	02/25/15	
Styrene	14	0.50	ug/L	10		142	70-130	1	30	02/25/15	BS High
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130	3	30	02/25/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		104	70-130	5	30	02/25/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	1	30	02/25/15	
Tetrachloroethene (PCE)	9.9	0.50	ug/L	10		99	70-130	0	30	02/25/15	
Toluene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130	1	30	02/25/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10		107	70-130	0	30	02/25/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130	1	30	02/25/15	
Vinyl Chloride	11	0.50	ug/L	10		111	70-130	3	30	02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.0			5.0		101	70-130			02/25/15	
Surrogate: Bromofluorobenzene	50			50		101	70-130			02/25/15	

EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Alachlor	ND	1.0	ug/L							02/28/15	
Atrazine	ND	0.50	ug/L							02/28/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/28/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/28/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/28/15	
Bromacil	ND	10	ug/L							02/28/15	
Butachlor	ND	0.38	ug/L							02/28/15	
Diazinon	ND	0.25	ug/L							02/28/15	
Dimethoate	ND	10	ug/L							02/28/15	
Metolachlor	ND	0.50	ug/L							02/28/15	
Metribuzin	ND	0.50	ug/L							02/28/15	
Molinate	ND	2.0	ug/L							02/28/15	
Prometryn	ND	2.0	ug/L							02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Propachlor	ND	0.50	ug/L							02/28/15	
Simazine	ND	1.0	ug/L							02/28/15	
Thiobencarb	ND	1.0	ug/L							02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		99	70-130			02/28/15	

Blank Spike (A502263-BS1)

Alachlor	1.0	1.0	ug/L	1.0		100	70-130			02/28/15	
Atrazine	0.49	0.50	ug/L	0.50		98	70-130			02/28/15	
Benzo(a)pyrene	0.071	0.10	ug/L	0.10		71	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		95	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130			02/28/15	
Bromacil	1.1	10	ug/L	1.0		111	70-130			02/28/15	
Butachlor	1.0	0.38	ug/L	1.0		100	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20		84	70-130			02/28/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130			02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		100	70-130			02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130			02/28/15	
Molinate	0.99	2.0	ug/L	1.0		99	70-130			02/28/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			02/28/15	
Propachlor	0.49	0.50	ug/L	0.50		99	70-130			02/28/15	
Simazine	0.32	1.0	ug/L	0.35		93	70-130			02/28/15	
Thiobencarb	0.48	1.0	ug/L	0.50		96	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		97	70-130			02/28/15	

Blank Spike Dup (A502263-BSD1)

Alachlor	0.98	1.0	ug/L	1.0		98	70-130	2	30	02/28/15	
Atrazine	0.48	0.50	ug/L	0.50		96	70-130	2	30	02/28/15	
Benzo(a)pyrene	0.086	0.10	ug/L	0.10		86	70-130	19	30	02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		94	70-130	1	30	02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130	1	30	02/28/15	
Bromacil	1.1	10	ug/L	1.0		108	70-130	3	30	02/28/15	
Butachlor	0.98	0.38	ug/L	1.0		98	70-130	2	30	02/28/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130	2	30	02/28/15	
Dimethoate	0.95	10	ug/L	1.0		95	70-130	8	30	02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		98	70-130	2	30	02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130	0	30	02/28/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	3	30	02/28/15	
Prometryn	1.8	2.0	ug/L	2.0		90	70-130	14	30	02/28/15	
Propachlor	0.50	0.50	ug/L	0.50		99	70-130	1	30	02/28/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130	5	30	02/28/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	1	30	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.7			5.0		95	70-130			02/28/15	

Matrix Spike (A502263-MS1), Source: A5B1765-06

Alachlor	0.93	1.0	ug/L	1.0	ND	93	70-130			02/28/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502263-MS1), Source: A5B1765-06

Atrazine	0.48	0.50	ug/L	0.50	ND	96	70-130			02/28/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10	ND	82	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0	ND	93	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.5	3.0	ug/L	1.5	ND	99	70-130			02/28/15	
Bromacil	0.99	10	ug/L	1.0	ND	99	70-130			02/28/15	
Butachlor	0.93	0.38	ug/L	1.0	ND	93	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20	ND	84	70-130			02/28/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			02/28/15	
Metolachlor	1.9	0.50	ug/L	2.0	ND	93	70-130			02/28/15	
Metribuzin	0.92	0.50	ug/L	1.0	ND	92	70-130			02/28/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			02/28/15	
Prometryn	1.9	2.0	ug/L	2.0	ND	94	70-130			02/28/15	
Propachlor	0.50	0.50	ug/L	0.50	ND	99	70-130			02/28/15	
Simazine	0.33	1.0	ug/L	0.35	ND	95	70-130			02/28/15	
Thiobencarb	0.46	1.0	ug/L	0.50	ND	91	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.1			5.0		102	70-130			02/28/15	

EPA 531.1 - Quality Control

Batch: A502103

Prepared: 02/24/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502103-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							02/24/15	
Aldicarb	ND	3.0	ug/L							02/24/15	
Aldicarb Sulfone	ND	2.0	ug/L							02/24/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							02/24/15	
Carbaryl	ND	5.0	ug/L							02/24/15	
Carbofuran	ND	5.0	ug/L							02/24/15	
Methiocarb	ND	2.0	ug/L							02/24/15	
Methomyl	ND	2.0	ug/L							02/24/15	
Oxamyl	ND	20	ug/L							02/24/15	
Propoxur	ND	2.0	ug/L							02/24/15	

Blank Spike (A502103-BS1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		97	80-120			02/24/15	
Aldicarb	3.9	3.0	ug/L	4.0		99	80-120			02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120			02/24/15	
Carbaryl	3.7	5.0	ug/L	4.0		94	80-120			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0		97	80-120			02/24/15	
Methiocarb	4.1	2.0	ug/L	4.0		101	80-120			02/24/15	
Methomyl	3.4	2.0	ug/L	4.0		84	80-120			02/24/15	
Oxamyl	3.5	20	ug/L	4.0		87	80-120			02/24/15	
Propoxur	3.8	2.0	ug/L	4.0		96	80-120			02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502103

Prepared: 02/24/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502103-BSD1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		98	80-120	1	20	02/25/15	
Aldicarb	3.8	3.0	ug/L	4.0		94	80-120	5	20	02/25/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120	0	20	02/25/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		108	80-120	1	20	02/25/15	
Carbaryl	3.9	5.0	ug/L	4.0		96	80-120	3	20	02/25/15	
Carbofuran	3.8	5.0	ug/L	4.0		96	80-120	1	20	02/25/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120	3	20	02/25/15	
Methomyl	3.6	2.0	ug/L	4.0		90	80-120	7	20	02/25/15	
Oxamyl	3.4	20	ug/L	4.0		86	80-120	1	20	02/25/15	
Propoxur	3.8	2.0	ug/L	4.0		96	80-120	1	20	02/25/15	

Matrix Spike (A502103-MS1), Source: A5B1379-03

3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0	ND	95	65-135			02/24/15	
Aldicarb	3.9	3.0	ug/L	4.0	ND	97	65-135			02/24/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			02/24/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0	ND	110	65-135			02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0	ND	96	65-135			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	97	65-135			02/24/15	
Methiocarb	3.8	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Methomyl	3.5	2.0	ug/L	4.0	ND	87	65-135			02/24/15	
Oxamyl	3.5	20	ug/L	4.0	ND	88	65-135			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	98	65-135			02/24/15	

EPA 547 - Quality Control

Batch: A502147

Prepared: 02/25/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502147-BLK1)

Glyphosate	ND	25	ug/L							02/25/15	
Surrogate: AMPA	110			100		115	70-130			02/25/15	

Blank Spike (A502147-BS1)

Glyphosate	100	25	ug/L	100		102	70-130			02/25/15	
Surrogate: AMPA	100			100		100	70-130			02/25/15	

Blank Spike Dup (A502147-BSD1)

Glyphosate	110	25	ug/L	100		106	70-130	4	30	02/25/15	
Surrogate: AMPA	93			100		93	70-130			02/25/15	

Matrix Spike (A502147-MS1), Source: A5B1935-01

Glyphosate	110	25	ug/L	100	ND	107	70-130			02/25/15	
Surrogate: AMPA	130			100		128	70-130			02/25/15	

Matrix Spike Dup (A502147-MSD1), Source: A5B1935-01

Glyphosate	110	25	ug/L	100	ND	105	70-130	2	30	02/25/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502147

Prepared: 02/25/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502147-MSD1), Source: A5B1935-01

Surrogate: AMPA 94 100 93 70-130 02/25/15

EPA 548.1 - Quality Control

Batch: A502241

Prepared: 02/26/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502241-BLK1)

Endothall ND 45 ug/L 02/27/15

Blank Spike (A502241-BS1)

Endothall 16 45 ug/L 20 79 54-105 02/27/15

Blank Spike Dup (A502241-BSD1)

Endothall 14 45 ug/L 20 71 54-105 11 46 02/27/15

Matrix Spike (A502241-MS1), Source: A5B1841-01

Endothall 18 45 ug/L 20 ND 88 54-105 02/27/15

EPA 549.2 - Quality Control

Batch: A502063

Prepared: 02/24/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502063-BLK1)

Diquat ND 4.0 ug/L 03/03/15

Blank Spike (A502063-BS1)

Diquat 0.38 4.0 ug/L 4.0 10 70-130 03/03/15 BS **Low**

Blank Spike Dup (A502063-BSD1)

Diquat 0.42 4.0 ug/L 4.0 10 70-130 9 30 03/03/15 BS **Low**

Matrix Spike (A502063-MS1), Source: A5B1592-01

Diquat 0.40 4.0 ug/L 4.0 ND 10 70-130 03/03/15 MS1.0 **Low**

Matrix Spike Dup (A502063-MSD1), Source: A5B1592-01

Diquat 0.45 4.0 ug/L 4.0 ND 11 70-130 11 30 03/03/15 MS1.0 **Low**

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP 2435

Vancouver

State of Oregon - NELAC WA100008 State of Washington C824-13



A5B1925



02242015

Monte6227

Turnaround: Standard

Due Date: 3/10/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

28

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed:

A5B1925
Monte6227

02/24/2015

10



Page 20 of 21

*Required Fields

Temp:

Company/Client Name*: **Monterey Bay Analytical Services** Report Attention*: **Mason Weidner-Holland** Invoice To*: **David Holland** Phone*: **831-375-6227** Fax*: **831-641-0734**

Additional cc's: **David Holland** PO#: E-mail*: **mweidner@mbasinc.com, dholland@mbasinc.com**

Address*: **4 Justin Court, Suite D** City*: **Monterey** State*: **CA** Zip*: **93940**

Project: **Cal Am** Project #: How would you like to receive your completed results?*

E-Mail Fax Mail

Reporting Options: Trace (J-Flag) Swamp EDD Type: _____

Regulatory Carbon Copies: SWRCB (Drinking Water) Merced Co Fresno Co Madera Co Tulare Co Other: _____

Regulatory Compliance: EDT to California SWRCB (Drinking Water) System Number*: _____

Sampler Name (Printed/Signature)*: **Coral Shaw** Geotracker #: _____

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
	MW-3D (monitoring)	2/21/15	1655	GW	AB27199	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name) **D. Holland** Company **MBAS** Date **2/23/15** Time **1600** Received by: (Signature and Printed Name) Company

Relinquished by: (Signature and Printed Name) Company Date Time Received by: (Signature and Printed Name) Company

Received for Lab by: (Signature and Printed Name) **Caroline Witt** Date **2/24/15** Time **10:50** Payment Received at Delivery: Check / Cash

Shipping Method: CONTRAC UPS GSO WALK-IN FED EX Courier: _____ Custody Seal: Y / N

Cooling Method: Wet Blue None Chilling Process Begun: Y / N **BW, Paper**

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$			Yes	No	NA	Were correct containers and preservatives received for the tests requested?			Yes	No	NA														
	If samples were taken today, is there evidence that chilling has begun?			Yes	No	NA	Were there bubbles in the VOA vials? (Volatiles Only)			Yes	No	NA														
	Did all bottles arrive unbroken and intact?			Yes	No		Was a sufficient amount of sample received?			Yes	No															
	Did all bottle labels agree with COC?			Yes	No		Do samples have a hold time <72 hours?			Yes	No															
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?			Yes	No	NA	Was PM notified of discrepancies? PM: _____ By/Time: _____			Yes	No	NA														
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?																						
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$		—	—																						
	None (P) ^{White Cap}		—	—																						
	Cr6 (P) ^{Br. Green Label}	NH4OH(NH4)2SO4 DW	pH > 8	Y	N																					
	Cr6 (P) ^{Pink Label}	Hex Chrome Buffer DW	pH 9-9.5	Y	N																					
	Cr6 (P) ^{Pink Label}	Hex Chrome Buffer WW	pH 9.3-9.7	Y	N																					
	HNO3 (P) ^{Red Cap}		—	—																						
	H2SO4 (P) or (AG) ^{Yellow Cap/Label}		pH < 2	Y	N																					
	NaOH (P) ^{Green Cap}		Cl, pH >10	Y	N																					
	NaOH + ZnAc (P)		pH > 9	Y	N																					
	Dissolved Oxygen 300ml (g)		—	—																						
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—																						
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel		—	—																						
	Na2O3S+HCl (AG) ^{Lt. Pink Label} 525		—	—																						
	Na2S2O3 1 Liter (Brown P) 549		—	—																						
	Na2S2O3 (AG) ^{Blue Label} 547,515,548,THM,524		—	—																						
	Na2S2O3 (CG) ^{Blue Label} 504, 505		—	—																						
	Na2S2O3 + MCAA (CG) ^{Orange Label} 531		pH < 3	Y	N																					
	NH4Cl (AG) ^{Purple Label} 552		—	—																						
	EDA (AG) ^{Brown Label} DBPs		—	—																						
	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624		—	—																						
	Buffer pH 4 (CG)		—	—																						
	None (CG)		—	—																						
	H3PO4 (CG) ^{Salmon Label}		—	—																						
	Other:																									
Asbestos 1Liter Plastic w/ Foil		—	—																							
Low Level Hg / Metals Double Baggie		—	—																							
Bottled Water		—	—																							
Clear Glass Jar: 250 / 500 / 1 Liter		—	—																							
Soil Tube Brass / Steel / Plastic		—	—																							
Tedlar Bag / Plastic Bag		—	—																							
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials																			
	S P				S P																					
	S P				S P																					
Comments																										

Chain of Custody / Analysis Request



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 Monterey, CA 93940
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 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested												
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter							

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com	
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []	
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____	
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container	
			Date	Time		CL2	Residual	Routine	Other	Repeat		Special	Type	Size
27199		MW-3D (monitoring)	2-21-15	16:55	0.1 °C						27		
												Field Parameters:	
												Temp:	19.6 °C
												pH:	6.55
												Sp Cond:	41740 µS/cm
												Turb:	0.38 NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Coral Shaw / Geoscience		2-21-15	16:55	Is sample for regulatory purposes? Yes / No 2 mL 1:1 HNO ₃ to pH < 2 to each 125 mL for metals
Relinquished by:	Coral Shaw / Geoscience		2-22-15	10:10	
Received by:	Sarah McGinnis		2/22/15	10:10	
Relinquished by:					
Received by:					

[] Payment received	Check #	Amount:	Receipt #	Date:
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SM

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials
27199	250ml	NaOH	2/22/15 2/23/15

no CN⁻ analysis
tossed
2/23/15

Lab ID	Cont. Size	Pres	Date/Initials

Comments

vacuum filtered pre-rinsed 0.45 μ membrane filter
 500ML + Na₂SO₃ + H₂SO₄ pH < 2 diss. TC-N, NH₃
 250ML + H₂SO₄ pH < 2 diss. total P
 250ML diss. orthophosphate color.



California American Water
 P.O. Box 951, Monterey, CA 93942-0951
 ph: 831-646-3259 / 831-646-3269
 Susy Jacobson

4 Justin Court Suite D, Monterey, CA 93940
 831.375.MBAS

www.MBASinc.com

ELAP Certification Number: 2385

Lab Number: AB27757

Collection Date/Time: 3/7/2015 16:45 Sample Collector: SOBOWLEW J
 Submittal Date/Time: 3/8/2015 11:43 Sample ID

Sample Description: MW-4S (monitoring)

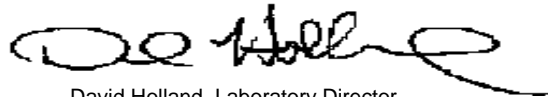
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	80		2	3/12/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	3/12/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	3/19/2015	TC
Arsenic, Total	EPA200.8	µg/L	15		12	3/12/2015	SM
Barium, Dissolved	EPA200.8	µg/L	92		125	3/12/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	98		10	3/12/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	0.790		0.5	3/11/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	16.7		2	3/9/2015	MW
Calcium	EPA200.7	mg/L	594		5	3/11/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	617		5	3/11/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		3/19/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	3/12/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	5497		20	3/9/2015	MW
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		3/20/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	3		3	3/9/2015	LRH
Copper, Total	EPA200.8	µg/L	Not Detected		50	3/12/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/18/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		3/16/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/17/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		3/18/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		2	3/9/2015	MW
Glyphosate	EPA547	µg/L	Not Detected	E		3/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	3176		10	3/11/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	3/12/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	3/19/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/24/2015	TC
Lithium	EPA200.8	µg/L	16		12	3/12/2015	SM
Magnesium	EPA200.7	mg/L	411		5	3/11/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	421		10	3/11/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
Manganese, Total	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	3/9/2015	HM
Nitrate as NO3	EPA300.0	mg/L	20		20	3/9/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	5.3		2	3/9/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		2	3/9/2015	MW

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
 H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
 D = Method deviates from standard method due to insufficient sample for MS/MSD

Odor Threshold at 60 C	SM2150B	TON	4		1	3/9/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.06		0.03	3/9/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.77			3/7/2015	JS
pH (Laboratory)	SM4500-H+B	pH (H)	7.0		0.1	3/9/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		3/12/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.06		0.03	3/9/2015	LRH
Potassium	EPA200.7	mg/L	26		5	3/11/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	28.0		1	3/11/2015	MW
QC Ratio TDS/SEC	Calculation		0.70			3/11/2015	MW
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		3/19/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	27		5	3/11/2015	MW
Sodium	EPA200.7	mg/L	2579		5	3/11/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	2750		5	3/11/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	17050		1	3/10/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	16917		1	3/7/2015	JS
Strontium, Dissolved	EPA200.8	µg/L	5208		62	3/12/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	716		20	3/9/2015	MW
Temperature (Field)	SM2550	° C	17.7			3/7/2015	JS
Total Diss. Solids	SM2540C	mg/L	11900		10	3/9/2015	HM
Turbidity	EPA180.1	NTU	0.30		0.05	3/9/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.52		0.05	3/7/2015	JS
Volatile Org. Compounds (524)	EPA524	µg/L	Attached	E		3/12/2015	BSK
Zinc, Total	EPA200.8	µg/L	Not Detected		250	3/12/2015	SM

Sample Comments: Odor: Salty

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27757 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	2579	0.04350	112.19
Potassium	26	0.02558	0.67
Calcium	594	0.04990	29.64
Magnesium	411	0.08229	33.82
NH3-N	0	0.07143	0.00
		SUM	176.31

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	80	0.02000	1.60
Sulfate	716	0.02082	14.91
Chloride	5497	0.02821	155.07
Nitrate-Nitrogen	5.3	0.07138	0.38
Phosphate-P	0.1	0.01031	0.00
Bromide	16.7	0.01252	0.21
		SUM	172.17

ANION-CATION BALANCE **1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	17050	
Cation Sum X 100	17631	103%
Anion Sum X 100	17217	101%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27757 Dissolved Ions**

CORRECTNESS OF ANALYSIS			
CATION	MG/L	FACTOR	MEQ/L
Sodium	2750	0.04350	119.63
Potassium	28	0.02558	0.72
Calcium	617	0.04990	30.79
Magnesium	421	0.08229	34.64
NH3-N	0	0.07143	0.00
		SUM	185.77

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	80	0.02000	1.60
Sulfate	716	0.02082	14.91
Chloride	5497	0.02821	155.07
Nitrate-Nitrogen	5.3	0.07138	0.38
Phosphate-P	0.1	0.01031	0.00
Bromide	16.7	0.01252	0.21
		SUM	172.17

ANION-CATION BALANCE **4** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	17050	
Cation Sum X 100	18577	109%
Anion Sum X 100	17217	101%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



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<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	9:18
CCV	40	41	102.5	95-105	10:46

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27757	80	80	0.0	5	10:46

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	907
ICVL	0.050	0.051	102	80-120	908
ICV	0.250	0.267	106.8	80-120	938

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27756	0.032	0.250	0.3	0.302	107.2	108	0.7	80/120	10	935

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27848

Date Analyzed
Thursday, March 12, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.1	101.7	0.05	106.0	102.5	3.35	26.8	50	84.4	84.7	0.4	98.2	102.8	4.58	0.02
Aluminum	0.0	102.0	2.82	101.4	101.7	0.34	4.4	50	85.1	88.2	3.6	99.9	99.0	0.94	-0.10
Copper	0.0	100.0	0.12	99.4	101.1	1.64	1.7	50	93.1	93.8	0.7	100.1	100.7	0.60	0.05
Zinc	0.1	131.2	1.62	103.3	103.8	0.47	25.7	50	93.8	95.8	2.1	103.0	104.0	0.99	0.06
Arsenic	0.1	101.3	0.20	98.0	98.3	0.25	1.9	50	111.2	113.1	1.7	99.1	99.5	0.36	0.14
Strontium	0.0	101.1	0.14	99.7	99.2	0.56	781.4	50	45.4	57.5	23.5	100.1	100.1	0.02	0.02
Barium	0.0	101.2	0.05	97.9	98.8	0.84	36.9	50	89.8	98.1	8.8	100.0	97.0	3.06	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/19/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.04	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.450	90.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27893	ND	0.500	0.520	0.530	104	106	1.9	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 3/9/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.72	98.0	95-105	1600

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27757	7.05	7.06	0.1	10	1600

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 3/9/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:00
ICV	1.00	0.96	96%	95-105	16:00

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27799	Not Detected	Not Detected	#VALUE!	10	16:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 3/10/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1020
ICV	24800	24770	99.9%	95-105	1040

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27766	32720	32870	0.5%	10	1040

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	1050
ICVL	100	111	111	80-120	1050
ICV	500	508	101.6	90-110	1050

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27766	23100	23500	1.7	10	1120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/24/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.106	---	<0.5
ICV	5.0	5.3	106	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27966	0.8	5.0	5.4	5.4	92	92	0.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150311 EPA 200.7

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	-0.01	0.00	1.03	103.5%	1.05	104.9%	1.3%	1	1.04	103.7%	1	1.0	99.9%
B 249.772	0.05-5ppm	0.00	0.01	1.01	101.5%	1.04	104.1%	2.5%	1	1.02	101.6%	1	1.0	98.2%
Ca 317.933	50-300ppm	-6.21	-6.08	47.2	94.4%	48.0	96.0%	1.7%	50	49.4	98.8%	50	45.1	90.3%
Ca 396.841	0.5-50ppm	-0.60	-0.39	48.6	97.2%	48.9	97.9%	0.7%	50	49.8	99.7%	50	47.1	94.1%
Cu 324.754	10ppb-100ppm	-21.93	-22.48	963	96.3%	982	98.2%	2.0%	1000	998	99.8%	1000	948.7	94.9%
Cu 327.394	10ppb-100ppm	-19.05	-18.94	962	96.2%	983	98.3%	2.1%	1000	987	98.7%	1000	950.5	95.0%
Fe 238.204	10ppb-100ppm	-3.75	-3.15	963	96.3%	983	98.3%	2.0%	1000	1009	100.9%	1000	947.0	94.7%
Fe 259.940	10ppb-100ppm	-3.79	-0.02	963	96.3%	982	98.2%	2.0%	1000	1005	100.5%	1000	961.7	96.2%
K 766.491	0.5-750ppm	-0.29	-0.27	9.7	97.1%	9.9	98.8%	1.7%	10	9.9	99.3%	10	9.5	94.6%
Mg 202.581	50-1000ppm	-2.75	-2.62	47.4	94.8%	48.9	97.8%	3.2%	50	50.2	100.5%	50	47.3	94.6%
Mg 279.071	0.5-50ppm	-0.13	-0.01	48.0	96.0%	49.0	98.0%	2.0%	50	50.5	100.9%	50	47.4	94.7%
Mn 257.611	10ppb-11ppm	-22.38	-19.28	955	95.5%	971	97.1%	1.7%	1000	999	99.9%	1000	948.2	94.8%
Mn 260.561	10ppb-11ppm	-23.41	-21.36	949	94.9%	975	97.5%	2.8%	1000	1003	100.3%	1000	946.7	94.7%
Na 568.821	50-1000ppm	0.46	0.59	45.9	91.8%	47.6	95.3%	3.8%	50	47.5	94.9%	50	46.8	93.6%
Na 589.592	0.5-50ppm	-0.20	-0.07	48.7	97.3%	49.2	98.4%	1.1%	50	49.6	99.2%	50	47.4	94.9%
Si 251.611	0.5-200ppm	-0.23	-0.04	48.4	96.8%	49.2	98.3%	1.6%	50	49.8	99.5%	50	48.4	96.8%
Si 252.411	0.5-200ppm	-0.24	-0.11	48.8	97.6%	49.9	99.8%	2.2%	50	50.4	100.9%	50	48.6	97.2%
Zn 213.857	10ppb-50ppm	-27.69	14.85	983	98.3%	974	97.4%	0.9%	1000	990	99.0%	1000	938.5	93.8%

Matrix Spikes

Sample ID ab27760

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	1.96	2.88	92.3%	2.91	95.0%	0.9%	1	1.03	102.6%	1.1%	0.00
B 249.772	1.97	2.89	91.3%	2.90	92.6%	0.4%	1	1.02	101.8%	0.2%	0.00
Ca 317.933	13.9	65.2	102.6%	65.4	102.9%	0.3%	50	50.0	100.0%	1.2%	-6.07
Ca 396.847	19.0	64.3	90.7%	64.6	91.2%	0.4%	50	49.4	98.9%	0.8%	-0.39
Cu 324.754	1212	2122	91.0%	2122	91.0%	0.0%	1000	999	99.9%	0.1%	-21.41
Cu 327.394	1217	2122	90.5%	2130	91.3%	0.3%	1000	1000	100.0%	1.3%	-18.32
Fe 238.204	8	955	94.7%	951	94.2%	0.5%	1000	999	99.9%	0.9%	-4.08
Fe 259.940	12	975	96.3%	969	95.7%	0.6%	1000	1001	100.1%	0.3%	-3.08
K 766.491	2.2	11.9	97.4%	12.0	98.9%	1.2%	10	10.1	100.5%	1.2%	-0.28
Mg 202.581	12.9	63.1	100.3%	62.9	100.0%	0.2%	50	51.1	102.1%	1.6%	-2.70
Mg 279.077	14.2	60.3	92.1%	60.2	92.0%	0.1%	50	49.5	99.1%	1.8%	0.00
Mn 257.611	-15	952	96.7%	958	97.3%	0.6%	1000	1001	100.1%	0.3%	-20.17
Mn 260.561	-17	964	98.1%	962	97.8%	0.2%	1000	1006	100.6%	0.3%	-20.97
Na 568.821	112.6	158.6	92.0%	159.7	94.2%	0.7%	50	51.3	102.6%	7.8%	-0.01
Na 589.592	104.7	107.5	5.5%	107.8	6.2%	0.3%	50	49.1	98.3%	0.9%	0.08
Si 251.611	15.4	62.2	93.7%	62.3	93.9%	0.2%	50	49.6	99.1%	0.4%	-0.12
Si 252.411	15.3	62.7	94.9%	62.4	94.2%	0.5%	50	49.8	99.6%	1.3%	-0.17
Zn 213.857	19	957	93.8%	967	94.8%	1.0%	1000	1000	100.0%	1%	-29.29

4 Justin Court Ste D, Monterey, CA 93940

831.375.MBAS (6227), 831.641.0734 (Fax)

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

Batch ID:

20150309

	F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount	2	20	2	20	2	2
ICVB	0.03	0.12	0.03	0.16	0.08	0.00
ICV	1.91	19.72	2.10	20.08	1.94	1.91
Rec 90-110%	95.29	98.59	105.11	100.39	96.83	95.61
ICVL	0.17	1.89	0.21	1.79	0.24	0.23
Rec 50-150%	87.09	94.31	103.55	89.26	118.72	117.03
Sample ID AB27761	2.56	158.75	0.34	33.38	0.37	0.58
MS	4.46	179.81	2.41	53.48	2.31	2.47
Rec 80-120%	95.09	105.30	103.66	100.48	96.91	94.32
MSD	4.46	179.95	2.41	53.34	2.30	2.47
Rec 80-120%	95.21	106.02	103.81	99.80	96.56	94.24
Diff 10%	0.05	0.08	0.12	0.26	0.31	0.07
CCV	1.95	19.73	2.10	20.22	1.92	1.88
Rec 90-110%	97.68	98.64	104.91	101.08	96.11	94.07
Diff 10%	2.48	0.05	0.19	0.69	0.74	1.62
CCVB	0.02	0.00	0.00	0.00	0.00	0.00



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Orthophosphate QC Summary (SM 4500 PE)

Date: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:26
LCSL	0.03	0.03	100	50-150	14:26
ICV	0.30	0.29	97	90-110	14:26
QCS	0.30	0.30	100	80-120	14:26
CCV	0.30	0.30	100	80-120	14:26

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27757	0.06	0.30	0.36	0.37	100	103	2.7	70-130	10	14:26	14:26

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Phosphorus QC Summary (Hach 8190)

Date: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:42
LCSL	0.03	0.03	100	50-150	13:42
ICV	0.30	0.29	97	90-110	13:42
QCS	0.30	0.30	100	80-120	13:42
CCV	0.30	0.28	93	80-120	13:42
CCVB	0.00	< 0.03	NA	< 0.03	13:42

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptanc
								MS/MSD
AB27757	0.06	0.30	0.36	0.37	101	103	1.4	70-130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

March 18, 2015

Ceres ID: 10614

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on March 10, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

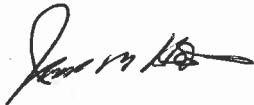
This work was authorized under M.B.A.'s Project # AB27757.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10614-001	MW-4S (monitoring)	3/10/2015	3/7/2015 16:45

Section II: Data Summary

Sample ID: Method Blank									
Client Data			Sample Data		Laboratory Data				
Name:	Monterey Bay Analytical		Matrix:	Aqueous		Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27757		Sample Size:	1.000 L		QC Batch #:	1301	Date Extracted:	16-Mar-15
						ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers	
2,3,7,8-TCDD	ND	1.59			<u>IS</u> ¹³ C-2,3,7,8-TCDD	97.0	31 - 137		
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	89.2	42 - 164		
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.				
Analyst: JMH			Reviewed by: BS						

Sample ID: Ongoing Precision and Recovery							
Client Data		Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27757	Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
				ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	106	25-141	
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
				<i>a. Method acceptance criteria .</i>			
Analyst: JMH			Reviewed by: BS				

Sample ID: MW-4S (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10614-001		Date Received: 10-Mar-15
Project: AB27757			Sample Size: 1.028 L		QC Batch #: 1301		Date Extracted: 16-Mar-15
Date Collected: 7-Mar-15					ZB-5 MS Analysis Date: 17-Mar-15		
Time Collected: 16:45							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.48			<u>IS</u> ¹³ C-2,3,7,8-TCDD	85.4	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	83.6	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10614
 Temperature: 1.3 °C

Reports and invoices will be delivered by email in .pdf format


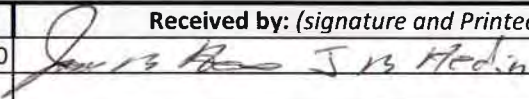
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: <u>mweidner@mbasinc.com</u>	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

- A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection				Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time											<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
														Comments
1	MW-4S (monitoring)	3/7/2015	1645	0:00	Aq	2	X							AB27757
2														(2,3,7,8 TCDD only)
3														Please include excel
4														report
5														
6														
7														
8														
9														
10														
11														
12														

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
	3/9/2015	16:00	 J. B. Medina	3/10/15	10:28

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: 10614	Date/Time: 3/10/15 10:28
Client Project ID: AB 277 57	Received Temperature: 1.3°C Acceptable: Y/N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals? Present?	Y / N
	Intact?
	NA: <input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	Y <input checked="" type="radio"/> N
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present?	Y / N <input checked="" type="radio"/> NA
List COC discrepancies:	
<div style="position: relative; width: 100%; height: 100%;"> 3/10/15 </div>	
List Damaged Samples:	
<div style="position: relative; width: 100%; height: 100%;"> 3/10/15 </div>	

Ceres ID: 10614 PB: 1301 Sample #s: 1 Due Date: 3/24/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions

- 1 Calibrate balance
- 2 Tare balance
- 3 Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
- 4 Weigh empty bottle and cap. Record as Bottle Wt.
- 5 Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10614-1	1542.56	514.81	1.028L

Chemist J

Date 3/10/15

Method: 1613A
 SOP #: 505.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1301-MB001	Method Blank		1.000L	3/16/15 [Signature]	3/17/15 [Signature]	NA	3/17/15	NA	3/17/15 [Signature]
0-1301-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10614-1301-001	MW-4S (monitoring)	✓	1.028L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:15 3/16/15
 Soxhlet Stop: _____

Samples Logged out by: [Signature] 08:00 3/16/15
 Samples Returned by: NA
 Note samples Depleted: 1A

Sample Extracts Storage Location: Box 15
 Extracts to Instrument: 12:20 3/17/15 [Signature]
 Extracts returned to Storage Location: 08:27 3/18/15 [Signature]

Chemist: [Signature]


Method: 8290A/1813B
 SOP #: 302.1/301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	102	2/11/20
NSS	B	1	1
CSS	C	6	1
RSS	D	202	6

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	20, 30, 100, 20	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122314A	6/23/15
Na2SO4	1.5g	P101814A	4/16/15
20% Decm: Hex	30ml	E102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/27/15 14:11
Attention: David Holland	Received Date: 03/10/15 09:20
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5C10013	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear David Holland :

Enclosed are the results of analyses for samples received 03/10/15 09:20 with the Chain of Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

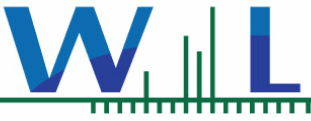
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-4S(Monitoring)	Josh Sobolew	AB27757	5C10013-01	Water	03/07/15 16:45

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

5C10013-01 MW-4S(Monitoring)

Sampled: 03/07/15 16:45

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27757

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5C1170

Prepared: 03/19/15 12:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	120	ug/l	12.5	03/19/15 15:11	M-05

Chlorinated Pesticides and/or PCBs

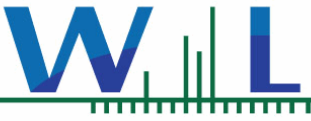
Method: EPA 508

Batch: W5C0606

Prepared: 03/11/15 08:49

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/20/15 19:40	
4,4'-DDE	ND	0.010	ug/l	1	03/20/15 19:40	
4,4'-DDT	ND	0.010	ug/l	1	03/20/15 19:40	
Aldrin	ND	0.010	ug/l	1	03/20/15 19:40	
alpha-BHC	ND	0.010	ug/l	1	03/20/15 19:40	
Aroclor 1016	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1221	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1232	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1242	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1248	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1254	ND	0.10	ug/l	1	03/20/15 19:40	
Aroclor 1260	ND	0.10	ug/l	1	03/20/15 19:40	
beta-BHC	ND	0.010	ug/l	1	03/20/15 19:40	
Chlordane (tech)	ND	0.10	ug/l	1	03/20/15 19:40	
Chlorothalonil	ND	0.050	ug/l	1	03/20/15 19:40	
delta-BHC	ND	0.010	ug/l	1	03/20/15 19:40	
Dieldrin	ND	0.010	ug/l	1	03/20/15 19:40	
Endosulfan I	ND	0.010	ug/l	1	03/20/15 19:40	
Endosulfan II	ND	0.010	ug/l	1	03/20/15 19:40	
Endosulfan sulfate	ND	0.010	ug/l	1	03/20/15 19:40	
Endrin	ND	0.010	ug/l	1	03/20/15 19:40	
Endrin aldehyde	ND	0.010	ug/l	1	03/20/15 19:40	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/20/15 19:40	
Heptachlor	ND	0.010	ug/l	1	03/20/15 19:40	
Heptachlor epoxide	ND	0.010	ug/l	1	03/20/15 19:40	
Hexachlorobenzene	ND	0.050	ug/l	1	03/20/15 19:40	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/20/15 19:40	
Methoxychlor	ND	0.010	ug/l	1	03/20/15 19:40	
PCBs, Total	ND	0.50	ug/l	1	03/20/15 19:40	
Propachlor	ND	0.050	ug/l	1	03/20/15 19:40	
Toxaphene	ND	1.0	ug/l	1	03/20/15 19:40	
Trifluralin	ND	0.010	ug/l	1	03/20/15 19:40	
Surr: Decachlorobiphenyl	40 %	Conc:0.0401	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	72 %	Conc:0.0715	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

5C10013-01 MW-4S(Monitoring)

Sampled: 03/07/15 16:45

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27757

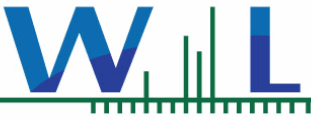
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
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Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Anions by IC, EPA Method 9056 - Quality Control

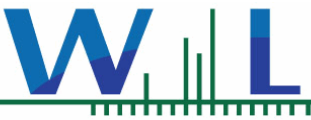
Batch W5C1170 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C1170-BLK1)				Analyzed: 03/19/15 13:27						
Iodide	ND	10	ug/l							
LCS (W5C1170-BS1)				Analyzed: 03/19/15 14:19						
Iodide	40.6	10	ug/l	40.0		102	85-115			
Matrix Spike (W5C1170-MS1)				Source: 5C12026-01		Analyzed: 03/19/15 16:09				
Iodide	35.9	10	ug/l	40.0	ND	90	80-120			
Matrix Spike Dup (W5C1170-MSD1)				Source: 5C12026-01		Analyzed: 03/19/15 16:28				
Iodide	36.8	10	ug/l	40.0	ND	92	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)				Analyzed: 03/20/15 17:07						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



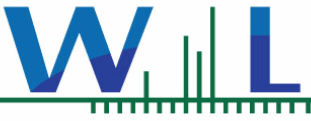
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)										
Analyzed: 03/20/15 17:07										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0856		ug/l	0.100		86	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0768		ug/l	0.100		77	70-130			
LCS (W5C0606-BS1)										
Analyzed: 03/20/15 17:38										
4,4'-DDD	0.0893	0.010	ug/l	0.100		89	55-142			
4,4'-DDE	0.0851	0.010	ug/l	0.100		85	49-129			
4,4'-DDT	0.0908	0.010	ug/l	0.100		91	54-160			
Aldrin	0.0741	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.0784	0.010	ug/l	0.100		78	59-131			
beta-BHC	0.0850	0.010	ug/l	0.100		85	63-136			
delta-BHC	0.0948	0.010	ug/l	0.100		95	59-137			
Dieldrin	0.0807	0.010	ug/l	0.100		81	59-135			
Endosulfan I	0.0616	0.010	ug/l	0.100		62	28-138			
Endosulfan II	0.0670	0.010	ug/l	0.100		67	53-133			
Endosulfan sulfate	0.0885	0.010	ug/l	0.100		88	58-155			
Endrin	0.0829	0.010	ug/l	0.100		83	57-148			
Endrin aldehyde	0.0674	0.010	ug/l	0.100		67	45-139			
gamma-BHC (Lindane)	0.0816	0.010	ug/l	0.100		82	59-129			
Heptachlor	0.0836	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0814	0.010	ug/l	0.100		81	59-134			
Methoxychlor	0.0735	0.010	ug/l	0.100		74	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0789		ug/l	0.100		79	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0696		ug/l	0.100		70	70-130			
LCS Dup (W5C0606-BSD1)										
Analyzed: 03/20/15 18:08										
4,4'-DDD	0.105	0.010	ug/l	0.100		105	55-142	16	25	
4,4'-DDE	0.0946	0.010	ug/l	0.100		95	49-129	11	25	
4,4'-DDT	0.104	0.010	ug/l	0.100		104	54-160	14	25	
Aldrin	0.0801	0.010	ug/l	0.100		80	29-115	8	25	
alpha-BHC	0.0847	0.010	ug/l	0.100		85	59-131	8	25	
beta-BHC	0.0960	0.010	ug/l	0.100		96	63-136	12	25	
delta-BHC	0.108	0.010	ug/l	0.100		108	59-137	13	25	
Dieldrin	0.0914	0.010	ug/l	0.100		91	59-135	12	25	
Endosulfan I	0.0678	0.010	ug/l	0.100		68	28-138	10	25	
Endosulfan II	0.0743	0.010	ug/l	0.100		74	53-133	10	25	
Endosulfan sulfate	0.0994	0.010	ug/l	0.100		99	58-155	12	25	

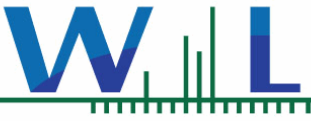


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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5C0606 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5C0606-BSD1)				Analyzed: 03/20/15 18:08						
Endrin	0.0919	0.010	ug/l	0.100		92	57-148	10	25	
Endrin aldehyde	0.0676	0.010	ug/l	0.100		68	45-139	0.2	25	
gamma-BHC (Lindane)	0.0899	0.010	ug/l	0.100		90	59-129	10	25	
Heptachlor	0.0914	0.010	ug/l	0.100		91	42-136	9	25	
Heptachlor epoxide	0.0895	0.010	ug/l	0.100		90	59-134	10	25	
Methoxychlor	0.0735	0.010	ug/l	0.100		73	56-167	0.1	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0831</i>		<i>ug/l</i>	<i>0.100</i>		<i>83</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0696</i>		<i>ug/l</i>	<i>0.100</i>		<i>70</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5C0788

3/20/2015

Invoice: A505824

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5C0788 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 3/10/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 3/10/2015 - 08:00 Report Due: 3/24/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
--	---

Sample Receipt Conditions

Cooler: Cooler #2 Temperature on Receipt °C: 2.6	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Initial receipt at BSK-FAL
---	--

Cooler: Default Cooler Temperature on Receipt °C: 2.6	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Initial receipt at BSK-FAL
--	--

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- BS3.0 BS/BSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- BS4.0 BS/BSD RPD exceeded the method acceptance limit as one of the blank spikes recovered outside limits.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5C0788-01
Sampled By: Josh Sobolew
Sample Description: MW-4S (monitoring) // AB27757

Sample Date - Time: 03/07/15 - 16:45
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A503030	03/18/15	03/18/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A503030	03/18/15	03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	112 %	Acceptable range: 70-130 %						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502705	03/10/15	03/12/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502705	03/10/15	03/12/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
Surrogate: DCPAA	EPA 515.3	102 %	Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	

Certificate of Analysis

Sample ID: A5C0788-01

Sampled By: Josh Sobolew

Sample Description: MW-4S (monitoring) // AB27757

Sample Date - Time: 03/07/15 - 16:45

Matrix: Ground Water

Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	BS1.0, CV0.0
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Toluene	EPA 524.2	0.51	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	86 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	91 %	Acceptable range: 70-130 %						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5C0788-01

Sampled By: Josh Sobolew

Sample Description: MW-4S (monitoring) // AB27757

Sample Date - Time: 03/07/15 - 16:45

Matrix: Ground Water

Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503033	03/18/15	03/19/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503033	03/18/15	03/19/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	100 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	BS1.0, BS4.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503013	03/17/15	03/19/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502659	03/10/15	03/10/15	
Surrogate: AMPA	EPA 547	111 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502773	03/11/15	03/18/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502842	03/13/15	03/17/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A503030

Prepared: 03/18/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A503030-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/18/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		98	70-130			03/18/15	

Blank Spike (A503030-BS1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		102	70-130			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		94	70-130			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/18/15	

Blank Spike Dup (A503030-BSD1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		105	70-130	3	20	03/19/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	4	20	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		101	70-130			03/19/15	

Matrix Spike (A503030-MS1), Source: A5C0852-01

Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12	ND	105	65-135			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	98	65-135			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.45		101	70-130			03/18/15	

EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502705-BLK1)

2,4,5-T	ND	1.0	ug/L							03/11/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/11/15	
2,4-D	ND	10	ug/L							03/11/15	
Bentazon	ND	2.0	ug/L							03/11/15	
Dalapon	ND	10	ug/L							03/11/15	
Dicamba	ND	1.5	ug/L							03/11/15	
Dinoseb	ND	2.0	ug/L							03/11/15	
Pentachlorophenol	ND	0.20	ug/L							03/11/15	
Picloram	ND	1.0	ug/L							03/11/15	
Surrogate: DCPAA	60			58		103	70-130			03/11/15	

Blank Spike (A502705-BS1)

2,4,5-T	4.3	1.0	ug/L	4.0		107	70-130			03/11/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80		98	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40		109	70-130			03/11/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130			03/11/15	
Dalapon	4.3	10	ug/L	4.0		107	70-130			03/11/15	
Dicamba	6.3	1.5	ug/L	6.0		104	70-130			03/11/15	
Dinoseb	0.80	2.0	ug/L	0.80		99	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130			03/11/15	
Picloram	0.36	1.0	ug/L	0.40		90	70-130			03/11/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502705-BS1)

Surrogate: DCPAA 58 58 100 70-130 03/11/15

Blank Spike Dup (A502705-BSD1)

2,4,5-T	4.2	1.0	ug/L	4.0		105	70-130	1	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		96	70-130	2	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130	1	20	03/11/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130	1	20	03/11/15	
Dalapon	3.9	10	ug/L	4.0		97	70-130	9	20	03/11/15	
Dicamba	6.2	1.5	ug/L	6.0		103	70-130	2	20	03/11/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130	5	20	03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130	1	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40		117	70-130	25	20	03/11/15	BS3.0
Surrogate: DCPAA	57			58		99	70-130			03/11/15	

Matrix Spike (A502705-MS1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130			03/11/15	
2,4,5-TP (Silvex)	0.74	1.0	ug/L	0.80	ND	93	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130			03/11/15	
Dalapon	4.2	10	ug/L	4.0	ND	104	70-130			03/11/15	
Dicamba	6.2	1.5	ug/L	6.0	ND	104	70-130			03/11/15	
Dinoseb	0.82	2.0	ug/L	0.80	ND	102	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	97	70-130			03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	116	70-130			03/11/15	
Surrogate: DCPAA	59			58		101	70-130			03/11/15	

Matrix Spike Dup (A502705-MSD1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80	ND	96	70-130	4	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	0	20	03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130	0	20	03/11/15	
Dalapon	4.1	10	ug/L	4.0	ND	102	70-130	2	20	03/11/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130	1	20	03/11/15	
Dinoseb	0.84	2.0	ug/L	0.80	ND	105	70-130	3	20	03/11/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	95	70-130	2	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	118	70-130	1	20	03/11/15	
Surrogate: DCPAA	58			58		100	70-130			03/11/15	

EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							03/12/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethene	ND	0.50	ug/L							03/12/15	
1,1-Dichloropropene	ND	0.50	ug/L							03/12/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
2,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
2-Butanone	ND	5.0	ug/L							03/12/15	
2-Chlorotoluene	ND	0.50	ug/L							03/12/15	
2-Hexanone	ND	10	ug/L							03/12/15	
4-Chlorotoluene	ND	0.50	ug/L							03/12/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							03/12/15	
Acetone	ND	10	ug/L							03/12/15	
Benzene	ND	0.50	ug/L							03/12/15	
Bromobenzene	ND	0.50	ug/L							03/12/15	
Bromochloromethane	ND	0.50	ug/L							03/12/15	
Bromodichloromethane	ND	0.50	ug/L							03/12/15	
Bromoform	ND	0.50	ug/L							03/12/15	
Bromomethane	ND	0.50	ug/L							03/12/15	
Carbon Tetrachloride	ND	0.50	ug/L							03/12/15	
Chlorobenzene	ND	0.50	ug/L							03/12/15	
Chloroethane	ND	0.50	ug/L							03/12/15	
Chloroform	ND	0.50	ug/L							03/12/15	
Chloromethane	ND	0.50	ug/L							03/12/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Dibromochloromethane	ND	0.50	ug/L							03/12/15	
Dibromomethane	ND	0.50	ug/L							03/12/15	
Dichlorodifluoromethane	ND	0.50	ug/L							03/12/15	
Dichloromethane	ND	0.50	ug/L							03/12/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							03/12/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							03/12/15	
Ethylbenzene	ND	0.50	ug/L							03/12/15	
Hexachlorobutadiene	ND	0.50	ug/L							03/12/15	
Isopropylbenzene	ND	0.50	ug/L							03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

m,p-Xylenes	ND	0.50	ug/L							03/12/15	
Methyl-t-butyl ether	ND	0.50	ug/L							03/12/15	
Naphthalene	ND	0.50	ug/L							03/12/15	
n-Butylbenzene	ND	0.50	ug/L							03/12/15	
n-Propylbenzene	ND	0.50	ug/L							03/12/15	
o-Xylene	ND	0.50	ug/L							03/12/15	
p-Isopropyltoluene	ND	0.50	ug/L							03/12/15	
sec-Butylbenzene	ND	0.50	ug/L							03/12/15	
Styrene	ND	0.50	ug/L							03/12/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							03/12/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							03/12/15	
tert-Butylbenzene	ND	0.50	ug/L							03/12/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							03/12/15	
Toluene	ND	0.50	ug/L							03/12/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Trichloroethene (TCE)	ND	0.50	ug/L							03/12/15	
Trichlorofluoromethane	ND	5.0	ug/L							03/12/15	
Vinyl Chloride	ND	0.50	ug/L							03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.3			5.0		85	70-130			03/12/15	
Surrogate: Bromofluorobenzene	46			50		91	70-130			03/12/15	

Blank Spike (A502806-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130			03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5	10	ug/L	10		95	70-130			03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
1,1-Dichloropropene	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		109	70-130			03/12/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		107	70-130			03/12/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			03/12/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
2,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Butanone	11	5.0	ug/L	10		107	70-130			03/12/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Hexanone	11	10	ug/L	10		106	70-130			03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		104	70-130			03/12/15	
Acetone	9.4	10	ug/L	10		94	70-130			03/12/15	
Benzene	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			03/12/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130			03/12/15	
Bromomethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			03/12/15	
Chlorobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Chloroethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Chloroform	10	0.50	ug/L	10		102	70-130			03/12/15	
Chloromethane	12	0.50	ug/L	10		122	70-130			03/12/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			03/12/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Dibromochloromethane	9.9	0.50	ug/L	10		99	70-130			03/12/15	
Dibromomethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		155	70-130			03/12/15	BS High
Dichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130			03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130			03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			03/12/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130			03/12/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		100	70-130			03/12/15	
Naphthalene	9.9	0.50	ug/L	10		99	70-130			03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		110	70-130			03/12/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
o-Xylene	10	0.50	ug/L	10		104	70-130			03/12/15	
p-Isopropyltoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Styrene	12	0.50	ug/L	10		117	70-130			03/12/15	
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130			03/12/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		100	70-130			03/12/15	
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Toluene	10	0.50	ug/L	10		102	70-130			03/12/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130			03/12/15	
Vinyl Chloride	13	0.50	ug/L	10		126	70-130			03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		103	70-130			03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

Surrogate: Bromofluorobenzene 50 50 100 70-130 03/12/15

Blank Spike Dup (A502806-BSD1)

1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
1,1,1-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	3	30	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130	3	30	03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		101	70-130	3	30	03/12/15	
1,1-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	2	30	03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		106	70-130	2	30	03/12/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130	7	30	03/12/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,2-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	7	30	03/12/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	03/12/15	
1,4-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2-Butanone	10	5.0	ug/L	10		101	70-130	5	30	03/12/15	
2-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
2-Hexanone	10	10	ug/L	10		100	70-130	6	30	03/12/15	
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	5	30	03/12/15	
Acetone	9.0	10	ug/L	10		90	70-130	4	30	03/12/15	
Benzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromobenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130	0	30	03/12/15	
Bromomethane	9.3	0.50	ug/L	10		93	70-130	4	30	03/12/15	
Carbon Tetrachloride	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
Chloroethane	9.2	0.50	ug/L	10		92	70-130	5	30	03/12/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Chloromethane	12	0.50	ug/L	10		118	70-130	3	30	03/12/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
cis-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Dibromochloromethane	9.7	0.50	ug/L	10		97	70-130	2	30	03/12/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		146	70-130	6	30	03/12/15	BS High
Dichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502806-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	3	30	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130	3	30	03/12/15	
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		100	70-130	4	30	03/12/15	
Isopropylbenzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
m,p-Xylenes	20	0.50	ug/L	20		99	70-130	5	30	03/12/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		97	70-130	2	30	03/12/15	
Naphthalene	10	0.50	ug/L	10		100	70-130	1	30	03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		106	70-130	3	30	03/12/15	
n-Propylbenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
o-Xylene	9.8	0.50	ug/L	10		98	70-130	6	30	03/12/15	
p-Isopropyltoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
sec-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Styrene	11	0.50	ug/L	10		109	70-130	7	30	03/12/15	
tert-Amyl Methyl Ether (TAME)	9.7	3.0	ug/L	10		97	70-130	2	30	03/12/15	
tert-Butyl alcohol (TBA)	9.1	2.0	ug/L	10		91	70-130	9	30	03/12/15	
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	5	30	03/12/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
trans-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
trans-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Trichloroethene (TCE)	9.7	0.50	ug/L	10		97	70-130	5	30	03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		106	70-130	4	30	03/12/15	
Vinyl Chloride	12	0.50	ug/L	10		120	70-130	5	30	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			03/12/15	
Surrogate: Bromofluorobenzene	50			50		100	70-130			03/12/15	

EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Alachlor	ND	1.0	ug/L							03/19/15	
Atrazine	ND	0.50	ug/L							03/19/15	
Benzo(a)pyrene	ND	0.10	ug/L							03/19/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							03/19/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							03/19/15	
Bromacil	ND	10	ug/L							03/19/15	
Butachlor	ND	0.38	ug/L							03/19/15	
Diazinon	ND	0.25	ug/L							03/19/15	
Dimethoate	ND	10	ug/L							03/19/15	
Metolachlor	ND	0.50	ug/L							03/19/15	
Metribuzin	ND	0.50	ug/L							03/19/15	
Molinate	ND	2.0	ug/L							03/19/15	
Prometryn	ND	2.0	ug/L							03/19/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Propachlor	ND	0.50	ug/L							03/19/15	
Simazine	ND	1.0	ug/L							03/19/15	
Thiobencarb	ND	1.0	ug/L							03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		96	70-130			03/19/15	

Blank Spike (A503033-BS1)

Alachlor	0.53	1.0	ug/L	0.50		107	70-130			03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		100	70-130			03/19/15	
Benzo(a)pyrene	0.036	0.10	ug/L	0.050		72	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		112	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.84	3.0	ug/L	0.75		113	70-130			03/19/15	
Bromacil	0.54	10	ug/L	0.50		107	70-130			03/19/15	
Butachlor	0.53	0.38	ug/L	0.50		107	70-130			03/19/15	
Diazinon	0.082	0.25	ug/L	0.10		82	70-130			03/19/15	
Dimethoate	0.50	10	ug/L	0.50		100	70-130			03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		100	70-130			03/19/15	
Metribuzin	0.50	0.50	ug/L	0.50		100	70-130			03/19/15	
Molinate	0.49	2.0	ug/L	0.50		98	70-130			03/19/15	
Prometryn	0.85	2.0	ug/L	1.0		85	70-130			03/19/15	
Propachlor	0.26	0.50	ug/L	0.25		105	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18		98	70-130			03/19/15	
Thiobencarb	0.25	1.0	ug/L	0.25		100	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.6			5.0		92	70-130			03/19/15	

Blank Spike Dup (A503033-BSD1)

Alachlor	0.55	1.0	ug/L	0.50		109	70-130	2	30	03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		102	70-130	2	30	03/19/15	
Benzo(a)pyrene	0.035	0.10	ug/L	0.050		70	70-130	3	30	03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		111	70-130	1	30	03/19/15	
Bis(2-ethylhexyl) phthalate	0.83	3.0	ug/L	0.75		111	70-130	1	30	03/19/15	
Bromacil	0.62	10	ug/L	0.50		123	70-130	14	30	03/19/15	
Butachlor	0.55	0.38	ug/L	0.50		109	70-130	2	30	03/19/15	
Diazinon	0.085	0.25	ug/L	0.10		85	70-130	4	30	03/19/15	
Dimethoate	0.63	10	ug/L	0.50		126	70-130	24	30	03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		104	70-130	4	30	03/19/15	
Metribuzin	0.54	0.50	ug/L	0.50		109	70-130	8	30	03/19/15	
Molinate	0.50	2.0	ug/L	0.50		100	70-130	1	30	03/19/15	
Prometryn	0.87	2.0	ug/L	1.0		87	70-130	2	30	03/19/15	
Propachlor	0.29	0.50	ug/L	0.25		117	70-130	11	30	03/19/15	
Simazine	0.18	1.0	ug/L	0.18		103	70-130	5	30	03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25		104	70-130	4	30	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		100	70-130			03/19/15	

Matrix Spike (A503033-MS1), Source: A5C0856-01

Alachlor	0.57	1.0	ug/L	0.51	ND	113	70-130			03/19/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A503033-MS1), Source: A5C0856-01

Atrazine	0.27	0.50	ug/L	0.25	ND	105	70-130			03/19/15	
Benzo(a)pyrene	0.040	0.10	ug/L	0.051	ND	78	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0	ND	110	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.92	3.0	ug/L	0.76	ND	121	70-130			03/19/15	
Bromacil	0.67	10	ug/L	0.51	ND	132	70-130			03/19/15	MS1.0 High
Butachlor	0.57	0.38	ug/L	0.51	ND	113	70-130			03/19/15	
Diazinon	0.10	0.25	ug/L	0.10	ND	102	70-130			03/19/15	
Dimethoate	0.59	10	ug/L	0.51	ND	116	70-130			03/19/15	
Metolachlor	1.1	0.50	ug/L	1.0	ND	106	70-130			03/19/15	
Metribuzin	0.56	0.50	ug/L	0.51	ND	111	70-130			03/19/15	
Molinate	0.52	2.0	ug/L	0.51	ND	102	70-130			03/19/15	
Prometryn	0.98	2.0	ug/L	1.0	ND	96	70-130			03/19/15	
Propachlor	0.27	0.50	ug/L	0.25	ND	107	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18	ND	98	70-130			03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25	ND	101	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.3			5.1		104	70-130			03/19/15	

EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A503013-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/18/15	
Aldicarb	ND	3.0	ug/L							03/18/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/18/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/18/15	
Carbaryl	ND	5.0	ug/L							03/18/15	
Carbofuran	ND	5.0	ug/L							03/18/15	
Methiocarb	ND	2.0	ug/L							03/18/15	
Methomyl	ND	2.0	ug/L							03/18/15	
Oxamyl	ND	20	ug/L							03/18/15	
Propoxur	ND	2.0	ug/L							03/18/15	

Blank Spike (A503013-BS1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb	4.1	3.0	ug/L	4.0		103	80-120			03/18/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		104	80-120			03/18/15	
Carbaryl	4.1	5.0	ug/L	4.0		103	80-120			03/18/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120			03/18/15	
Methiocarb	4.3	2.0	ug/L	4.0		106	80-120			03/18/15	
Methomyl	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Oxamyl	4.2	20	ug/L	4.0		104	80-120			03/18/15	
Propoxur	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A503013-BSD1)

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0		111	80-120	9	20	03/19/15	
Aldicarb	4.2	3.0	ug/L	4.0		104	80-120	1	20	03/19/15	
Aldicarb Sulfone	4.3	2.0	ug/L	4.0		109	80-120	7	20	03/19/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0		109	80-120	4	20	03/19/15	
Carbaryl	4.3	5.0	ug/L	4.0		108	80-120	5	20	03/19/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120	0	20	03/19/15	
Methiocarb	4.5	2.0	ug/L	4.0		112	80-120	5	20	03/19/15	
Methomyl	5.0	2.0	ug/L	4.0		124	80-120	21	20	03/19/15	BS High
Oxamyl	4.4	20	ug/L	4.0		109	80-120	5	20	03/19/15	
Propoxur	4.4	2.0	ug/L	4.0		110	80-120	8	20	03/19/15	

Matrix Spike (A503013-MS1), Source: A5C0576-01

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0	ND	113	65-135			03/19/15	
Aldicarb	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbaryl	3.9	5.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbofuran	4.0	5.0	ug/L	4.0	ND	99	65-135			03/19/15	
Methiocarb	3.9	2.0	ug/L	4.0	ND	98	65-135			03/19/15	
Methomyl	4.3	2.0	ug/L	4.0	ND	108	65-135			03/19/15	
Oxamyl	3.9	20	ug/L	4.0	ND	98	65-135			03/19/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	

EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502659-BLK1)

Glyphosate	ND	25	ug/L							03/10/15	
Surrogate: AMPA	110			100		107	70-130			03/10/15	

Blank Spike (A502659-BS1)

Glyphosate	99	25	ug/L	100		99	70-130			03/10/15	
Surrogate: AMPA	100			100		104	70-130			03/10/15	

Blank Spike Dup (A502659-BSD1)

Glyphosate	110	25	ug/L	100		106	70-130	7	30	03/10/15	
Surrogate: AMPA	110			100		111	70-130			03/10/15	

Matrix Spike (A502659-MS1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	97	70-130			03/10/15	
Surrogate: AMPA	120			100		114	70-130			03/10/15	

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	98	70-130	1	30	03/10/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Surrogate: AMPA 100 100 103 70-130 03/10/15

EPA 548.1 - Quality Control

Batch: A502773

Prepared: 03/11/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502773-BLK1)

Endothall ND 45 ug/L 03/17/15

Blank Spike (A502773-BS1)

Endothall 13 45 ug/L 20 64 54-105 03/17/15

Blank Spike Dup (A502773-BSD1)

Endothall 13 45 ug/L 20 63 54-105 1 46 03/18/15

Matrix Spike (A502773-MS1), Source: A5C0722-01

Endothall ND 45 ug/L 20 ND 0 54-105 03/18/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A502842

Prepared: 03/13/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502842-BLK1)

Diquat ND 4.0 ug/L 03/17/15

Blank Spike (A502842-BS1)

Diquat 3.1 4.0 ug/L 4.0 78 70-130 03/17/15

Blank Spike Dup (A502842-BSD1)

Diquat 3.4 4.0 ug/L 4.0 84 70-130 7 30 03/17/15

Matrix Spike (A502842-MS1), Source: A5C0711-01

Diquat 2.8 4.0 ug/L 4.0 ND 70 70-130 03/17/15

Matrix Spike (A502842-MS2), Source: A5C0711-02

Diquat 2.9 4.0 ug/L 4.0 ND 71 70-130 03/17/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5C0788



03102015

Monte6227

Turnaround: Standard

Due Date: 3/24/2015



Monterey Bay Analytical



2.4p2.4

Turnaround Time Request
 Standard - 10 business days
 Rush (Surcharge may apply)
 Date needed:

A5C0788
 Monte6227



03/10/2015
 10

***Required Fields**

Temp:

Company/Client Name*: Monterey Bay Analytical Services
 Report Attention*: Mason Weidner-Holland
 Additional cc's: David Holland
 City*: Monterey State*: CA Zip*: 93940
 Invoice To*: David Holland PO#: _____
 Phone*: 831-375-6227 Fax: 831-641-0734
 E-mail*: mweidner@mbasinc.com, dholland@mbasinc.com

Address*: 4 Justin Court, Suite D
 Project: Cal Am
 Project #:
 Regulatory Carbon Copies
 Reporting Options: Trace (U-Flag) Swamp EDD Type: _____
 Regulatory Compliance
 SWRCB (Drinking Water) Merced Co Fresno Co
 Madera Co Tulare Co
 EDT to California SWRCB (Drinking Water)
 System Number*: _____
 Geotracker #: _____

Sampler Name (Printed/Signature)*: Josh Sobolew
 Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid
 How would you like to receive your completed results?:
 E-Mail Fax Mail
 Comments / Station Code / WTRAX: EPA 524 inc. MTBE

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX
		Date	Time		
1	MW-4S (monitoring)	3/7/15	1645	GW	EPA 504 EPA 515 EPA 525 EPA 531 EPA 547 EPA 548 EPA 549

Relinquished by: (Signature and Printed Name)
 Received by: (Signature and Printed Name)
 Date: 3/9/15 Time: 1600
 Received by: (Signature and Printed Name)
 Date: _____ Time: _____

Shipping Method: UPS Fed Ex
 Cooling Method: Wet Dry
 Courier: _____

Company: MBAS
 Date: 3/9/15
 Time: 1600
 Amount: \$ _____
 P/A#: _____
 Check: _____
 Int: _____
 Cash: _____

Payment for services is due within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The participating for the Client/Company acknowledges that they are either the Client or an authorized agent to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf

Sample Integrity



BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$			Were correct containers and preservatives received for the tests requested?																																																																																																																																																																																																																											
		Yes	No	NA	Yes	No	NA																																																																																																																																																																																																																								
		26	24	0	Yes	No	NA																																																																																																																																																																																																																								
	Bottles Received	If samples were taken today, is there evidence that chilling has begun?			Were there bubbles in the VOA vials? (Volatiles Only)																																																																																																																																																																																																																										
			Yes	No	NA	Yes	No	NA																																																																																																																																																																																																																							
Did all bottles arrive unbroken and intact?			Was a sufficient amount of sample received?																																																																																																																																																																																																																												
		Yes	No	NA	Yes	No	NA																																																																																																																																																																																																																								
Did all bottle labels agree with COC?			Do samples have a hold time <72 hours?																																																																																																																																																																																																																												
	Yes	No	NA	Yes	No	NA																																																																																																																																																																																																																									
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?			Was PM notified of discrepancies? PM: By/Time:																																																																																																																																																																																																																												
	Yes	No	NA	Yes	No	NA																																																																																																																																																																																																																									
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$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547, 515, 548, THM, 524	—	—																																																																																																																																																																																																																													
$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—																																																																																																																																																																																																																													
$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	Y N																																																																																																																																																																																																																													
NH_4Cl (AG) ^{Purple Label} 552	—	—																																																																																																																																																																																																																													
EDA (AG) ^{Brown Label} DBPs	—	—																																																																																																																																																																																																																													
HCL (CG) 524, 2, BTEX, Gas, MTBE, 8260/624	—	—																																																																																																																																																																																																																													
Buffer pH 4 (CG)	—	—																																																																																																																																																																																																																													
None (CG)	—	—																																																																																																																																																																																																																													
H_3PO_4 (CG) ^{Salmon Label}	—	—																																																																																																																																																																																																																													
Other:																																																																																																																																																																																																																															
Asbestos 1Liter Plastic w/ Foil	—	—																																																																																																																																																																																																																													
Low Level Hg / Metals Double Baggie	—	—																																																																																																																																																																																																																													
Bottled Water	—	—																																																																																																																																																																																																																													
Clear Glass Jar: 250 / 500 / 1 Liter	—	—																																																																																																																																																																																																																													
Soil Tube Brass / Steel / Plastic	—	—																																																																																																																																																																																																																													
Tedlar Bag / Plastic Bag	—	—																																																																																																																																																																																																																													
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials																																																																																																																																																																																																																									
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3/10/15

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested											
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter						
Field Parameters:											
						Temp:	17.7°C				
						pH:	6.77				
						Sp Cond:	16917 µS/cm				
						Turb:	0.52 NTU				

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com	
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []	
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____	
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container	
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size
27757 27756		MW-45 (Monitoring)	3/7/15	4:45 PM	2.4°C						24		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Josh Sobolew Nathan Reynolds / GEOSCIENCE		3/7/15	1645	Is sample for regulatory purposes? <input checked="" type="radio"/> Yes / No 2ML 1:1 HNO ₃ to each 125ml PH < 2 3/9/15 LJ
Relinquished by:	Josh Sobolew		3/8/15	11:43 AM	
Received by:					
Relinquished by:					
Received by:	Mollie Woodh		3/8/15	1143	

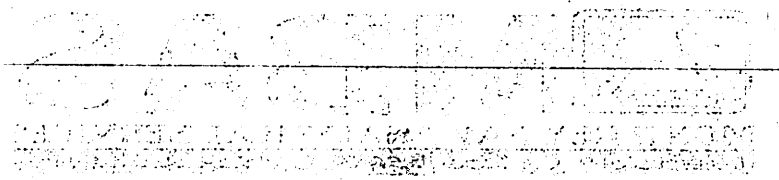
<input type="checkbox"/> Payment received	Check #	Amount:	Receipt #	Date:
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UNITED STATES DEPARTMENT OF AGRICULTURE

WATER RESOURCES DIVISION

WASHINGTON, D. C.

Form No. 10 (Rev. 1-25-60)



Cont.

M

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Administrative and reporting information at the bottom of the page, including fields for name, address, and other details.

**Table 3-3. Water Quality Analyses for Quarterly Sampling
Monitoring Wells and Test Slant Well**

Constituent	Units	Method Reporting Limit	Method
Physical Properties			
Color (Lab)	Color Units	3.0	SM 2120B/EPA 110.2
Oxidation-Reduction Potential (Field)	mV	-	Field Meter - Myron L 6PII
pH (Lab)	Units	0.10	SM 4500 H+B
pH (Field)	Units	-	Field Meter - YSI Pro Plus
Turbidity (Laboratory)	NTU	0.20	EPA 180.1/SM 2130B
Turbidity (Field)	NTU	-	Field Meter - Hach 2100P
Temperature (Field)	°C	-	Field Meter - YSI Pro Plus
Dissolved Oxygen (Field)	mg/L	-	Field Meter - YSI Pro Plus
Silt Density Index (Field)	-	-	ASTM D4189-07
Threshold Odor Number (Lab)	T.O.N.	1.0	EPA 140.1/SM 2150
Total Dissolved Solids (Lab)	mg/L	10	SM 2540 C
Specific Conductance (Lab)	µmhos/cm	1	SM 2510 B
Specific Conductance (Field)	µS/cm	-	Field Meter - YSI Pro Plus
General Minerals			
Total Cations	meq/L	-	Calculation
Total Anions	meq/L	-	Calculation
Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Bicarbonate Alkalinity as HCO ₃	mg/L	3	SM 2320 B
Carbonate Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Hydroxide Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Total Hardness as CaCO ₃	mg/L	3	Calculation
Aluminum	µg/L	1	EPA 200.7
Arsenic	µg/L	1	EPA 200.7 / EPA 200.8
Barium, Dissolved	µg/L	0.01	EPA 200.7
Boron, Dissolved	µg/L	0.5	EPA 200.8
Bromide, Dissolved	mg/L	0.1	EPA 326.0
Calcium, Dissolved	mg/L	1	EPA 200.7
Chloride, Dissolved	mg/L	1	EPA 300.0
Copper, Total	µg/L	50	EPA 200.7
Fluoride, Dissolved	mg/L	0.10	EPA 300.0 / SM 4500 FC
Iodide, Dissolved	mg/L	0.1	USGS I-2371 / EPA 9056A
Iron, Dissolved	µg/L	100	EPA 200.7 / EPA 200.8
Iron, Total	µg/L	100	EPA 200.7 / EPA 200.8
Lithium	µg/L	10	EPA 200.7 / EPA 6010B
Magnesium, Dissolved	mg/L	1	EPA 200.7

Constituent	Units	Method Reporting Limit	Method
Manganese, Dissolved	µg/L	20	EPA 200.7 / EPA 200.8
Manganese, Total	µg/L	20	EPA 200.7 / EPA 200.8
Mass Balance, Total & Dissolved	meq/L	-	Calculation
MBAS	mg/L	0.050	SM 5540 C / EPA 200.8
Nitrogen, Nitrate as NO ₃	mg/L	1	EPA 353.2 / EPA 300.0
Nitrogen, Nitrite, Dissolved	mg/L as N	1	SM 4500 NO ₂ B
Nitrogen, NO ₂ + NO ₃	mg/L as N	1	EPA 300.0
Nitrogen, Ammonia, Dissolved	mg/L as N	0.1	SM 4500 NH ₃ H / EPA 350.1
Nitrogen, Ammonia + Organic, Diss. (TKN)	mg/L as N	0.1	EPA 351.2
Phosphorus, Dissolved	mg/L as P	0.01	EPA 365.3
Phosphorus, ortho, Dissolved	mg/L as P	0.01	EPA 365.3
Potassium, Dissolved	mg/L	1	EPA 200.7
Silica, Dissolved	mg/L	1	SM 4500 SiE
Sodium, Dissolved	mg/L	1	EPA 200.7
Strontium, Dissolved	mg/L	0.1	EPA 200.7 / EPA 200.8
Sulfate as SO ₄ , dissolved	mg/L	0.5	EPA 300.0
Zinc, Total	µg/L	50	EPA 200.7
<i>Volatile Organic Compounds</i>			
VOCs plus Oxygenates (MTBE)	µg/L	varies	EPA 524.2
<i>EPA Organic Methods</i>			
EDB and DBCP	µg/L	varies	EPA 504.1
Chlorinated Pesticides & PCB's as DCP	µg/L	varies	EPA 508
Chlorinated Acid Herbicides	µg/L	varies	EPA 515
Nitrogen & Phosphorus Pesticides DEHP, DEHA, Benzo(a)Pyrene	µg/L	varies	EPA 525
Carbamates	µg/L	varies	EPA 531.1
Glyphosate	µg/L	varies	EPA 547
Endothall	µg/L	varies	EPA 548.1
Diquat	µg/L	varies	EPA 549.1
Dioxin (2,3,7,8 TCDD)	µg/L	varies	EPA 1613

Total and dissolved iron and manganese will be measured by field filtering samples directly into an acidified container immediately upon collection. A second sample will be collected directly into an acidified container without filtering. This method will provide a reliable and accurate means to determine the amount of dissolved and particulate iron and manganese, which has implications for desalting plant design.

27757

Cal Am DW

Sample Condition Upon Receipt

Geoscience

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

vacuum filter 1L , 0.45 μ membrane filter pre-rinsed

500mL + H₂SO₄ + Na₂S₂O₃ diss. TKN, NH₃

250mL no preserve diss. PO₄³⁻

250mL + H₂SO₄ diss. total P L3 3/9/15



Monterey Bay Analytical Services

4 Justin Court Suite D, Monterey, CA 93940

831.375.MBAS

www.MBASinc.com

ELAP Certification Number: 2385

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Lab Number: AB27753

Collection Date/Time: 3/6/2015 11:19 Sample Collector: MAKAR K

Submittal Date/Time: 3/6/2015 15:15 Sample ID Coliform Designation:

Sample Description: MW-4M (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	97		2		3/12/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	1000	3/12/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05		3/19/2015	TC
Arsenic, Total	EPA200.8	µg/L	21		12	10	3/12/2015	SM
Barium, Dissolved	EPA200.8	µg/L	104	J	125		3/12/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	118		10		3/12/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	1.16		5		3/11/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	31		2		3/12/2015	MW
Calcium	EPA200.7	mg/L	1040		5		3/11/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	1060		5		3/11/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E			3/19/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10		3/12/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	9751		20		3/12/2015	MW
Chlorinated Pesticides and PCB (EP	EPA508	µg/L	Not Detected	E			3/20/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	4		3	15	3/6/2015	LRH
Copper, Total	EPA200.8	µg/L	42	J	50	1300	3/12/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E			3/18/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E			3/16/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E			3/17/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E			3/18/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		0.1		3/6/2015	MW
Glyphosate	EPA547	µg/L	Not Detected	E			3/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5601		10		3/11/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5		3/12/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10		3/19/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		100	300	3/11/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		100	300	3/11/2015	MW
Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	1.8		0.5		3/18/2015	TC
Lithium	EPA200.8	µg/L	34		12		3/12/2015	SM
Magnesium	EPA200.7	mg/L	730		5		3/11/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	752		10		3/11/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	113		100	50	3/11/2015	MW
Manganese, Total	EPA200.7	µg/L	90	J	100	50	3/11/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	0.50	3/6/2015	HM
Nitrate as NO3	EPA300.0	mg/L	4		1	45	3/6/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	1.0		0.1		3/6/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.1		3/6/2015	MW
Odor Threshold at 60 C	SM2150B	TON	1		1	3	3/6/2015	TC
o-Phosphate-P	Hach 8048	mg/L	Not Detected		0.03		3/6/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.78				3/6/2015	KM
pH (Laboratory)	SM4500-H+B	pH (H)	7.1		0.1		3/6/2015	HM

mg/L : Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL: Maximum Contamination Level

H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments. T = Temperature Exceedance

Lab Number: AB27753

Collection Date/Time: 3/6/2015 11:19 Sample Collector: MAKAR K

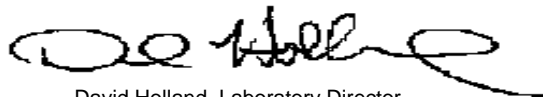
Submission Date/Time: 3/6/2015 15:15 Sample ID Coliform Designation:

Sample Description: MW-4M (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E			3/12/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	Not Detected		0.03		3/6/2015	LRH
Potassium	EPA200.7	mg/L	46		5		3/11/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	50.0		1		3/11/2015	MW
QC Ratio TDS/SEC	Calculation		0.68				3/11/2015	MW
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E			3/19/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	30		5		3/11/2015	MW
Sodium	EPA200.7	mg/L	4079		5		3/11/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	4320		5		3/11/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	26250		1	900	3/10/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	26779		1		3/6/2015	KM
Strontium, Dissolved	EPA200.8	µg/L	9637		62		3/12/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	1184		20		3/12/2015	MW
Temperature (Field)	SM2550	° C	18.4				3/6/2015	KM
Total Diss. Solids	SM2540C	mg/L	17900		10	500	3/9/2015	HM
Turbidity	EPA180.1	NTU	0.25		0.05	5.0	3/6/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.71		0.05		3/6/2015	KM
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E			3/12/2015	BSK
Zinc, Total	EPA200.8	µg/L	211	J	250	5000	3/12/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27753 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	4079	0.04350	177.44
Potassium	46	0.02558	1.18
Calcium	1040	0.04990	51.90
Magnesium	730	0.08229	60.07
NH3-N	0	0.07143	0.00
		SUM	290.58

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	97	0.02000	1.94
Sulfate	1184	0.02082	24.65
Chloride	9751	0.02821	275.08
Nitrate-Nitrogen	1	0.07138	0.07
Phosphate-P	0.0	0.01031	0.00
Bromide	31.0	0.01252	0.39
		SUM	302.13

ANION-CATION BALANCE **-2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	26250	
Cation Sum X 100	29058	111%
Anion Sum X 100	30213	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27753 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	4320	0.04350	187.92
Potassium	50	0.02558	1.28
Calcium	1060	0.04990	52.89
Magnesium	752	0.08229	61.88
NH3-N	0	0.07143	0.00
		SUM	303.98

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	97	0.02000	1.94
Sulfate	1184	0.02082	24.65
Chloride	9751	0.02821	275.08
Nitrate-Nitrogen	1	0.07138	0.07
Phosphate-P	0.0	0.01031	0.00
Bromide	31.0	0.01252	0.39
		SUM	302.13

ANION-CATION BALANCE **0** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	26250	
Cation Sum X 100	30398	116%
Anion Sum X 100	30213	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	9:18
CCV	40	41	102.5	95-105	10:46

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27757	80	80	0.0	5	10:46

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

MBAS QC Summary (SM 5540C)

Date Analyzed: 3/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.021	---	<0.05	913
ICVL	0.050	0.051	102	80-120	918
ICV	0.250	0.255	102	80-120	938

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27664	0.039	0.250	0.279	0.267	96	91.2	4.4	80/120	10	935

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent
 Difference; Rec = Recovery



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<http://www.MBASinc.com>

pH QC Summary (SM 4500 H+)

Date Analyzed: 3/6/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.81	99.3	95-105	1400

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27753	7.09	7.09	0.0	10	1540

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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<http://www.MBASinc.com>

Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 3/10/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1020
ICV	24800	24770	99.9%	95-105	1040

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27766	32720	32870	0.5%	10	1040

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

TDS QC Summary (SM 2540C)

Date Analyzed: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	1050
ICVL	100	111	111	80-120	1050
ICV	500	508	101.6	90-110	1050

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27766	23100	23500	1.7	10	1120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/18/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.146	---	<0.5
ICV	5.0	4.9	98	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27753	1.8	5.0	5.0	5.0	64	64	0.0	80-120	10

Data was accepted based on LCS recovery.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150311

EPA 200.7

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	-0.01	0.00	1.03	103.5%	1.05	104.9%	1.3%	1	1.04	103.7%	1	1.0	99.9%
B 249.772	0.05-5ppm	0.00	0.01	1.01	101.5%	1.04	104.1%	2.5%	1	1.02	101.6%	1	1.0	98.2%
Ca 317.933	50-300ppm	-6.21	-6.08	47.2	94.4%	48.0	96.0%	1.7%	50	49.4	98.8%	50	45.1	90.3%
Ca 396.841	0.5-50ppm	-0.60	-0.39	48.6	97.2%	48.9	97.9%	0.7%	50	49.8	99.7%	50	47.1	94.1%
Cu 324.754	10ppb-100ppm	-21.93	-22.48	963	96.3%	982	98.2%	2.0%	1000	998	99.8%	1000	948.7	94.9%
Cu 327.394	10ppb-100ppm	-19.05	-18.94	962	96.2%	983	98.3%	2.1%	1000	987	98.7%	1000	950.5	95.0%
Fe 238.204	10ppb-100ppm	-3.75	-3.15	963	96.3%	983	98.3%	2.0%	1000	1009	100.9%	1000	947.0	94.7%
Fe 259.940	10ppb-100ppm	-3.79	-0.02	963	96.3%	982	98.2%	2.0%	1000	1005	100.5%	1000	961.7	96.2%
K 766.491	0.5-750ppm	-0.29	-0.27	9.7	97.1%	9.9	98.8%	1.7%	10	9.9	99.3%	10	9.5	94.6%
Mg 202.581	50-1000ppm	-2.75	-2.62	47.4	94.8%	48.9	97.8%	3.2%	50	50.2	100.5%	50	47.3	94.6%
Mg 279.071	0.5-50ppm	-0.13	-0.01	48.0	96.0%	49.0	98.0%	2.0%	50	50.5	100.9%	50	47.4	94.7%
Mn 257.611	10ppb-11ppm	-22.38	-19.28	955	95.5%	971	97.1%	1.7%	1000	999	99.9%	1000	948.2	94.8%
Mn 260.561	10ppb-11ppm	-23.41	-21.36	949	94.9%	975	97.5%	2.8%	1000	1003	100.3%	1000	946.7	94.7%
Na 568.821	50-1000ppm	0.46	0.59	45.9	91.8%	47.6	95.3%	3.8%	50	47.5	94.9%	50	46.8	93.6%
Na 589.592	0.5-50ppm	-0.20	-0.07	48.7	97.3%	49.2	98.4%	1.1%	50	49.6	99.2%	50	47.4	94.9%
Si 251.611	0.5-200ppm	-0.23	-0.04	48.4	96.8%	49.2	98.3%	1.6%	50	49.8	99.5%	50	48.4	96.8%
Si 252.411	0.5-200ppm	-0.24	-0.11	48.8	97.6%	49.9	99.8%	2.2%	50	50.4	100.9%	50	48.6	97.2%
Zn 213.857	10ppb-50ppm	-27.69	14.85	983	98.3%	974	97.4%	0.9%	1000	990	99.0%	1000	938.5	93.8%

Matrix Spikes

Sample ID ab27760

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	1.96	2.88	92.3%	2.91	95.0%	0.9%	1	1.03	102.6%	1.1%	0.00
B 249.772	1.97	2.89	91.3%	2.90	92.6%	0.4%	1	1.02	101.8%	0.2%	0.00
Ca 317.933	13.9	65.2	102.6%	65.4	102.9%	0.3%	50	50.0	100.0%	1.2%	-6.07
Ca 396.847	19.0	64.3	90.7%	64.6	91.2%	0.4%	50	49.4	98.9%	0.8%	-0.39
Cu 324.754	1212	2122	91.0%	2122	91.0%	0.0%	1000	999	99.9%	0.1%	-21.41
Cu 327.394	1217	2122	90.5%	2130	91.3%	0.3%	1000	1000	100.0%	1.3%	-18.32
Fe 238.204	8	955	94.7%	951	94.2%	0.5%	1000	999	99.9%	0.9%	-4.08
Fe 259.940	12	975	96.3%	969	95.7%	0.6%	1000	1001	100.1%	0.3%	-3.08
K 766.491	2.2	11.9	97.4%	12.0	98.9%	1.2%	10	10.1	100.5%	1.2%	-0.28
Mg 202.581	12.9	63.1	100.3%	62.9	100.0%	0.2%	50	51.1	102.1%	1.6%	-2.70
Mg 279.077	14.2	60.3	92.1%	60.2	92.0%	0.1%	50	49.5	99.1%	1.8%	0.00
Mn 257.611	-15	952	96.7%	958	97.3%	0.6%	1000	1001	100.1%	0.3%	-20.17
Mn 260.561	-17	964	98.1%	962	97.8%	0.2%	1000	1006	100.6%	0.3%	-20.97
Na 568.821	112.6	158.6	92.0%	159.7	94.2%	0.7%	50	51.3	102.6%	7.8%	-0.01
Na 589.592	104.7	107.5	5.5%	107.8	6.2%	0.3%	50	49.1	98.3%	0.9%	0.08
Si 251.611	15.4	62.2	93.7%	62.3	93.9%	0.2%	50	49.6	99.1%	0.4%	-0.12
Si 252.411	15.3	62.7	94.9%	62.4	94.2%	0.5%	50	49.8	99.6%	1.3%	-0.17
Zn 213.857	19	957	93.8%	967	94.8%	1.0%	1000	1000	100.0%	1%	-29.29



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Orthophosphate QC Summary (SM4500 PE)

Date: 3/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	15:48
ICV	0.30	0.28	93	90-110	15:48
QCS	0.30	0.30	100	80-120	15:48

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27753	0	0.30	0.55	0.32	183	107	52.9	70-130	10	15:48	15:48

Note: MS recovery was over acceptance criteria due possible contamination on the caps. Data was accepted due MSD, QCS and ICV recovery percents.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27848

Date Analyzed
Thursday, March 12, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.1	101.7	0.05	106.0	102.5	3.35	26.8	50	84.4	84.7	0.4	98.2	102.8	4.58	0.02
Aluminum	0.0	102.0	2.82	101.4	101.7	0.34	4.4	50	85.1	88.2	3.6	99.9	99.0	0.94	-0.10
Copper	0.0	100.0	0.12	99.4	101.1	1.64	1.7	50	93.1	93.8	0.7	100.1	100.7	0.60	0.05
Zinc	0.1	131.2	1.62	103.3	103.8	0.47	25.7	50	93.8	95.8	2.1	103.0	104.0	0.99	0.06
Arsenic	0.1	101.3	0.20	98.0	98.3	0.25	1.9	50	111.2	113.1	1.7	99.1	99.5	0.36	0.14
Strontium	0.0	101.1	0.14	99.7	99.2	0.56	781.4	50	45.4	57.5	23.5	100.1	100.1	0.02	0.02
Barium	0.0	101.2	0.05	97.9	98.8	0.84	36.9	50	89.8	98.1	8.8	100.0	97.0	3.06	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/19/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.04	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.450	90.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27893	ND	0.500	0.520	0.530	104	106	1.9	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

20150306

	F	NO2-N	NO3-N
Spike amount	2	2	2
ICVB	0.00	0.00	0.00
ICV	1.96	2.10	1.92
Rec 90-110%	97.87	105.05	95.87
ICVL	0.19	0.21	0.23
Rec 50-150%	94.92	107.02	116.98
Sample ID ab27747	0.29	0.08	0.18
MS	2.11	3.00	1.97
Rec 80-120%	90.91	145.60	89.96
MSD	2.15	3.00	2.04
Rec 80-120%	92.94	146.02	93.03
Diff 10%	1.91	0.28	3.06
CCV	1.90	2.09	1.90
Rec 90-110%	94.97	104.74	95.13
Diff 10%	3.00	0.30	0.78
CCVB	0.00	0.00	0.00

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300.0 QC Report

All units expressed in mg/L

Batch ID:20150312

	Cl	SO4	Br
Spike amount	20	20	2
ICVB	0.00	0.00	0.00
ICV	19.64	19.99	1.91
Rec 90-110%	98.20	99.96	95.34
ICVL	1.44	1.73	0.21
Rec 50-150%	71.85	86.75	107.12
Sample ID	AB27966	168.64	277.08
	MS	187.63	299.98
Rec 80-120%	94.96	114.46	91.76
MSD	187.62	299.29	2.24
Rec 80-120%	94.91	111.01	91.60
Diff 10%	0.01	0.23	0.14
CCV	19.71	20.08	1.90
Rec 90-110%	98.55	100.40	94.78
Diff 10%	0.36	0.43	0.59
CCVB	0.00	0.00	0.00



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 3/6/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	8:30
ICV	1.00	1.02	102.0%	95-105	8:30

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27748	0.35	0.35	0%	10	16:41

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

March 18, 2015

Ceres ID: 10612

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on March 10, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

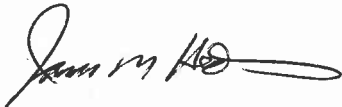
This work was authorized under M.B.A.'s Project # AB27753.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10612-001	MW-4M (monitoring)	3/10/2015	3/6/2015 11:19

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27753		Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
					ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.59			<u>IS</u> ¹³ C-2,3,7,8-TCDD	97.0	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	89.2	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery							
Client Data		Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27753	Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
				ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers	Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6		IS ¹³ C-2,3,7,8-TCDD	106	25-141	
				CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
				<i>a. Method acceptance criteria .</i>			
Analyst: JMH			Reviewed by: BS				

Sample ID: MW-4M (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10612-001		Date Received: 10-Mar-15
Project: AB27753			Sample Size: 1.021 L		QC Batch #: 1301		Date Extracted: 16-Mar-15
Date Collected: 6-Mar-15					ZB-5 MS Analysis Date: 17-Mar-15		
Time Collected: 11:19							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.44			<u>IS</u> ¹³ C-2,3,7,8-TCDD	95.7	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	96.6	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10612
 Temperature: 1.3 °C

Reports and invoices will be delivered by email in .pdf format

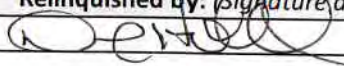
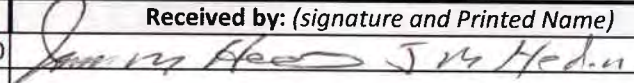
Client Information	Invoice Information(if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: mweidner@mbasinc.com	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)



	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time										<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
													Comments
1	MW-4M (monitoring)	3/6/2015	1119	0:00	Aq	2	X						AB27753
2													(2,3,7,8 TCDD only)
3													Please include excel
4													report
5													
6													
7													
8													
9													
10													
11													
12													

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
	3/9/2015	16:00	 J M Hedon	3/10/15	10:28

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed. Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10612</u>	Date/Time: <u>3/10/15 10:28</u>
Client Project ID: <u>AB 27753</u>	Received Temperature: <u>1.3°C</u> Acceptable: <u>(Y)</u> /N
Chain of Custody Relinquished by signed?	<u>(Y)</u> /N
Custody Seals? Present?	Y/N
Intact?	Y/N
NA:	<u>(NA)</u>
Unlabeled / Illegible Samples	Y/ <u>(N)</u>
Proper Containers:	<u>(Y)</u> /N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>(Y)</u> /N
Drinking Water, Sodium Thiosulfate present?	Y/N/ <u>(NA)</u>
List COC discrepancies:	
	
List Damaged Samples:	
	

Ceres ID: 10612 PB: 1301 Sample #s: 1 Due Date: 2/24/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Method: 1613B
 SOP #: 001.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1301-MB001	Method Blank		1.000L	J 3/16/15 ML	J 3/17/15 ML	NA	J 3/17/15	NA	J 3/17/15 ML
0-1301-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10612-1301-001	MW-4M (monitoring)	✓	1.021L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:15 3/16/15
 Soxhlet Stop: _____

Samples Logged out by: J 08:00 3/16/15
 Samples Returned by: NA
 Note samples Depleted: 1A

Sample Extracts Storage Location: Box 15
 Extracts to Instrument: 12:20 3/17/15 J
 Extracts returned to Storage Location: 08:27 3/18/15 J

Chemist: J

Method: 8290A/1613B
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	5021115A	102	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	0	202	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	20,30,100,20	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122314A	6/23/15
Na2SO4	1.5g	P101814A	4/16/15
20% Dec; Hex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5C0787

3/20/2015

Invoice: A505823

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5C0787 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 3/10/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical
Report To: David Holland
Project #: -
Received: 3/10/2015 - 08:00
Report Due: 3/24/2015

Invoice To: Monterey Bay Analytical
Invoice Attn: David Holland
Project PO#: -

Sample Receipt Conditions

Cooler: Cooler #2	Containers Intact
Temperature on Receipt °C: 2.4	COC/Labels Agree
	Received On Wet Ice
	Received On Blue Ice
	Packing Material - Bubble Wrap
	Packing Material - Paper
	Initial receipt at BSK-FAL

Cooler: Default Cooler	Containers Intact
Temperature on Receipt °C: 2.6	COC/Labels Agree
	Received On Wet Ice
	Received On Blue Ice
	Packing Material - Bubble Wrap
	Packing Material - Paper
	Initial receipt at BSK-FAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- BS3.0 BS/BSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- BS4.0 BS/BSD RPD exceeded the method acceptance limit as one of the blank spikes recovered outside limits.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5C0787-01
Sampled By: Kimberly Makar
Sample Description: MW-4M (monitoring) // AB27753

Sample Date - Time: 03/06/15 - 15:15
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A503030	03/18/15	03/18/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A503030	03/18/15	03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502705	03/10/15	03/12/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502705	03/10/15	03/12/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
Surrogate: DCPAA	EPA 515.3	99 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	

Certificate of Analysis

Sample ID: A5C0787-01
Sampled By: Kimberly Makar
Sample Description: MW-4M (monitoring) // AB27753

Sample Date - Time: 03/06/15 - 15:15
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	BS1.0, CV0.0
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	84 %			Acceptable range: 70-130 %				
Surrogate: Bromofluorobenzene	EPA 524.2	88 %			Acceptable range: 70-130 %				
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5C0787-01
Sampled By: Kimberly Makar
Sample Description: MW-4M (monitoring) // AB27753

Sample Date - Time: 03/06/15 - 15:15
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503033	03/18/15	03/19/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503033	03/18/15	03/19/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	100 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	BS1.0, BS4.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503013	03/17/15	03/19/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502659	03/10/15	03/10/15	
Surrogate: AMPA	EPA 547	107 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502773	03/11/15	03/18/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502842	03/13/15	03/17/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A503030

Prepared: 03/18/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A503030-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/18/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		98	70-130			03/18/15	

Blank Spike (A503030-BS1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		102	70-130			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		94	70-130			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/18/15	

Blank Spike Dup (A503030-BSD1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		105	70-130	3	20	03/19/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	4	20	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		101	70-130			03/19/15	

Matrix Spike (A503030-MS1), Source: A5C0852-01

Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12	ND	105	65-135			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	98	65-135			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.45		101	70-130			03/18/15	

EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502705-BLK1)

2,4,5-T	ND	1.0	ug/L							03/11/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/11/15	
2,4-D	ND	10	ug/L							03/11/15	
Bentazon	ND	2.0	ug/L							03/11/15	
Dalapon	ND	10	ug/L							03/11/15	
Dicamba	ND	1.5	ug/L							03/11/15	
Dinoseb	ND	2.0	ug/L							03/11/15	
Pentachlorophenol	ND	0.20	ug/L							03/11/15	
Picloram	ND	1.0	ug/L							03/11/15	
Surrogate: DCPAA	60			58		103	70-130			03/11/15	

Blank Spike (A502705-BS1)

2,4,5-T	4.3	1.0	ug/L	4.0		107	70-130			03/11/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80		98	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40		109	70-130			03/11/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130			03/11/15	
Dalapon	4.3	10	ug/L	4.0		107	70-130			03/11/15	
Dicamba	6.3	1.5	ug/L	6.0		104	70-130			03/11/15	
Dinoseb	0.80	2.0	ug/L	0.80		99	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130			03/11/15	
Picloram	0.36	1.0	ug/L	0.40		90	70-130			03/11/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502705-BS1)

Surrogate: DCPAA	58			58		100	70-130			03/11/15	
Blank Spike Dup (A502705-BSD1)											
2,4,5-T	4.2	1.0	ug/L	4.0		105	70-130	1	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		96	70-130	2	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130	1	20	03/11/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130	1	20	03/11/15	
Dalapon	3.9	10	ug/L	4.0		97	70-130	9	20	03/11/15	
Dicamba	6.2	1.5	ug/L	6.0		103	70-130	2	20	03/11/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130	5	20	03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130	1	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40		117	70-130	25	20	03/11/15	BS3.0
Surrogate: DCPAA	57			58		99	70-130			03/11/15	

Matrix Spike (A502705-MS1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130			03/11/15	
2,4,5-TP (Silvex)	0.74	1.0	ug/L	0.80	ND	93	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130			03/11/15	
Dalapon	4.2	10	ug/L	4.0	ND	104	70-130			03/11/15	
Dicamba	6.2	1.5	ug/L	6.0	ND	104	70-130			03/11/15	
Dinoseb	0.82	2.0	ug/L	0.80	ND	102	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	97	70-130			03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	116	70-130			03/11/15	
Surrogate: DCPAA	59			58		101	70-130			03/11/15	

Matrix Spike Dup (A502705-MSD1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80	ND	96	70-130	4	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	0	20	03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130	0	20	03/11/15	
Dalapon	4.1	10	ug/L	4.0	ND	102	70-130	2	20	03/11/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130	1	20	03/11/15	
Dinoseb	0.84	2.0	ug/L	0.80	ND	105	70-130	3	20	03/11/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	95	70-130	2	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	118	70-130	1	20	03/11/15	
Surrogate: DCPAA	58			58		100	70-130			03/11/15	

EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							03/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							03/12/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethene	ND	0.50	ug/L							03/12/15	
1,1-Dichloropropene	ND	0.50	ug/L							03/12/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
2,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
2-Butanone	ND	5.0	ug/L							03/12/15	
2-Chlorotoluene	ND	0.50	ug/L							03/12/15	
2-Hexanone	ND	10	ug/L							03/12/15	
4-Chlorotoluene	ND	0.50	ug/L							03/12/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							03/12/15	
Acetone	ND	10	ug/L							03/12/15	
Benzene	ND	0.50	ug/L							03/12/15	
Bromobenzene	ND	0.50	ug/L							03/12/15	
Bromochloromethane	ND	0.50	ug/L							03/12/15	
Bromodichloromethane	ND	0.50	ug/L							03/12/15	
Bromoform	ND	0.50	ug/L							03/12/15	
Bromomethane	ND	0.50	ug/L							03/12/15	
Carbon Tetrachloride	ND	0.50	ug/L							03/12/15	
Chlorobenzene	ND	0.50	ug/L							03/12/15	
Chloroethane	ND	0.50	ug/L							03/12/15	
Chloroform	ND	0.50	ug/L							03/12/15	
Chloromethane	ND	0.50	ug/L							03/12/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Dibromochloromethane	ND	0.50	ug/L							03/12/15	
Dibromomethane	ND	0.50	ug/L							03/12/15	
Dichlorodifluoromethane	ND	0.50	ug/L							03/12/15	
Dichloromethane	ND	0.50	ug/L							03/12/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							03/12/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							03/12/15	
Ethylbenzene	ND	0.50	ug/L							03/12/15	
Hexachlorobutadiene	ND	0.50	ug/L							03/12/15	
Isopropylbenzene	ND	0.50	ug/L							03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

m,p-Xylenes	ND	0.50	ug/L							03/12/15	
Methyl-t-butyl ether	ND	0.50	ug/L							03/12/15	
Naphthalene	ND	0.50	ug/L							03/12/15	
n-Butylbenzene	ND	0.50	ug/L							03/12/15	
n-Propylbenzene	ND	0.50	ug/L							03/12/15	
o-Xylene	ND	0.50	ug/L							03/12/15	
p-Isopropyltoluene	ND	0.50	ug/L							03/12/15	
sec-Butylbenzene	ND	0.50	ug/L							03/12/15	
Styrene	ND	0.50	ug/L							03/12/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							03/12/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							03/12/15	
tert-Butylbenzene	ND	0.50	ug/L							03/12/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							03/12/15	
Toluene	ND	0.50	ug/L							03/12/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Trichloroethene (TCE)	ND	0.50	ug/L							03/12/15	
Trichlorofluoromethane	ND	5.0	ug/L							03/12/15	
Vinyl Chloride	ND	0.50	ug/L							03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.3			5.0		85	70-130			03/12/15	
Surrogate: Bromofluorobenzene	46			50		91	70-130			03/12/15	

Blank Spike (A502806-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130			03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5	10	ug/L	10		95	70-130			03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
1,1-Dichloropropene	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		109	70-130			03/12/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		107	70-130			03/12/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			03/12/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
2,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Butanone	11	5.0	ug/L	10		107	70-130			03/12/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Hexanone	11	10	ug/L	10		106	70-130			03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		104	70-130			03/12/15	
Acetone	9.4	10	ug/L	10		94	70-130			03/12/15	
Benzene	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			03/12/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130			03/12/15	
Bromomethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			03/12/15	
Chlorobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Chloroethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Chloroform	10	0.50	ug/L	10		102	70-130			03/12/15	
Chloromethane	12	0.50	ug/L	10		122	70-130			03/12/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			03/12/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Dibromochloromethane	9.9	0.50	ug/L	10		99	70-130			03/12/15	
Dibromomethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		155	70-130			03/12/15	BS High
Dichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130			03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130			03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			03/12/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130			03/12/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		100	70-130			03/12/15	
Naphthalene	9.9	0.50	ug/L	10		99	70-130			03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		110	70-130			03/12/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
o-Xylene	10	0.50	ug/L	10		104	70-130			03/12/15	
p-Isopropyltoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Styrene	12	0.50	ug/L	10		117	70-130			03/12/15	
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130			03/12/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		100	70-130			03/12/15	
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Toluene	10	0.50	ug/L	10		102	70-130			03/12/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130			03/12/15	
Vinyl Chloride	13	0.50	ug/L	10		126	70-130			03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		103	70-130			03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

Surrogate: Bromofluorobenzene 50 50 100 70-130 03/12/15

Blank Spike Dup (A502806-BSD1)

1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
1,1,1-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	3	30	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130	3	30	03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		101	70-130	3	30	03/12/15	
1,1-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	2	30	03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		106	70-130	2	30	03/12/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130	7	30	03/12/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,2-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	7	30	03/12/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	03/12/15	
1,4-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2-Butanone	10	5.0	ug/L	10		101	70-130	5	30	03/12/15	
2-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
2-Hexanone	10	10	ug/L	10		100	70-130	6	30	03/12/15	
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	5	30	03/12/15	
Acetone	9.0	10	ug/L	10		90	70-130	4	30	03/12/15	
Benzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromobenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130	0	30	03/12/15	
Bromomethane	9.3	0.50	ug/L	10		93	70-130	4	30	03/12/15	
Carbon Tetrachloride	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
Chloroethane	9.2	0.50	ug/L	10		92	70-130	5	30	03/12/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Chloromethane	12	0.50	ug/L	10		118	70-130	3	30	03/12/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
cis-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Dibromochloromethane	9.7	0.50	ug/L	10		97	70-130	2	30	03/12/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		146	70-130	6	30	03/12/15	BS High
Dichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502806-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	3	30	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130	3	30	03/12/15	
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		100	70-130	4	30	03/12/15	
Isopropylbenzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
m,p-Xylenes	20	0.50	ug/L	20		99	70-130	5	30	03/12/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		97	70-130	2	30	03/12/15	
Naphthalene	10	0.50	ug/L	10		100	70-130	1	30	03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		106	70-130	3	30	03/12/15	
n-Propylbenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
o-Xylene	9.8	0.50	ug/L	10		98	70-130	6	30	03/12/15	
p-Isopropyltoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
sec-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Styrene	11	0.50	ug/L	10		109	70-130	7	30	03/12/15	
tert-Amyl Methyl Ether (TAME)	9.7	3.0	ug/L	10		97	70-130	2	30	03/12/15	
tert-Butyl alcohol (TBA)	9.1	2.0	ug/L	10		91	70-130	9	30	03/12/15	
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	5	30	03/12/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
trans-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
trans-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Trichloroethene (TCE)	9.7	0.50	ug/L	10		97	70-130	5	30	03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		106	70-130	4	30	03/12/15	
Vinyl Chloride	12	0.50	ug/L	10		120	70-130	5	30	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			03/12/15	
Surrogate: Bromofluorobenzene	50			50		100	70-130			03/12/15	

EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Alachlor	ND	1.0	ug/L							03/19/15	
Atrazine	ND	0.50	ug/L							03/19/15	
Benzo(a)pyrene	ND	0.10	ug/L							03/19/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							03/19/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							03/19/15	
Bromacil	ND	10	ug/L							03/19/15	
Butachlor	ND	0.38	ug/L							03/19/15	
Diazinon	ND	0.25	ug/L							03/19/15	
Dimethoate	ND	10	ug/L							03/19/15	
Metolachlor	ND	0.50	ug/L							03/19/15	
Metribuzin	ND	0.50	ug/L							03/19/15	
Molinate	ND	2.0	ug/L							03/19/15	
Prometryn	ND	2.0	ug/L							03/19/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Propachlor	ND	0.50	ug/L							03/19/15	
Simazine	ND	1.0	ug/L							03/19/15	
Thiobencarb	ND	1.0	ug/L							03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		96	70-130			03/19/15	

Blank Spike (A503033-BS1)

Alachlor	0.53	1.0	ug/L	0.50		107	70-130			03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		100	70-130			03/19/15	
Benzo(a)pyrene	0.036	0.10	ug/L	0.050		72	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		112	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.84	3.0	ug/L	0.75		113	70-130			03/19/15	
Bromacil	0.54	10	ug/L	0.50		107	70-130			03/19/15	
Butachlor	0.53	0.38	ug/L	0.50		107	70-130			03/19/15	
Diazinon	0.082	0.25	ug/L	0.10		82	70-130			03/19/15	
Dimethoate	0.50	10	ug/L	0.50		100	70-130			03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		100	70-130			03/19/15	
Metribuzin	0.50	0.50	ug/L	0.50		100	70-130			03/19/15	
Molinate	0.49	2.0	ug/L	0.50		98	70-130			03/19/15	
Prometryn	0.85	2.0	ug/L	1.0		85	70-130			03/19/15	
Propachlor	0.26	0.50	ug/L	0.25		105	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18		98	70-130			03/19/15	
Thiobencarb	0.25	1.0	ug/L	0.25		100	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.6			5.0		92	70-130			03/19/15	

Blank Spike Dup (A503033-BSD1)

Alachlor	0.55	1.0	ug/L	0.50		109	70-130	2	30	03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		102	70-130	2	30	03/19/15	
Benzo(a)pyrene	0.035	0.10	ug/L	0.050		70	70-130	3	30	03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		111	70-130	1	30	03/19/15	
Bis(2-ethylhexyl) phthalate	0.83	3.0	ug/L	0.75		111	70-130	1	30	03/19/15	
Bromacil	0.62	10	ug/L	0.50		123	70-130	14	30	03/19/15	
Butachlor	0.55	0.38	ug/L	0.50		109	70-130	2	30	03/19/15	
Diazinon	0.085	0.25	ug/L	0.10		85	70-130	4	30	03/19/15	
Dimethoate	0.63	10	ug/L	0.50		126	70-130	24	30	03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		104	70-130	4	30	03/19/15	
Metribuzin	0.54	0.50	ug/L	0.50		109	70-130	8	30	03/19/15	
Molinate	0.50	2.0	ug/L	0.50		100	70-130	1	30	03/19/15	
Prometryn	0.87	2.0	ug/L	1.0		87	70-130	2	30	03/19/15	
Propachlor	0.29	0.50	ug/L	0.25		117	70-130	11	30	03/19/15	
Simazine	0.18	1.0	ug/L	0.18		103	70-130	5	30	03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25		104	70-130	4	30	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		100	70-130			03/19/15	

Matrix Spike (A503033-MS1), Source: A5C0856-01

Alachlor	0.57	1.0	ug/L	0.51	ND	113	70-130			03/19/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A503033-MS1), Source: A5C0856-01

Atrazine	0.27	0.50	ug/L	0.25	ND	105	70-130			03/19/15	
Benzo(a)pyrene	0.040	0.10	ug/L	0.051	ND	78	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0	ND	110	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.92	3.0	ug/L	0.76	ND	121	70-130			03/19/15	
Bromacil	0.67	10	ug/L	0.51	ND	132	70-130			03/19/15	MS1.0 High
Butachlor	0.57	0.38	ug/L	0.51	ND	113	70-130			03/19/15	
Diazinon	0.10	0.25	ug/L	0.10	ND	102	70-130			03/19/15	
Dimethoate	0.59	10	ug/L	0.51	ND	116	70-130			03/19/15	
Metolachlor	1.1	0.50	ug/L	1.0	ND	106	70-130			03/19/15	
Metribuzin	0.56	0.50	ug/L	0.51	ND	111	70-130			03/19/15	
Molinate	0.52	2.0	ug/L	0.51	ND	102	70-130			03/19/15	
Prometryn	0.98	2.0	ug/L	1.0	ND	96	70-130			03/19/15	
Propachlor	0.27	0.50	ug/L	0.25	ND	107	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18	ND	98	70-130			03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25	ND	101	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.3			5.1		104	70-130			03/19/15	

EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A503013-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/18/15	
Aldicarb	ND	3.0	ug/L							03/18/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/18/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/18/15	
Carbaryl	ND	5.0	ug/L							03/18/15	
Carbofuran	ND	5.0	ug/L							03/18/15	
Methiocarb	ND	2.0	ug/L							03/18/15	
Methomyl	ND	2.0	ug/L							03/18/15	
Oxamyl	ND	20	ug/L							03/18/15	
Propoxur	ND	2.0	ug/L							03/18/15	

Blank Spike (A503013-BS1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb	4.1	3.0	ug/L	4.0		103	80-120			03/18/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		104	80-120			03/18/15	
Carbaryl	4.1	5.0	ug/L	4.0		103	80-120			03/18/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120			03/18/15	
Methiocarb	4.3	2.0	ug/L	4.0		106	80-120			03/18/15	
Methomyl	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Oxamyl	4.2	20	ug/L	4.0		104	80-120			03/18/15	
Propoxur	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A503013-BSD1)

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0		111	80-120	9	20	03/19/15	
Aldicarb	4.2	3.0	ug/L	4.0		104	80-120	1	20	03/19/15	
Aldicarb Sulfone	4.3	2.0	ug/L	4.0		109	80-120	7	20	03/19/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0		109	80-120	4	20	03/19/15	
Carbaryl	4.3	5.0	ug/L	4.0		108	80-120	5	20	03/19/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120	0	20	03/19/15	
Methiocarb	4.5	2.0	ug/L	4.0		112	80-120	5	20	03/19/15	
Methomyl	5.0	2.0	ug/L	4.0		124	80-120	21	20	03/19/15	BS High
Oxamyl	4.4	20	ug/L	4.0		109	80-120	5	20	03/19/15	
Propoxur	4.4	2.0	ug/L	4.0		110	80-120	8	20	03/19/15	

Matrix Spike (A503013-MS1), Source: A5C0576-01

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0	ND	113	65-135			03/19/15	
Aldicarb	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbaryl	3.9	5.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbofuran	4.0	5.0	ug/L	4.0	ND	99	65-135			03/19/15	
Methiocarb	3.9	2.0	ug/L	4.0	ND	98	65-135			03/19/15	
Methomyl	4.3	2.0	ug/L	4.0	ND	108	65-135			03/19/15	
Oxamyl	3.9	20	ug/L	4.0	ND	98	65-135			03/19/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	

EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502659-BLK1)

Glyphosate	ND	25	ug/L							03/10/15	
Surrogate: AMPA	110			100		107	70-130			03/10/15	

Blank Spike (A502659-BS1)

Glyphosate	99	25	ug/L	100		99	70-130			03/10/15	
Surrogate: AMPA	100			100		104	70-130			03/10/15	

Blank Spike Dup (A502659-BSD1)

Glyphosate	110	25	ug/L	100		106	70-130	7	30	03/10/15	
Surrogate: AMPA	110			100		111	70-130			03/10/15	

Matrix Spike (A502659-MS1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	97	70-130			03/10/15	
Surrogate: AMPA	120			100		114	70-130			03/10/15	

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	98	70-130	1	30	03/10/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Surrogate: AMPA 100 100 103 70-130 03/10/15

EPA 548.1 - Quality Control

Batch: A502773

Prepared: 03/11/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502773-BLK1)

Endothall ND 45 ug/L 03/17/15

Blank Spike (A502773-BS1)

Endothall 13 45 ug/L 20 64 54-105 03/17/15

Blank Spike Dup (A502773-BSD1)

Endothall 13 45 ug/L 20 63 54-105 1 46 03/18/15

Matrix Spike (A502773-MS1), Source: A5C0722-01

Endothall ND 45 ug/L 20 ND 0 54-105 03/18/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A502842

Prepared: 03/13/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502842-BLK1)

Diquat ND 4.0 ug/L 03/17/15

Blank Spike (A502842-BS1)

Diquat 3.1 4.0 ug/L 4.0 78 70-130 03/17/15

Blank Spike Dup (A502842-BSD1)

Diquat 3.4 4.0 ug/L 4.0 84 70-130 7 30 03/17/15

Matrix Spike (A502842-MS1), Source: A5C0711-01

Diquat 2.8 4.0 ug/L 4.0 ND 70 70-130 03/17/15

Matrix Spike (A502842-MS2), Source: A5C0711-02

Diquat 2.9 4.0 ug/L 4.0 ND 71 70-130 03/17/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5C0787



03102015

Monte6227

Turnaround: Standard

Due Date: 3/24/2015



Monterey Bay Analytical



2.4.2.4

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed: _____



*Required Fields

Temp: _____

Company/Client Name*: **Monterey Bay Analytical Services**

Report Attention*: **Mason Weidner-Holland**

Invoice To*: **David Holland**

Phone*: **831-375-6227**

Additional cc's: **David Holland**

PO#: _____

Fax: **831-641-0734**

E-mail*: **mweidner@mbasinc.com, dholland@mbasinc.com**

Address*: **4 Justin Court, Suite D**

City*: **Monterey**

State*: **CA**

Zip*: **93940**

Project: **Cal Am**

Project #: _____

How would you like to receive your completed results?*

E-Mail Fax Mail

Reporting Options:

Trace (J-Flag) Swamp EDD Type: _____

Regulatory Carbon Copies

SWRCB (Drinking Water)

Regulatory Compliance

EDT to California SWRCB (Drinking Water)

Sampler Name (Printed/Signature)*: **Kimberly Makar**

Merced Co Fresno Co

Madera Co Tulare Co

Other: _____

Geotracker #: _____

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
1	MW-4M (monitoring)	3/6/15	1515	GW	AB27753	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name) *[Signature]* Company **MBAS** Date **3/9/15** Time **1600**

Received by: (Signature and Printed Name) _____ Company _____

Relinquished by: (Signature and Printed Name) _____ Company _____

Received by: (Signature and Printed Name) _____ Company _____

Received for Lab by: (Signature and Printed Name) *[Signature]* Date _____ Time _____

Payment Received at Delivery: _____ Check _____ Cash _____

Date: _____ Amount: _____ PI#: _____ Init: _____

Shipping Method: CONTRAC UPS GSO WALK-IN FED EX Courier: _____

Cooling Method: Wet Blue None

Custody Seal: Y/N Y N

Chilling Process Begun: Y/N Y N

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	Yes No NA	26, 24	Were correct containers and preservatives received for the tests requested?	Yes No NA
	If samples were taken today, is there evidence that chilling has begun?	Yes No NA		Were there bubbles in the VOA vials? (Volatiles Only)	Yes No NA
	Did all bottles arrive unbroken and intact?	Yes No		Was a sufficient amount of sample received?	Yes No
	Did all bottle labels agree with COC?	Yes No		Do samples have a hold time <72 hours?	Yes No
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No NA		Was PM notified of discrepancies? PM: By/Time:	Yes No NA

Bottles Received	Description	Checks		Passed?	Notes
		Yes	No		
	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)				
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$				
	None (P) ^{White Cap}				
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y	N	
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y	N	
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y	N	
	HNO_3 (P) ^{Red Cap}				
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y	N	
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y	N	
	NaOH + ZnAc (P)	pH > 9	Y	N	
	Dissolved Oxygen 300ml (g)				
	None (AG) 609809/5063 825, 632/8321, 8151, 8270				
	HCl (AG) ^{LT. Blue Label} O&G, Diesel				
	$\text{Na}_2\text{O}_2 + \text{HCl}$ (AG) ^{Pink Label} 525				
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549				
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547, 515, 548, THM, 524				
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505				
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	Y	N	
	NH_4Cl (AG) ^{Purple Label} 552				
	EDA (AG) ^{Brown Label} DBPs				
	HCL (CG) 524, 2, BTEX, Gas, MTBE, 8260/624				
	Buffer pH 4 (CG)				
	None (CG)				
	H_3PO_4 (CG) ^{Salmon Label}				
	Other:				
	Asbestos 1Liter Plastic w/ Foil				
	Low Level Hg / Metals Double Baggie				
	Bottled Water				
	Clear Glass Jar: 250 / 500 / 1 Liter				
	Soil Tube Brass / Steel / Plastic				
	Tedlar Bag / Plastic Bag				

Split	Container		Preservative	Date/Time/Initials	Container		Preservative	Date/Time/Initials
	S P					S P		
S P					S P			

Comments

Handwritten signature and date: J 3/10/15

Labeled by: mw @ 11:04

Labels checked by: SB @ 11:09

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/27/15 14:08
Attention: David Holland	Received Date: 03/10/15 09:20
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5C10011	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

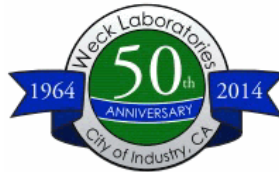
Dear David Holland :

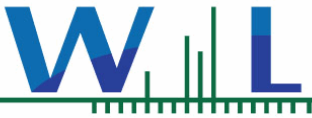
Enclosed are the results of analyses for samples received 03/10/15 09:20 with the Chain of Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

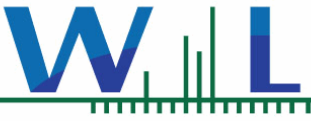
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-4M(Monitoring)	Kimberly Makar	AB27753	5C10011-01	Water	03/06/15 11:19

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

5C10011-01 MW-4M(Monitoring)**Sampled:** 03/06/15 11:19**Sampled By:** Kimberly Makar**Matrix:** Water**Sample Note:** AB27753**Anions by IC, EPA Method 9056**

Method: EPA 9056M

Batch: W5C1170

Prepared: 03/19/15 12:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	250	ug/l	25	03/19/15 14:40	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508

Batch: W5C0606

Prepared: 03/11/15 08:49

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/20/15 18:39	
4,4'-DDE	ND	0.010	ug/l	1	03/20/15 18:39	
4,4'-DDT	ND	0.010	ug/l	1	03/20/15 18:39	
Aldrin	ND	0.010	ug/l	1	03/20/15 18:39	
alpha-BHC	ND	0.010	ug/l	1	03/20/15 18:39	
Aroclor 1016	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1221	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1232	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1242	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1248	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1254	ND	0.10	ug/l	1	03/20/15 18:39	
Aroclor 1260	ND	0.10	ug/l	1	03/20/15 18:39	
beta-BHC	ND	0.010	ug/l	1	03/20/15 18:39	
Chlordane (tech)	ND	0.10	ug/l	1	03/20/15 18:39	
Chlorothalonil	ND	0.050	ug/l	1	03/20/15 18:39	
delta-BHC	ND	0.010	ug/l	1	03/20/15 18:39	
Dieldrin	ND	0.010	ug/l	1	03/20/15 18:39	
Endosulfan I	ND	0.010	ug/l	1	03/20/15 18:39	
Endosulfan II	ND	0.010	ug/l	1	03/20/15 18:39	
Endosulfan sulfate	ND	0.010	ug/l	1	03/20/15 18:39	
Endrin	ND	0.010	ug/l	1	03/20/15 18:39	
Endrin aldehyde	ND	0.010	ug/l	1	03/20/15 18:39	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/20/15 18:39	
Heptachlor	ND	0.010	ug/l	1	03/20/15 18:39	
Heptachlor epoxide	ND	0.010	ug/l	1	03/20/15 18:39	
Hexachlorobenzene	ND	0.050	ug/l	1	03/20/15 18:39	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/20/15 18:39	
Methoxychlor	ND	0.010	ug/l	1	03/20/15 18:39	
PCBs, Total	ND	0.50	ug/l	1	03/20/15 18:39	
Propachlor	ND	0.050	ug/l	1	03/20/15 18:39	
Toxaphene	ND	1.0	ug/l	1	03/20/15 18:39	
Trifluralin	ND	0.010	ug/l	1	03/20/15 18:39	
<i>Surr: Decachlorobiphenyl</i>	24 %	Conc:0.0244	70-130	%		S-GC
<i>Surr: Tetrachloro-meta-xylene</i>	77 %	Conc:0.0767	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

5C10011-01 MW-4M(Monitoring)

Sampled: 03/06/15 11:19

Sampled By: Kimberly Makar

Matrix: Water

Sample Note: AB27753

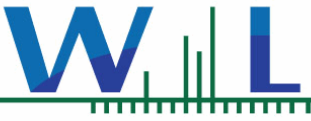
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

Anions by IC, EPA Method 9056 - Quality Control

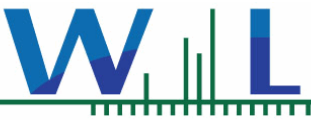
Batch W5C1170 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C1170-BLK1)				Analyzed: 03/19/15 13:27						
Iodide	ND	10	ug/l							
LCS (W5C1170-BS1)				Analyzed: 03/19/15 14:19						
Iodide	40.6	10	ug/l	40.0		102	85-115			
Matrix Spike (W5C1170-MS1)				Source: 5C12026-01		Analyzed: 03/19/15 16:09				
Iodide	35.9	10	ug/l	40.0	ND	90	80-120			
Matrix Spike Dup (W5C1170-MSD1)				Source: 5C12026-01		Analyzed: 03/19/15 16:28				
Iodide	36.8	10	ug/l	40.0	ND	92	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)				Analyzed: 03/20/15 17:07						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



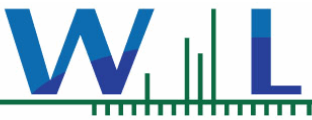
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)										
Analyzed: 03/20/15 17:07										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0856		ug/l	0.100		86	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0768		ug/l	0.100		77	70-130			
LCS (W5C0606-BS1)										
Analyzed: 03/20/15 17:38										
4,4'-DDD	0.0893	0.010	ug/l	0.100		89	55-142			
4,4'-DDE	0.0851	0.010	ug/l	0.100		85	49-129			
4,4'-DDT	0.0908	0.010	ug/l	0.100		91	54-160			
Aldrin	0.0741	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.0784	0.010	ug/l	0.100		78	59-131			
beta-BHC	0.0850	0.010	ug/l	0.100		85	63-136			
delta-BHC	0.0948	0.010	ug/l	0.100		95	59-137			
Dieldrin	0.0807	0.010	ug/l	0.100		81	59-135			
Endosulfan I	0.0616	0.010	ug/l	0.100		62	28-138			
Endosulfan II	0.0670	0.010	ug/l	0.100		67	53-133			
Endosulfan sulfate	0.0885	0.010	ug/l	0.100		88	58-155			
Endrin	0.0829	0.010	ug/l	0.100		83	57-148			
Endrin aldehyde	0.0674	0.010	ug/l	0.100		67	45-139			
gamma-BHC (Lindane)	0.0816	0.010	ug/l	0.100		82	59-129			
Heptachlor	0.0836	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0814	0.010	ug/l	0.100		81	59-134			
Methoxychlor	0.0735	0.010	ug/l	0.100		74	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0789		ug/l	0.100		79	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0696		ug/l	0.100		70	70-130			
LCS Dup (W5C0606-BSD1)										
Analyzed: 03/20/15 18:08										
4,4'-DDD	0.105	0.010	ug/l	0.100		105	55-142	16	25	
4,4'-DDE	0.0946	0.010	ug/l	0.100		95	49-129	11	25	
4,4'-DDT	0.104	0.010	ug/l	0.100		104	54-160	14	25	
Aldrin	0.0801	0.010	ug/l	0.100		80	29-115	8	25	
alpha-BHC	0.0847	0.010	ug/l	0.100		85	59-131	8	25	
beta-BHC	0.0960	0.010	ug/l	0.100		96	63-136	12	25	
delta-BHC	0.108	0.010	ug/l	0.100		108	59-137	13	25	
Dieldrin	0.0914	0.010	ug/l	0.100		91	59-135	12	25	
Endosulfan I	0.0678	0.010	ug/l	0.100		68	28-138	10	25	
Endosulfan II	0.0743	0.010	ug/l	0.100		74	53-133	10	25	
Endosulfan sulfate	0.0994	0.010	ug/l	0.100		99	58-155	12	25	

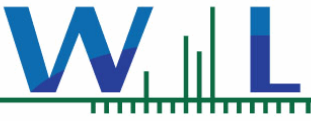


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5C0606 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5C0606-BSD1)				Analyzed: 03/20/15 18:08						
Endrin	0.0919	0.010	ug/l	0.100		92	57-148	10	25	
Endrin aldehyde	0.0676	0.010	ug/l	0.100		68	45-139	0.2	25	
gamma-BHC (Lindane)	0.0899	0.010	ug/l	0.100		90	59-129	10	25	
Heptachlor	0.0914	0.010	ug/l	0.100		91	42-136	9	25	
Heptachlor epoxide	0.0895	0.010	ug/l	0.100		90	59-134	10	25	
Methoxychlor	0.0735	0.010	ug/l	0.100		73	56-167	0.1	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0831</i>		<i>ug/l</i>	<i>0.100</i>		<i>83</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0696</i>		<i>ug/l</i>	<i>0.100</i>		<i>70</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:08

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested										
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter					
Field Parameters:										
						Temp: 18.4°C				
						pH: 6.78				
						Sp Cond: 26779 µS/cm				
						Turb: 0.71				

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com, susan.jacobson@amwater.com, nreynolds@geoscience-water.com, bvillalobos@geoscience-water.com		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2	Residual	Routine	Other	Repeat		Special	Type	Size
27753		mbo-4M (monitoring)	03/06/15	1119	4.6							24		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Kimberly Makar (GEO SCIENCE)	<i>Kimberly Makar</i>	03/06/15	11:19	Is sample for regulatory purposes? Yes / No 2mL 1:1 HNO ₃ to each 125mL to pH < 2 by 3/6/15
Relinquished by:	Kimberly Makar	<i>Kimberly Makar</i>	03/06/15	1435	
Received by:	Nathan Reynolds (GEO SCIENCE)	<i>Nathan Reynolds</i>	3-6-15	14:35	
Relinquished by:					
Received by:	MBAS	<i>[Signature]</i>	3/6/15	1515	

[] Payment received	Check #	Amount:	Receipt #	Date:
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SAAC
DALLAS
TELETYPE

10/27

10/27

10/27

5

2

RECEIVED

10/27/68
10/27/68
10/27/68

10/27/68

10/27/68

**Table 3-3. Water Quality Analyses for Quarterly Sampling
Monitoring Wells and Test Slant Well**

Constituent	Units	Method Reporting Limit	Method
Physical Properties			
Color (Lab)	Color Units	3.0	SM 2120B/EPA 110.2
Oxidation-Reduction Potential (Field)	mV	-	Field Meter - Myron L 6PII
pH (Lab)	Units	0.10	SM 4500 H+B
pH (Field)	Units	-	Field Meter - YSI Pro Plus
Turbidity (Laboratory)	NTU	0.20	EPA 180.1/SM 2130B
Turbidity (Field)	NTU	-	Field Meter - Hach 2100P
Temperature (Field)	°C	-	Field Meter - YSI Pro Plus
Dissolved Oxygen (Field)	mg/L	-	Field Meter - YSI Pro Plus
Silt Density Index (Field)	-	-	ASTM D4189-07
Threshold Odor Number (Lab)	T.O.N.	1.0	EPA 140.1/SM 2150
Total Dissolved Solids (Lab)	mg/L	10	SM 2540 C
Specific Conductance (Lab)	µmhos/cm	1	SM 2510 B
Specific Conductance (Field)	µS/cm	-	Field Meter - YSI Pro Plus
General Minerals			
Total Cations	meq/L	-	Calculation
Total Anions	meq/L	-	Calculation
Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Bicarbonate Alkalinity as HCO ₃	mg/L	3	SM 2320 B
Carbonate Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Hydroxide Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Total Hardness as CaCO ₃	mg/L	3	Calculation
Aluminum	µg/L	1	EPA 200.7
Arsenic	µg/L	1	EPA 200.7 / EPA 200.8
Barium, Dissolved	µg/L	0.01	EPA 200.7
Boron, Dissolved	µg/L	0.5	EPA 200.8
Bromide, Dissolved	mg/L	0.1	EPA 326.0
Calcium, Dissolved	mg/L	1	EPA 200.7
Chloride, Dissolved	mg/L	1	EPA 300.0
Copper, Total	µg/L	50	EPA 200.7
Fluoride, Dissolved	mg/L	0.10	EPA 300.0 / SM 4500 FC
Iodide, Dissolved	mg/L	0.1	USGS I-2371 / EPA 9056A
Iron, Dissolved	µg/L	100	EPA 200.7 / EPA 200.8
Iron, Total	µg/L	100	EPA 200.7 / EPA 200.8
Lithium	µg/L	10	EPA 200.7 / EPA 6010B
Magnesium, Dissolved	mg/L	1	EPA 200.7

Constituent	Units	Method Reporting Limit	Method
Manganese, Dissolved	µg/L	20	EPA 200.7 / EPA 200.8
Manganese, Total	µg/L	20	EPA 200.7 / EPA 200.8
Mass Balance, Total & Dissolved	meq/L	-	Calculation
MBAS	mg/L	0.050	SM 5540 C / EPA 200.8
Nitrogen, Nitrate as NO ₃	mg/L	1	EPA 353.2 / EPA 300.0
Nitrogen, Nitrite, Dissolved	mg/L as N	1	SM 4500 NO ₂ B
Nitrogen, NO ₂ + NO ₃	mg/L as N	1	EPA 300.0
Nitrogen, Ammonia, Dissolved	mg/L as N	0.1	SM 4500 NH ₃ H / EPA 350.1
Nitrogen, Ammonia + Organic, Diss. (TKN)	mg/L as N	0.1	EPA 351.2
Phosphorus, Dissolved	mg/L as P	0.01	EPA 365.3
Phosphorus, ortho, Dissolved	mg/L as P	0.01	EPA 365.3
Potassium, Dissolved	mg/L	1	EPA 200.7
Silica, Dissolved	mg/L	1	SM 4500 SiE
Sodium, Dissolved	mg/L	1	EPA 200.7
Strontium, Dissolved	mg/L	0.1	EPA 200.7 / EPA 200.8
Sulfate as SO ₄ , dissolved	mg/L	0.5	EPA 300.0
Zinc, Total	µg/L	50	EPA 200.7
<i>Volatile Organic Compounds</i>			
VOCs plus Oxygenates (MTBE)	µg/L	varies	EPA 524.2
<i>EPA Organic Methods</i>			
EDB and DBCP	µg/L	varies	EPA 504.1
Chlorinated Pesticides & PCB's as DCP	µg/L	varies	EPA 508
Chlorinated Acid Herbicides	µg/L	varies	EPA 515
Nitrogen & Phosphorus Pesticides DEHP, DEHA, Benzo(a)Pyrene	µg/L	varies	EPA 525
Carbamates	µg/L	varies	EPA 531.1
Glyphosate	µg/L	varies	EPA 547
Endothall	µg/L	varies	EPA 548.1
Diquat	µg/L	varies	EPA 549.1
Dioxin (2,3,7,8 TCDD)	µg/L	varies	EPA 1613

Total and dissolved iron and manganese will be measured by field filtering samples directly into an acidified container immediately upon collection. A second sample will be collected directly into an acidified container without filtering. This method will provide a reliable and accurate means to determine the amount of dissolved and particulate iron and manganese, which has implications for desalting plant design.

Sample Condition Upon Receipt

27753

COC info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

* filter 1L, vacuum filter 0.45 μ membrane filter pre-rinsed
 500mL + H₂SO₄ + Na₂S₂O₃ diss. TLN, NH₃
 250mL no preserve diss. PO₄³⁻
 250mL + H₂SO₄ diss. total P LJ 3/6/15



Monterey Bay Analytical Services

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ELAP Certification Number: 2385

California American Water
 P.O. Box 951, Monterey, CA 93942-0951
 ph: 831-646-3259 / 831-646-3269
 Susy Jacobson

Page 1 of 2

Thursday, March 26, 2015

Lab Number: AB27178

Collection Date/Time: 2/19/2015 16:45 Sample Collector: SHAW C

Submittal Date/Time: 2/20/2015 8:39 Sample ID Coliform Designation:

Sample Description: MW-4D (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	111		2		2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		125	1000	3/4/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05		2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	40		12	10	3/4/2015	SM
Barium, Dissolved	EPA200.8	µg/L	166		125		3/4/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	135		10		2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	0.65		0.05		2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	43.8		10.0		2/20/2015	TC
Calcium	EPA200.7	mg/L	2980		5		3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	3070		5		3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E			2/25/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10		2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	14142		100		2/20/2015	TC
Chlorinated Pesticides and PCB (EP	EPA508	µg/L	Not Detected	E			2/26/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	8		3	15	2/20/2015	LRH
Copper, Total	EPA200.8	µg/L	46	J	50	1300	3/4/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E			3/4/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E			2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E			3/3/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E			2/27/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		0.1		2/20/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E			2/25/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	11617		10		3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5		2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10		2/26/2015	WECK
Iron	EPA200.7	µg/L	77		10	300	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	80		10	300	2/27/2015	MW
Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	0.6		0.5		3/9/2015	TC
Lithium	EPA200.8	µg/L	222		12		3/4/2015	SM
Magnesium	EPA200.7	mg/L	1020		5		3/6/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	979		1		2/27/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	268		10	50	2/27/2015	MW
Manganese, Total	EPA200.7	µg/L	276		10	50	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	0.50	2/20/2015	HM
Nitrate as NO3	EPA300.0	mg/L	1		1	45	2/21/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	0.2		0.1		2/21/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.1		2/20/2015	TC
Odor Threshold at 60 C	SM2150B	TON	3		1	3	2/20/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.06		0.03		2/20/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.65				2/19/2015	CS
pH (Laboratory)	SM4500-H+B	pH (H)	7.0		0.1		2/20/2015	HM

mg/L : Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL : Maximum Contamination Level

H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments. T = Temperature Exceedance

Lab Number: AB27178

Collection Date/Time: 2/19/2015 16:45

Sample Collector: SHAW C

Submittal Date/Time: 2/20/2015 8:39

Sample ID

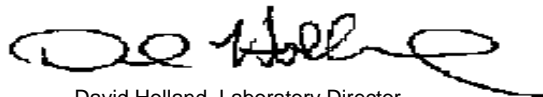
Coliform Designation:

Sample Description: MW-4D (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E			3/4/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.11		0.03		2/25/2015	LRH
Potassium	EPA200.7	mg/L	51.2		0.5		2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	49.1		0.1		2/27/2015	MW
QC Ratio TDS/SEC	Calculation		0.72				3/26/2015	DH
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E			2/28/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	36		0.5		2/27/2015	MW
Sodium	EPA200.7	mg/L	4286		5		3/6/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	4730		5		3/6/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	38000		1	900	2/24/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	5750		1		2/19/2015	CS
Strontium, Dissolved	EPA200.8	µg/L	17499		62		3/4/2015	SM
Sulfate	EPA300.0	mg/L	1700		100	250	2/20/2015	TC
Temperature (Field)	SM2550	° C	19.9				2/19/2015	CS
Total Diss. Solids	SM2540C	mg/L	27500		10	500	2/23/2015	HM
Turbidity	EPA180.1	NTU	0.65		0.05	5.0	2/20/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.76		0.05		2/19/2015	CS
Volatile Org. Compounds (524)	EPA524	µg/L	Attached	E			2/25/2015	BSK
Zinc, Total	EPA200.8	µg/L	Not Detected		250	5000	3/4/2015	SM

Sample Comments: Odor:Salty

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27178 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	4730	0.04350	205.76
Potassium	49.1	0.02558	1.26
Calcium	3070	0.04990	153.19
Magnesium	979	0.08229	80.56
NH3-N	0	0.07143	0.00
		SUM	440.77

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	111	0.02000	2.22
Sulfate	1700	0.02082	35.39
Chloride	14142	0.02821	398.95
Nitrate-Nitrogen	0.2	0.07138	0.01
Phosphate-P	0.1	0.01031	0.00
Bromide	43.8	0.01252	0.55
		SUM	437.12

ANION-CATION BALANCE **0** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	38000	
Cation Sum X 100	44077	116%
Anion Sum X 100	43712	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27178 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	4286	0.04350	186.44
Potassium	51.2	0.02558	1.31
Calcium	2980	0.04990	148.70
Magnesium	1020	0.08229	83.94
NH3-N	0	0.07143	0.00
		SUM	420.39

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	111	0.02000	2.22
Sulfate	1700	0.02082	35.39
Chloride	14142	0.02821	398.95
Nitrate-Nitrogen	0.2	0.07138	0.01
Phosphate-P	0.1	0.01031	0.00
Bromide	43.8	0.01252	0.55
		SUM	437.12

ANION-CATION BALANCE **-2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	38000	
Cation Sum X 100	42039	111%
Anion Sum X 100	43712	115%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



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<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51
CCV 2	40	40	100	95-105	15:27

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27190	44	43	2.3	5	11:51

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 2/20/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.013	---	<0.05	953
ICVL	0.050	0.047	94	80-120	953
ICV	0.250	0.257	102.8	80-120	953

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27178	0.027	0.250	0.259	0.257	92.8	92	0.8	80/120	10	953

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent
 Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27199 D

25X Dilution

Date Analyzed
Wednesday, March 04, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	114.1	0.06	118.3	122.6	3.55	249.7	625	96.7	97.8	1.1	102.8	99.0	3.76	0.05
Aluminum	-0.2	103.5	1.51	108.5	106.8	1.57	157.4	625	89.6	89.9	0.3	99.7	103.1	3.27	-0.12
Copper	0.0	103.0	0.18	106.9	107.0	0.16	50.2	625	121.5	123.7	1.8	102.0	104.8	2.64	0.01
Zinc	-0.2	161.5	2.53	108.9	113.4	4.00	289.1	625	71.3	72.4	1.5	98.4	99.7	1.32	-0.05
Arsenic	0.0	101.8	0.04	107.8	106.7	1.04	39.3	625	110.6	108.0	2.4	105.2	109.3	3.80	0.00
Strontium	0.0	100.8	0.03	103.1	105.6	2.40	16370.3	625	75.5	90.5	18.0	101.4	100.8	0.59	0.04
Barium	0.0	97.6	0.02	102.6	104.6	1.97	161.8	625	101.2	104.5	3.2	100.9	103.2	2.19	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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Orthophosphate QC Summary (Hach 8048)

Date: 2/20/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:59
LCSL	0.03	0.02	67	50-150	14:59
ICV	1.00	1.02	102	90-110	14:59
QCS	1.00	1.05	105	80-120	14:59
CCV	1.00	1.04	104	80-120	14:59

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27178	0.06	1.00	1.07	1.08	101	102	1	70-130	10	14:59	14:59

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/20/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.81	99.3	95-105	1550

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27178	6.99	7	0.1	10	1550

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/24/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1410	1410	100.0%	95-105	1320
ICV	24800	24915	100.5%	95-105	1320

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27193	510	506	0.8%	10	1320

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 2/23/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	3	---	<10	1600
ICVL	100	120	120	80-120	1600
ICV	500	511	102.2	90-110	1600

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27193	294	277	6.0	10	1600

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/9/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.409	---	<0.5
LCS	5.0	5.1	102	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27178	0.6	5.0	5.0	5.1	88	90	2.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150306

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	0.99	99.4%	1.01	101.2%	1.8%	1	1.00	100.3%	1	1.0	97.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.1%	1.01	101.4%	0.3%	1	1.01	101.1%	1	1.0	98.5%
Ca 317.933	50-300ppm	-4.97	-5.13	46.7	93.3%	47.0	93.9%	0.6%	50	49.4	98.8%	50	45.5	91.0%
Ca 396.847	0.5-50ppm	-0.13	-0.37	47.7	95.5%	48.4	96.8%	1.4%	50	49.3	98.7%	50	47.0	94.1%
Cu 324.754	10ppb-100ppm	-0.89	-4.68	966	96.6%	977	97.7%	1.1%	1000	990	99.0%	1000	963.7	96.4%
Cu 327.394	10ppb-100ppm	1.63	-4.30	972	97.2%	982	98.2%	1.1%	1000	1001	100.1%	1000	967.4	96.7%
Fe 238.204	10ppb-100ppm	8.47	6.24	941	94.1%	935	93.5%	0.6%	1000	986	98.6%	1000	944.6	94.5%
Fe 259.940	10ppb-100ppm	6.42	4.25	949	94.9%	955	95.5%	0.7%	1000	987	98.7%	1000	952.2	95.2%
K 766.491	0.5-750ppm	0.05	0.02	9.8	97.9%	9.9	99.4%	1.6%	10	10.1	101.3%	10	9.8	98.1%
Mg 202.583	50-1000ppm	-1.18	-1.41	48.8	97.6%	49.6	99.1%	1.6%	50	50.9	101.8%	50	48.4	96.9%
Mg 279.071	0.5-50ppm	0.10	-0.11	47.5	95.1%	48.0	96.0%	1.0%	50	49.8	99.6%	50	47.3	94.5%
Mn 257.611	10ppb-11ppm	-1.07	-3.61	949	94.9%	954	95.4%	0.5%	1000	993	99.3%	1000	952.8	95.3%
Mn 260.561	10ppb-11ppm	0.50	-3.29	955	95.5%	958	95.8%	0.4%	1000	990	99.0%	1000	956.0	95.6%
Na 568.821	50-1000ppm	3.72	3.75	51.4	102.8%	51.9	103.9%	1.0%	50	51.5	103.1%	50	51.2	102.3%
Na 589.592	0.5-50ppm	0.02	-0.11	49.0	98.1%	49.1	98.3%	0.2%	50	50.0	100.1%	50	48.9	97.7%
Si 251.611	0.5-200ppm	0.02	-0.23	48.6	97.1%	49.0	97.9%	0.8%	50	49.8	99.7%	50	49.0	97.9%
Si 252.411	0.5-200ppm	0.02	-0.26	48.3	96.6%	48.7	97.5%	0.9%	50	49.3	98.7%	50	48.5	97.0%
Zn 213.857	10ppb-50ppm	0.15	-12.62	971	97.1%	971	97.1%	0.0%	1000	986	98.6%	1000	950.4	95.0%

Matrix Spikes

Sample ID AB27554D

Analyte/ WL	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	3.57	4.36	78.7%	4.47	89.7%	2.5%	1	1.06	106.2%	5.7%	0.01
B 249.772	3.63	4.43	80.5%	4.54	91.0%	2.3%	1	1.09	108.5%	7.0%	0.02
Ca 317.933	321.7	363.2	83.2%	364.7	86.2%	0.4%	50	53.6	107.3%	8.2%	-4.50
Ca 396.847	167.8	181.2	26.7%	183.2	30.8%	1.1%	50	53.4	106.7%	7.8%	0.61
Cu 324.754	-5	886	89.1%	926	93.1%	4.4%	1000	1047	104.7%	5.6%	-2.41
Cu 327.394	-5	889	89.4%	932	93.7%	4.7%	1000	1047	104.7%	4.5%	-3.33
Fe 238.204	5	750	74.5%	754	74.8%	0.5%	1000	1015	101.5%	2.9%	2.67
Fe 259.940	4	733	72.9%	744	74.0%	1.4%	1000	1023	102.3%	3.6%	2.94
K 766.491	329.2	336.2	69.7%	343.8	145.9%	2.2%	10	12.8	128.5%	23.6%	0.52
Mg 202.582	1104.7	1133.3	57.2%	1168.4	127.5%	3.1%	50	61.1	122.1%	18.1%	0.38
Mg 279.078	880.0	905.1	50.2%	914.2	68.5%	1.0%	50	58.6	117.1%	16.2%	1.61
Mn 257.611	-5	759	76.5%	771	77.6%	1.6%	1000	1029	102.9%	3.5%	-2.35
Mn 260.561	19	784	76.5%	794	77.5%	1.3%	1000	1033	103.3%	4.2%	-1.44
Na 568.821	8446.2	8322.3	-248%	8629.5	366.8%	3.6%	50	119.2	238.3%	79.2%	16.11
Na 589.592	4570.3	4572.1	3.6%	4602.5	64.4%	0.7%	50	112.9	225.9%	77.2%	14.10
Si 251.611	0.3	50.0	99.5%	51.4	102.3%	2.7%	50	51.9	103.8%	4.0%	-0.11
Si 252.411	0.2	49.8	99.1%	51.1	101.6%	2.5%	50	51.1	102.2%	3.5%	-0.06
Zn 213.857	-15	864	87.9%	876	89.1%	1.3%	1000	1020	102.0%	3%	-3.11



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27199	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

4 Justin Court Ste D, Monterey, CA 93940

831.375.MBAS (6227), 831.641.0734 (Fax)

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

Batch ID: **20150220**

	F	Cl	NO2-N	SO4	Br	NO3-N	PO4-P
Spike amount	2	20	2	20	2	2	2
ICVB	0.00	0.10	0.05	0.00	0.08	0.00	0.00
ICV	1.84	19.89	2.01	20.06	1.82	1.86	1.80
Rec 90-110%	92.15	99.46	100.32	100.29	90.85	92.93	90.21
ICVL	0.17	1.82	0.19	1.66	0.23	0.22	0.17
Rec 50-150%	83.00	91.15	93.48	83.01	114.78	108.52	86.58
Sample ID AB27181	0.18	36.12	0.18	10.83	0.27	6.38	0.16
MS	1.98	55.65	1.97	30.38	2.11	8.06	2.16
Rec 80-120%	89.93	97.62	89.18	97.73	91.86	83.77	100.17
MSD	1.98	55.68	1.98	30.45	2.13	8.07	2.09
Rec 80-120%	89.90	97.82	89.56	98.08	92.57	84.15	96.42
Diff 10%	0.04	0.07	0.38	0.23	0.67	0.09	3.53
CCV	1.93	19.94	2.02	20.21	1.84	1.86	1.87
Rec 90-110%	96.38	99.70	100.83	101.07	91.85	93.02	93.75
Diff 10%	4.49	0.23	0.50	0.77	1.09	0.10	3.85
CCVB	0.00	0.10	0.04	0.00	0.09	0.00	0.00



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 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/20/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	11:48
ICV	1.00	1.05	105.0%	95-105	11:48

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27178	0.65	0.65	0.00%	10	11:48

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

February 27, 2015

Ceres ID: 10605

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 24, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

This work was authorized under M.B.A.'s Project # AB27199.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10605-001	MW-3D (monitoring)	2/24/2015	2/21/2015 16:55

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27199		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27199		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	106	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-3D (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10605-001		Date Received: 24-Feb-15
Project: AB27199			Sample Size: 1.032 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 21-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 16:55							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.17			<u>IS</u> ¹³ C-2,3,7,8-TCDD	88.5	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	92.9	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 14605
 Temperature: 0.9 °C

Reports and invoices will be delivered by email in .pdf format

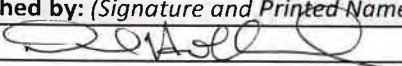
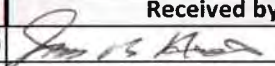
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Monterey Bay Analytical</u> Contact Name: <u>David Holland</u> Address: <u>4 Justin Court Ste D Monterey CA 93940</u> Ph: <u>831-375-6227</u> Email: <u>mweidner@mbasinc.com</u>	Company Name: <u>Same</u> Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

- A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time	Matrix									<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
1	MW-3D (monitoring)	2/21/2015	1655	0:00	Aq	2	X						AB27199
2													(2,3,7,8 TCDD only)
3													Please include excel report
4													
5													
6													
7													
8													
9													
10													
11													
12													



Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/23/2015	16:00	 J. M. Medina	2/24/15	16:15

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.

Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: 10605	Date/Time: 2/24/15 10:15
Client Project ID: AB27199	Received Temperature: 0.4 °C Acceptable: <input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals? Present?	Y / N
	Intact?
	Y / N
NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	Y / <input checked="" type="radio"/> N
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present?	Y / N / <input checked="" type="radio"/> NA
List COC discrepancies:	
	
List Damaged Samples:	
	

Ceres ID: 10605 PB: 1296 Sample #s: 1 Due Date: 3/10/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt.
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows:

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10605-1	1548.61g	516.30g	1.032L

Chemist: J Date: 2/25/15

Method: 1613B
 SOP #: 301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1296-MB001	Method Blank		1.000L	J 2/25/15 MB	J 2/26/15 MB	NA	J 2/26/15	NA	J 2/26/15 MB
0-1296-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10605-1296-001	MW-3D (monitoring)	✓	1.022L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: _____

Samples Logged out by: J 07:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: 1

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15 J
 Extracts returned to Storage Location: _____

Method: 8290A/1613B
 SOP #: 302.1/301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	10ul	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20ul	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3020, 100, 20ml	143512	4/24/15
Si-gel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/23/15
Na2SO4	1.5g	P101614A	4/16/15
20% DemitHex	30ml	L102714A	4/27/15

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/09/15 16:28
Attention: David Holland	Received Date: 02/24/15 08:45
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5B24007	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear David Holland :

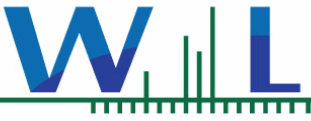
Enclosed are the results of analyses for samples received 02/24/15 08:45 with the Chain of Custody document. The samples were received in good condition, at 1.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

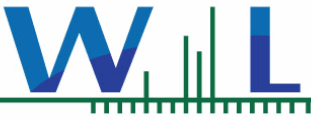
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-4D(Monitoring)	Coral Shaw	AB27178	5B24007-01	Water	02/19/15 16:45

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

5B24007-01 MW-4D(Monitoring)

Sampled: 02/19/15 16:45

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27178

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5B1418

Prepared: 02/26/15 13:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	02/26/15 15:45	

Chlorinated Pesticides and/or PCBs

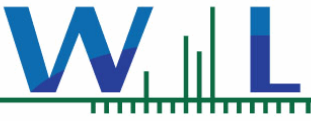
Method: EPA 508

Batch: W5B1201

Prepared: 02/24/15 08:29

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	02/26/15 23:41	
4,4'-DDE	ND	0.010	ug/l	1	02/26/15 23:41	
4,4'-DDT	ND	0.010	ug/l	1	02/26/15 23:41	
Aldrin	ND	0.010	ug/l	1	02/26/15 23:41	
alpha-BHC	ND	0.010	ug/l	1	02/26/15 23:41	
Aroclor 1016	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1221	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1232	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1242	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1248	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1254	ND	0.10	ug/l	1	02/26/15 23:41	
Aroclor 1260	ND	0.10	ug/l	1	02/26/15 23:41	
beta-BHC	ND	0.010	ug/l	1	02/26/15 23:41	
Chlordane (tech)	ND	0.10	ug/l	1	02/26/15 23:41	
Chlorothalonil	ND	0.050	ug/l	1	02/26/15 23:41	
delta-BHC	ND	0.010	ug/l	1	02/26/15 23:41	
Dieldrin	ND	0.010	ug/l	1	02/26/15 23:41	
Endosulfan I	ND	0.010	ug/l	1	02/26/15 23:41	
Endosulfan II	ND	0.010	ug/l	1	02/26/15 23:41	
Endosulfan sulfate	ND	0.010	ug/l	1	02/26/15 23:41	
Endrin	ND	0.010	ug/l	1	02/26/15 23:41	
Endrin aldehyde	ND	0.010	ug/l	1	02/26/15 23:41	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	02/26/15 23:41	
Heptachlor	ND	0.010	ug/l	1	02/26/15 23:41	
Heptachlor epoxide	ND	0.010	ug/l	1	02/26/15 23:41	
Hexachlorobenzene	ND	0.050	ug/l	1	02/26/15 23:41	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	02/26/15 23:41	
Methoxychlor	ND	0.010	ug/l	1	02/26/15 23:41	
PCBs, Total	ND	0.50	ug/l	1	02/26/15 23:41	
Propachlor	ND	0.050	ug/l	1	02/26/15 23:41	
Toxaphene	ND	1.0	ug/l	1	02/26/15 23:41	
Trifluralin	ND	0.010	ug/l	1	02/26/15 23:41	
Surr: Decachlorobiphenyl	10 %	Conc:0.0103	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	71 %	Conc:0.0708	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

5B24007-01 MW-4D(Monitoring)

Sampled: 02/19/15 16:45

Sampled By: Coral Shaw

Matrix: Water

Sample Note: AB27178

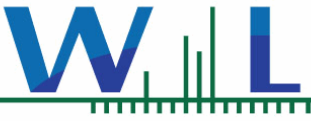
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Anions by IC, EPA Method 9056 - Quality Control

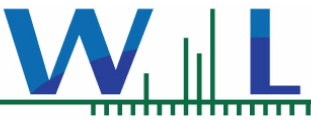
Batch W5B1418 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1418-BLK1)				Analyzed: 02/26/15 13:47						
Iodide	ND	10	ug/l							
LCS (W5B1418-BS1)				Analyzed: 02/26/15 14:06						
Iodide	40.5	10	ug/l	40.0		101	85-115			
Matrix Spike (W5B1418-MS1)				Source: 5B19011-01		Analyzed: 02/26/15 16:49				
Iodide	89.8	25	ug/l	100	ND	90	80-120			
Matrix Spike Dup (W5B1418-MSD1)				Source: 5B19011-01		Analyzed: 02/26/15 17:07				
Iodide	94.5	25	ug/l	100	ND	94	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1201 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1201-BLK1)				Analyzed: 02/26/15 20:38						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



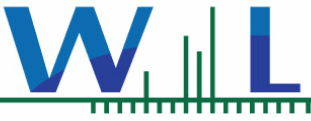
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5B1201 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5B1201-BLK1)										
Analyzed: 02/26/15 20:38										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
Surr: Decachlorobiphenyl	0.0918		ug/l	0.100		92	70-130			
Surr: Tetrachloro-meta-xylene	0.0773		ug/l	0.100		77	70-130			
LCS (W5B1201-BS1)										
Analyzed: 02/26/15 21:08										
4,4'-DDD	0.0964	0.010	ug/l	0.100		96	55-142			
4,4'-DDE	0.0907	0.010	ug/l	0.100		91	49-129			
4,4'-DDT	0.0974	0.010	ug/l	0.100		97	54-160			
Aldrin	0.0792	0.010	ug/l	0.100		79	29-115			
alpha-BHC	0.0844	0.010	ug/l	0.100		84	59-131			
beta-BHC	0.102	0.010	ug/l	0.100		102	63-136			
delta-BHC	0.108	0.010	ug/l	0.100		108	59-137			
Dieldrin	0.0902	0.010	ug/l	0.100		90	59-135			
Endosulfan I	0.0706	0.010	ug/l	0.100		71	28-138			
Endosulfan II	0.0844	0.010	ug/l	0.100		84	53-133			
Endosulfan sulfate	0.112	0.010	ug/l	0.100		112	58-155			
Endrin	0.0940	0.010	ug/l	0.100		94	57-148			
Endrin aldehyde	0.0816	0.010	ug/l	0.100		82	45-139			
gamma-BHC (Lindane)	0.0876	0.010	ug/l	0.100		88	59-129			
Heptachlor	0.0841	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0882	0.010	ug/l	0.100		88	59-134			
Methoxychlor	0.103	0.010	ug/l	0.100		103	56-167			
Surr: Decachlorobiphenyl	0.0950		ug/l	0.100		95	70-130			
Surr: Tetrachloro-meta-xylene	0.0751		ug/l	0.100		75	70-130			
LCS Dup (W5B1201-BSD1)										
Analyzed: 02/26/15 21:39										
4,4'-DDD	0.0960	0.010	ug/l	0.100		96	55-142	0.4	25	
4,4'-DDE	0.0929	0.010	ug/l	0.100		93	49-129	2	25	
4,4'-DDT	0.0985	0.010	ug/l	0.100		99	54-160	1	25	
Aldrin	0.0840	0.010	ug/l	0.100		84	29-115	6	25	
alpha-BHC	0.0900	0.010	ug/l	0.100		90	59-131	6	25	
beta-BHC	0.104	0.010	ug/l	0.100		104	63-136	2	25	
delta-BHC	0.110	0.010	ug/l	0.100		110	59-137	2	25	
Dieldrin	0.0906	0.010	ug/l	0.100		91	59-135	0.5	25	
Endosulfan I	0.0717	0.010	ug/l	0.100		72	28-138	1	25	
Endosulfan II	0.0841	0.010	ug/l	0.100		84	53-133	0.4	25	
Endosulfan sulfate	0.110	0.010	ug/l	0.100		110	58-155	2	25	

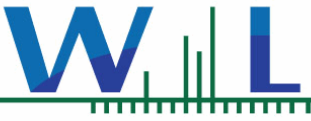


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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5B1201 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5B1201-BSD1)				Analyzed: 02/26/15 21:39						
Endrin	0.0948	0.010	ug/l	0.100		95	57-148	0.8	25	
Endrin aldehyde	0.0837	0.010	ug/l	0.100		84	45-139	3	25	
gamma-BHC (Lindane)	0.0924	0.010	ug/l	0.100		92	59-129	5	25	
Heptachlor	0.0896	0.010	ug/l	0.100		90	42-136	6	25	
Heptachlor epoxide	0.0902	0.010	ug/l	0.100		90	59-134	2	25	
Methoxychlor	0.101	0.010	ug/l	0.100		101	56-167	2	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0877</i>		<i>ug/l</i>	<i>0.100</i>		<i>88</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0769</i>		<i>ug/l</i>	<i>0.100</i>		<i>77</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/24/15 08:45
Date Reported: 03/09/15 16:28

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1924

3/09/2015

Invoice: A504877

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1924 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 2/24/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 2/24/2015 - 10:00 Report Due: 3/10/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
--	---

Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 2.8	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Sample(s) were received in temperature range. Initial receipt at BSK-FAL
--	---

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- BS2.0 Blank spike recovery for this analyte was biased low. Associated result may be biased low; reanalysis not feasible.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5B1924-01
Sampled By: Coral Shaw
Sample Description: MW-4D (monitoring) // AB27178

Sample Date - Time: 02/19/15 - 14:45
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A502346	03/03/15	03/04/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A502346	03/03/15	03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	98 %	<i>Acceptable range: 70-130 %</i>						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502347	03/03/15	03/04/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502347	03/03/15	03/04/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502347	03/03/15	03/04/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502347	03/03/15	03/04/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502347	03/03/15	03/04/15	
Surrogate: DCPAA	EPA 515.3	98 %	<i>Acceptable range: 70-130 %</i>						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	

Certificate of Analysis

Sample ID: A5B1924-01
Sampled By: Coral Shaw
Sample Description: MW-4D (monitoring) // AB27178

Sample Date - Time: 02/19/15 - 14:45
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Acetone	EPA 524.2	ND	10	ug/L	1	A502118	02/25/15	02/25/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Chloromethane	EPA 524.2	0.69	0.50	ug/L	1	A502118	02/25/15	02/25/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502118	02/25/15	02/25/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	BS1.0
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502118	02/25/15	02/25/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502118	02/25/15	02/25/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502118	02/25/15	02/25/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502118	02/25/15	02/25/15	

Certificate of Analysis

Sample ID: A5B1924-01
Sampled By: Coral Shaw
Sample Description: MW-4D (monitoring) // AB27178

Sample Date - Time: 02/19/15 - 14:45
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	87 %							
Surrogate: Bromofluorobenzene	EPA 524.2	93 %							
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A502263	02/27/15	02/28/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	02/28/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A502263	02/27/15	02/28/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	02/28/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A502263	02/27/15	02/28/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A502263	02/27/15	02/28/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A502263	02/27/15	02/28/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	02/28/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A502263	02/27/15	02/28/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A502263	02/27/15	02/28/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A502263	02/27/15	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	99 %							
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/25/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/25/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/25/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502103	02/24/15	02/25/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/25/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502147	02/25/15	02/25/15	
Surrogate: AMPA	EPA 547	93 %							
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502241	02/26/15	02/27/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502063	02/24/15	03/03/15	BS2.0



A5B1924

Cal Am

Certificate of Analysis

Sample ID: A5B1924-01

Sampled By: Coral Shaw

Sample Description: MW-4D (monitoring) // AB27178

Sample Date - Time: 02/19/15 - 14:45

Matrix: Ground Water

Sample Type: Grab

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A502346

Prepared: 03/03/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A502346-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/03/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/03/15	

Blank Spike (A502346-BS1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		94	70-130			03/03/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		99	70-130			03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.44			0.46		96	70-130			03/03/15	

Blank Spike Dup (A502346-BSD1)

Dibromochloropropane (DBCP)	0.12	0.010	ug/L	0.12		95	70-130	1	20	03/04/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		96	70-130	2	20	03/04/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		97	70-130			03/04/15	

Matrix Spike (A502346-MS1), Source: A5B1720-01

Dibromochloropropane (DBCP)	0.66	0.010	ug/L	0.13	0.44	171	65-135			03/03/15	MS1.0 High
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.13	ND	101	65-135			03/03/15	
Surrogate: 1-Br-2-Nitrobenzene	0.43			0.46		95	70-130			03/03/15	

EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502347-BLK1)

2,4,5-T	ND	1.0	ug/L							03/04/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/04/15	
2,4-D	ND	10	ug/L							03/04/15	
Bentazon	ND	2.0	ug/L							03/04/15	
Dalapon	ND	10	ug/L							03/04/15	
Dicamba	ND	1.5	ug/L							03/04/15	
Dinoseb	ND	2.0	ug/L							03/04/15	
Pentachlorophenol	ND	0.20	ug/L							03/04/15	
Picloram	ND	1.0	ug/L							03/04/15	
Surrogate: DCPAA	59			58		101	70-130			03/04/15	

Blank Spike (A502347-BS1)

2,4,5-T	4.1	1.0	ug/L	4.0		103	70-130			03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		101	70-130			03/04/15	
2,4-D	0.44	10	ug/L	0.40		109	70-130			03/04/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130			03/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130			03/04/15	
Dicamba	6.1	1.5	ug/L	6.0		102	70-130			03/04/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130			03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130			03/04/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130			03/04/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502347

Prepared: 03/03/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502347-BS1)

Surrogate: DCPAA	60			58		103	70-130			03/04/15	
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Blank Spike Dup (A502347-BSD1)

2,4,5-T	4.0	1.0	ug/L	4.0		101	70-130	2	20	03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80		102	70-130	0	20	03/04/15	
2,4-D	0.42	10	ug/L	0.40		106	70-130	3	20	03/04/15	
Bentazon	8.2	2.0	ug/L	8.0		103	70-130	1	20	03/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130	0	20	03/04/15	
Dicamba	6.1	1.5	ug/L	6.0		101	70-130	1	20	03/04/15	
Dinoseb	0.79	2.0	ug/L	0.80		99	70-130	1	20	03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130	1	20	03/04/15	
Picloram	0.39	1.0	ug/L	0.40		98	70-130	2	20	03/04/15	
Surrogate: DCPAA	59			58		102	70-130			03/04/15	

Matrix Spike (A502347-MS1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	104	70-130			03/04/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80	ND	98	70-130			03/04/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/04/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	101	70-130			03/04/15	
Dalapon	4.4	10	ug/L	4.0	ND	109	70-130			03/04/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	104	70-130			03/04/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130			03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130			03/04/15	
Picloram	0.40	1.0	ug/L	0.40	ND	99	70-130			03/04/15	
Surrogate: DCPAA	61			58		105	70-130			03/04/15	

Matrix Spike Dup (A502347-MSD1), Source: A5B1978-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/04/15	
2,4,5-TP (Silvex)	0.81	1.0	ug/L	0.80	ND	101	70-130	3	20	03/04/15	
2,4-D	0.44	10	ug/L	0.40	ND	110	70-130	2	20	03/04/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	100	70-130	1	20	03/04/15	
Dalapon	4.4	10	ug/L	4.0	ND	111	70-130	2	20	03/04/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	105	70-130	1	20	03/04/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	101	70-130	1	20	03/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	99	70-130	1	20	03/04/15	
Picloram	0.41	1.0	ug/L	0.40	ND	102	70-130	2	20	03/04/15	
Surrogate: DCPAA	61			58		105	70-130			03/04/15	

EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							02/25/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							02/25/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							02/25/15	
1,1-Dichloroethane	ND	0.50	ug/L							02/25/15	
1,1-Dichloroethene	ND	0.50	ug/L							02/25/15	
1,1-Dichloropropene	ND	0.50	ug/L							02/25/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							02/25/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
1,2-Dichloroethane	ND	0.50	ug/L							02/25/15	
1,2-Dichloropropane	ND	0.50	ug/L							02/25/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							02/25/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
1,3-Dichloropropane	ND	0.50	ug/L							02/25/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							02/25/15	
2,2-Dichloropropane	ND	0.50	ug/L							02/25/15	
2-Butanone	ND	5.0	ug/L							02/25/15	
2-Chlorotoluene	ND	0.50	ug/L							02/25/15	
2-Hexanone	ND	10	ug/L							02/25/15	
4-Chlorotoluene	ND	0.50	ug/L							02/25/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							02/25/15	
Acetone	ND	10	ug/L							02/25/15	
Benzene	ND	0.50	ug/L							02/25/15	
Bromobenzene	ND	0.50	ug/L							02/25/15	
Bromochloromethane	ND	0.50	ug/L							02/25/15	
Bromodichloromethane	ND	0.50	ug/L							02/25/15	
Bromoform	ND	0.50	ug/L							02/25/15	
Bromomethane	ND	0.50	ug/L							02/25/15	
Carbon Tetrachloride	ND	0.50	ug/L							02/25/15	
Chlorobenzene	ND	0.50	ug/L							02/25/15	
Chloroethane	ND	0.50	ug/L							02/25/15	
Chloroform	ND	0.50	ug/L							02/25/15	
Chloromethane	ND	0.50	ug/L							02/25/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							02/25/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							02/25/15	
Dibromochloromethane	ND	0.50	ug/L							02/25/15	
Dibromomethane	ND	0.50	ug/L							02/25/15	
Dichlorodifluoromethane	ND	0.50	ug/L							02/25/15	
Dichloromethane	ND	0.50	ug/L							02/25/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							02/25/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							02/25/15	
Ethylbenzene	ND	0.50	ug/L							02/25/15	
Hexachlorobutadiene	ND	0.50	ug/L							02/25/15	
Isopropylbenzene	ND	0.50	ug/L							02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502118-BLK1)

m,p-Xylenes	ND	0.50	ug/L							02/25/15	
Methyl-t-butyl ether	ND	0.50	ug/L							02/25/15	
Naphthalene	ND	0.50	ug/L							02/25/15	
n-Butylbenzene	ND	0.50	ug/L							02/25/15	
n-Propylbenzene	ND	0.50	ug/L							02/25/15	
o-Xylene	ND	0.50	ug/L							02/25/15	
p-Isopropyltoluene	ND	0.50	ug/L							02/25/15	
sec-Butylbenzene	ND	0.50	ug/L							02/25/15	
Styrene	ND	0.50	ug/L							02/25/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							02/25/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							02/25/15	
tert-Butylbenzene	ND	0.50	ug/L							02/25/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							02/25/15	
Toluene	ND	0.50	ug/L							02/25/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							02/25/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							02/25/15	
Trichloroethene (TCE)	ND	0.50	ug/L							02/25/15	
Trichlorofluoromethane	ND	5.0	ug/L							02/25/15	
Vinyl Chloride	ND	0.50	ug/L							02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.4			5.0		88	70-130			02/25/15	
Surrogate: Bromofluorobenzene	47			50		94	70-130			02/25/15	

Blank Spike (A502118-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		107	70-130			02/25/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		102	70-130			02/25/15	
1,1-Dichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,1-Dichloroethene	11	0.50	ug/L	10		110	70-130			02/25/15	
1,1-Dichloropropene	11	0.50	ug/L	10		106	70-130			02/25/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		101	70-130			02/25/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
1,2,4-Trimethylbenzene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130			02/25/15	
1,2-Dichloroethane	10	0.50	ug/L	10		104	70-130			02/25/15	
1,2-Dichloropropane	10	0.50	ug/L	10		103	70-130			02/25/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		105	70-130			02/25/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
1,3-Dichloropropane	10	0.50	ug/L	10		103	70-130			02/25/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
2,2-Dichloropropane	11	0.50	ug/L	10		110	70-130			02/25/15	
2-Butanone	10	5.0	ug/L	10		105	70-130			02/25/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/25/15	
2-Hexanone	10	10	ug/L	10		104	70-130			02/25/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502118-BS1)

4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		104	70-130			02/25/15	
Acetone	11	10	ug/L	10		113	70-130			02/25/15	
Benzene	10	0.50	ug/L	10		104	70-130			02/25/15	
Bromobenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
Bromochloromethane	10	0.50	ug/L	10		104	70-130			02/25/15	
Bromodichloromethane	10	0.50	ug/L	10		101	70-130			02/25/15	
Bromoform	11	0.50	ug/L	10		110	70-130			02/25/15	
Bromomethane	11	0.50	ug/L	10		112	70-130			02/25/15	
Carbon Tetrachloride	11	0.50	ug/L	10		105	70-130			02/25/15	
Chlorobenzene	10	0.50	ug/L	10		103	70-130			02/25/15	
Chloroethane	11	0.50	ug/L	10		107	70-130			02/25/15	
Chloroform	10	0.50	ug/L	10		102	70-130			02/25/15	
Chloromethane	11	0.50	ug/L	10		111	70-130			02/25/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			02/25/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		104	70-130			02/25/15	
Dibromochloromethane	11	0.50	ug/L	10		106	70-130			02/25/15	
Dibromomethane	10	0.50	ug/L	10		103	70-130			02/25/15	
Dichlorodifluoromethane	12	0.50	ug/L	10		123	70-130			02/25/15	
Dichloromethane	10	0.50	ug/L	10		104	70-130			02/25/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		104	70-130			02/25/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		107	70-130			02/25/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130			02/25/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			02/25/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
m,p-Xylenes	20	0.50	ug/L	20		101	70-130			02/25/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		106	70-130			02/25/15	
Naphthalene	10	0.50	ug/L	10		102	70-130			02/25/15	
n-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
n-Propylbenzene	10	0.50	ug/L	10		102	70-130			02/25/15	
o-Xylene	10	0.50	ug/L	10		102	70-130			02/25/15	
p-Isopropyltoluene	9.9	0.50	ug/L	10		99	70-130			02/25/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
Styrene	14	0.50	ug/L	10		140	70-130			02/25/15	BS High
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		101	70-130			02/25/15	
tert-Butyl alcohol (TBA)	11	2.0	ug/L	10		108	70-130			02/25/15	
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130			02/25/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		100	70-130			02/25/15	
Toluene	10	0.50	ug/L	10		102	70-130			02/25/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130			02/25/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10		107	70-130			02/25/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			02/25/15	
Trichlorofluoromethane	11	5.0	ug/L	10		109	70-130			02/25/15	
Vinyl Chloride	11	0.50	ug/L	10		114	70-130			02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			02/25/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502118-BS1)

Surrogate: Bromofluorobenzene 51 50 101 70-130 02/25/15

Blank Spike Dup (A502118-BSD1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10	103	70-130	1	30	02/25/15
1,1,1-Trichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	101	70-130	1	30	02/25/15
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10	106	70-130	1	30	02/25/15
1,1,2-Trichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,1-Dichloroethane	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,1-Dichloroethene	11	0.50	ug/L	10	109	70-130	0	30	02/25/15
1,1-Dichloropropene	11	0.50	ug/L	10	106	70-130	0	30	02/25/15
1,2,3-Trichlorobenzene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
1,2,4-Trichlorobenzene	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
1,2,4-Trimethylbenzene	9.8	0.50	ug/L	10	98	70-130	1	30	02/25/15
1,2-Dichlorobenzene	9.8	0.50	ug/L	10	98	70-130	0	30	02/25/15
1,2-Dichloroethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
1,2-Dichloropropane	10	0.50	ug/L	10	103	70-130	0	30	02/25/15
1,3,5-Trimethylbenzene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,3-Dichlorobenzene	9.9	0.50	ug/L	10	99	70-130	2	30	02/25/15
1,3-Dichloropropane	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
1,4-Dichlorobenzene	9.9	0.50	ug/L	10	99	70-130	0	30	02/25/15
2,2-Dichloropropane	11	0.50	ug/L	10	109	70-130	1	30	02/25/15
2-Butanone	10	5.0	ug/L	10	101	70-130	3	30	02/25/15
2-Chlorotoluene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
2-Hexanone	10	10	ug/L	10	101	70-130	3	30	02/25/15
4-Chlorotoluene	9.9	0.50	ug/L	10	99	70-130	0	30	02/25/15
4-Methyl-2-pentanone	10	5.0	ug/L	10	102	70-130	3	30	02/25/15
Acetone	11	10	ug/L	10	108	70-130	5	30	02/25/15
Benzene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
Bromobenzene	10	0.50	ug/L	10	101	70-130	0	30	02/25/15
Bromochloromethane	11	0.50	ug/L	10	107	70-130	3	30	02/25/15
Bromodichloromethane	10	0.50	ug/L	10	102	70-130	1	30	02/25/15
Bromoform	11	0.50	ug/L	10	111	70-130	1	30	02/25/15
Bromomethane	11	0.50	ug/L	10	114	70-130	2	30	02/25/15
Carbon Tetrachloride	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
Chlorobenzene	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
Chloroethane	11	0.50	ug/L	10	108	70-130	1	30	02/25/15
Chloroform	10	0.50	ug/L	10	102	70-130	0	30	02/25/15
Chloromethane	11	0.50	ug/L	10	114	70-130	2	30	02/25/15
cis-1,2-Dichloroethene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
cis-1,3-Dichloropropene	10	0.50	ug/L	10	104	70-130	0	30	02/25/15
Dibromochloromethane	11	0.50	ug/L	10	105	70-130	1	30	02/25/15
Dibromomethane	10	0.50	ug/L	10	104	70-130	1	30	02/25/15
Dichlorodifluoromethane	12	0.50	ug/L	10	120	70-130	2	30	02/25/15
Dichloromethane	11	0.50	ug/L	10	105	70-130	2	30	02/25/15

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502118

Prepared: 02/25/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502118-BSD1)

Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		106	70-130	2	30	02/25/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		108	70-130	1	30	02/25/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130	0	30	02/25/15	
Hexachlorobutadiene	10	0.50	ug/L	10		102	70-130	2	30	02/25/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130	0	30	02/25/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		107	70-130	1	30	02/25/15	
Naphthalene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
n-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	02/25/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130	1	30	02/25/15	
o-Xylene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130	1	30	02/25/15	
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	02/25/15	
Styrene	14	0.50	ug/L	10		142	70-130	1	30	02/25/15	BS High
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130	3	30	02/25/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		104	70-130	5	30	02/25/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	1	30	02/25/15	
Tetrachloroethene (PCE)	9.9	0.50	ug/L	10		99	70-130	0	30	02/25/15	
Toluene	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130	1	30	02/25/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10		107	70-130	0	30	02/25/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130	0	30	02/25/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130	1	30	02/25/15	
Vinyl Chloride	11	0.50	ug/L	10		111	70-130	3	30	02/25/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.0			5.0		101	70-130			02/25/15	
Surrogate: Bromofluorobenzene	50			50		101	70-130			02/25/15	

EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Alachlor	ND	1.0	ug/L							02/28/15	
Atrazine	ND	0.50	ug/L							02/28/15	
Benzo(a)pyrene	ND	0.10	ug/L							02/28/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							02/28/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							02/28/15	
Bromacil	ND	10	ug/L							02/28/15	
Butachlor	ND	0.38	ug/L							02/28/15	
Diazinon	ND	0.25	ug/L							02/28/15	
Dimethoate	ND	10	ug/L							02/28/15	
Metolachlor	ND	0.50	ug/L							02/28/15	
Metribuzin	ND	0.50	ug/L							02/28/15	
Molinate	ND	2.0	ug/L							02/28/15	
Prometryn	ND	2.0	ug/L							02/28/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A502263-BLK1)

Propachlor	ND	0.50	ug/L							02/28/15	
Simazine	ND	1.0	ug/L							02/28/15	
Thiobencarb	ND	1.0	ug/L							02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		99	70-130			02/28/15	

Blank Spike (A502263-BS1)

Alachlor	1.0	1.0	ug/L	1.0		100	70-130			02/28/15	
Atrazine	0.49	0.50	ug/L	0.50		98	70-130			02/28/15	
Benzo(a)pyrene	0.071	0.10	ug/L	0.10		71	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		95	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130			02/28/15	
Bromacil	1.1	10	ug/L	1.0		111	70-130			02/28/15	
Butachlor	1.0	0.38	ug/L	1.0		100	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20		84	70-130			02/28/15	
Dimethoate	0.88	10	ug/L	1.0		88	70-130			02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		100	70-130			02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130			02/28/15	
Molinate	0.99	2.0	ug/L	1.0		99	70-130			02/28/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			02/28/15	
Propachlor	0.49	0.50	ug/L	0.50		99	70-130			02/28/15	
Simazine	0.32	1.0	ug/L	0.35		93	70-130			02/28/15	
Thiobencarb	0.48	1.0	ug/L	0.50		96	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		97	70-130			02/28/15	

Blank Spike Dup (A502263-BS1)

Alachlor	0.98	1.0	ug/L	1.0		98	70-130	2	30	02/28/15	
Atrazine	0.48	0.50	ug/L	0.50		96	70-130	2	30	02/28/15	
Benzo(a)pyrene	0.086	0.10	ug/L	0.10		86	70-130	19	30	02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0		94	70-130	1	30	02/28/15	
Bis(2-ethylhexyl) phthalate	1.4	3.0	ug/L	1.5		92	70-130	1	30	02/28/15	
Bromacil	1.1	10	ug/L	1.0		108	70-130	3	30	02/28/15	
Butachlor	0.98	0.38	ug/L	1.0		98	70-130	2	30	02/28/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130	2	30	02/28/15	
Dimethoate	0.95	10	ug/L	1.0		95	70-130	8	30	02/28/15	
Metolachlor	2.0	0.50	ug/L	2.0		98	70-130	2	30	02/28/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130	0	30	02/28/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	3	30	02/28/15	
Prometryn	1.8	2.0	ug/L	2.0		90	70-130	14	30	02/28/15	
Propachlor	0.50	0.50	ug/L	0.50		99	70-130	1	30	02/28/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130	5	30	02/28/15	
Thiobencarb	0.47	1.0	ug/L	0.50		95	70-130	1	30	02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.7			5.0		95	70-130			02/28/15	

Matrix Spike (A502263-MS1), Source: A5B1765-06

Alachlor	0.93	1.0	ug/L	1.0	ND	93	70-130			02/28/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A502263

Prepared: 02/27/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A502263-MS1), Source: A5B1765-06

Atrazine	0.48	0.50	ug/L	0.50	ND	96	70-130			02/28/15	
Benzo(a)pyrene	0.082	0.10	ug/L	0.10	ND	82	70-130			02/28/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	2.0	ND	93	70-130			02/28/15	
Bis(2-ethylhexyl) phthalate	1.5	3.0	ug/L	1.5	ND	99	70-130			02/28/15	
Bromacil	0.99	10	ug/L	1.0	ND	99	70-130			02/28/15	
Butachlor	0.93	0.38	ug/L	1.0	ND	93	70-130			02/28/15	
Diazinon	0.17	0.25	ug/L	0.20	ND	84	70-130			02/28/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			02/28/15	
Metolachlor	1.9	0.50	ug/L	2.0	ND	93	70-130			02/28/15	
Metribuzin	0.92	0.50	ug/L	1.0	ND	92	70-130			02/28/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			02/28/15	
Prometryn	1.9	2.0	ug/L	2.0	ND	94	70-130			02/28/15	
Propachlor	0.50	0.50	ug/L	0.50	ND	99	70-130			02/28/15	
Simazine	0.33	1.0	ug/L	0.35	ND	95	70-130			02/28/15	
Thiobencarb	0.46	1.0	ug/L	0.50	ND	91	70-130			02/28/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.1			5.0		102	70-130			02/28/15	

EPA 531.1 - Quality Control

Batch: A502103

Prepared: 02/24/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A502103-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							02/24/15	
Aldicarb	ND	3.0	ug/L							02/24/15	
Aldicarb Sulfone	ND	2.0	ug/L							02/24/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							02/24/15	
Carbaryl	ND	5.0	ug/L							02/24/15	
Carbofuran	ND	5.0	ug/L							02/24/15	
Methiocarb	ND	2.0	ug/L							02/24/15	
Methomyl	ND	2.0	ug/L							02/24/15	
Oxamyl	ND	20	ug/L							02/24/15	
Propoxur	ND	2.0	ug/L							02/24/15	

Blank Spike (A502103-BS1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		97	80-120			02/24/15	
Aldicarb	3.9	3.0	ug/L	4.0		99	80-120			02/24/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120			02/24/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120			02/24/15	
Carbaryl	3.7	5.0	ug/L	4.0		94	80-120			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0		97	80-120			02/24/15	
Methiocarb	4.1	2.0	ug/L	4.0		101	80-120			02/24/15	
Methomyl	3.4	2.0	ug/L	4.0		84	80-120			02/24/15	
Oxamyl	3.5	20	ug/L	4.0		87	80-120			02/24/15	
Propoxur	3.8	2.0	ug/L	4.0		96	80-120			02/24/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A502103

Prepared: 02/24/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A502103-BSD1)

3-Hydroxycarbofuran	3.9	3.0	ug/L	4.0		98	80-120	1	20	02/25/15	
Aldicarb	3.8	3.0	ug/L	4.0		94	80-120	5	20	02/25/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		97	80-120	0	20	02/25/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		108	80-120	1	20	02/25/15	
Carbaryl	3.9	5.0	ug/L	4.0		96	80-120	3	20	02/25/15	
Carbofuran	3.8	5.0	ug/L	4.0		96	80-120	1	20	02/25/15	
Methiocarb	3.9	2.0	ug/L	4.0		98	80-120	3	20	02/25/15	
Methomyl	3.6	2.0	ug/L	4.0		90	80-120	7	20	02/25/15	
Oxamyl	3.4	20	ug/L	4.0		86	80-120	1	20	02/25/15	
Propoxur	3.8	2.0	ug/L	4.0		96	80-120	1	20	02/25/15	

Matrix Spike (A502103-MS1), Source: A5B1379-03

3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0	ND	95	65-135			02/24/15	
Aldicarb	3.9	3.0	ug/L	4.0	ND	97	65-135			02/24/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			02/24/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0	ND	110	65-135			02/24/15	
Carbaryl	3.9	5.0	ug/L	4.0	ND	96	65-135			02/24/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	97	65-135			02/24/15	
Methiocarb	3.8	2.0	ug/L	4.0	ND	96	65-135			02/24/15	
Methomyl	3.5	2.0	ug/L	4.0	ND	87	65-135			02/24/15	
Oxamyl	3.5	20	ug/L	4.0	ND	88	65-135			02/24/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	98	65-135			02/24/15	

EPA 547 - Quality Control

Batch: A502147

Prepared: 02/25/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502147-BLK1)

Glyphosate	ND	25	ug/L							02/25/15	
Surrogate: AMPA	110			100		115	70-130			02/25/15	

Blank Spike (A502147-BS1)

Glyphosate	100	25	ug/L	100		102	70-130			02/25/15	
Surrogate: AMPA	100			100		100	70-130			02/25/15	

Blank Spike Dup (A502147-BSD1)

Glyphosate	110	25	ug/L	100		106	70-130	4	30	02/25/15	
Surrogate: AMPA	93			100		93	70-130			02/25/15	

Matrix Spike (A502147-MS1), Source: A5B1935-01

Glyphosate	110	25	ug/L	100	ND	107	70-130			02/25/15	
Surrogate: AMPA	130			100		128	70-130			02/25/15	

Matrix Spike Dup (A502147-MSD1), Source: A5B1935-01

Glyphosate	110	25	ug/L	100	ND	105	70-130	2	30	02/25/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502147

Prepared: 02/25/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502147-MSD1), Source: A5B1935-01

Surrogate: AMPA 94 100 93 70-130 02/25/15

EPA 548.1 - Quality Control

Batch: A502241

Prepared: 02/26/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502241-BLK1)

Endothall ND 45 ug/L 02/27/15

Blank Spike (A502241-BS1)

Endothall 16 45 ug/L 20 79 54-105 02/27/15

Blank Spike Dup (A502241-BSD1)

Endothall 14 45 ug/L 20 71 54-105 11 46 02/27/15

Matrix Spike (A502241-MS1), Source: A5B1841-01

Endothall 18 45 ug/L 20 ND 88 54-105 02/27/15

EPA 549.2 - Quality Control

Batch: A502063

Prepared: 02/24/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502063-BLK1)

Diquat ND 4.0 ug/L 03/03/15

Blank Spike (A502063-BS1)

Diquat 0.38 4.0 ug/L 4.0 10 70-130 03/03/15 BS **Low**

Blank Spike Dup (A502063-BSD1)

Diquat 0.42 4.0 ug/L 4.0 10 70-130 9 30 03/03/15 BS **Low**

Matrix Spike (A502063-MS1), Source: A5B1592-01

Diquat 0.40 4.0 ug/L 4.0 ND 10 70-130 03/03/15 MS1.0 **Low**

Matrix Spike Dup (A502063-MSD1), Source: A5B1592-01

Diquat 0.45 4.0 ug/L 4.0 ND 11 70-130 11 30 03/03/15 MS1.0 **Low**

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5B1924

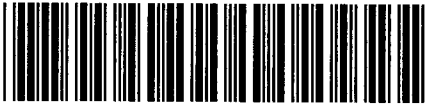


02242015

Monte6227

Turnaround: Standard

Due Date: 3/10/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

2.8

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed:

A5B1924
 Monte6227

02/24/2015
 10



*Required Fields

Temp:

Company/Client Name*: Monterey Bay Analytical Services	Report Attention*: Mason Weidner-Holland Additional cc's: David Holland	Invoice To*: David Holland PO#:	Phone*: 831-375-6227	Fax: 831-641-0734
Address*: 4 Justin Court, Suite D			City*: Monterey	
State*: CA			Zip*: 93940	
Project: Cal Am			How would you like to receive your completed results?* <input checked="" type="checkbox"/> E-Mail <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
Reporting Options: <input type="checkbox"/> Trace (J-Flag) <input type="checkbox"/> Swamp <input type="checkbox"/> EDD Type: _____			Regulatory Carbon Copies <input type="checkbox"/> SWRCB (Drinking Water) <input type="checkbox"/> Merced Co <input type="checkbox"/> Fresno Co <input type="checkbox"/> Madera Co <input type="checkbox"/> Tulare Co <input type="checkbox"/> Other: _____	
Sampler Name (Printed/Signature)*: Coral Shaw			Regulatory Compliance <input type="checkbox"/> EDT to California SWRCB (Drinking Water) System Number*: _____ <input type="checkbox"/> Geotracker #: _____	

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
	MW-4D (monitoring)	2/19/15	1445	GW	AB27178	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name) D. Holland <i>[Signature]</i>	Company MBAS	Date 2/23/15	Time 1600	Received by: (Signature and Printed Name)	Company
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Received for Lab by: (Signature and Printed Name) <i>Caroline White</i>	Date 2/24/15	Time 10:00	Payment Received at Delivery:		
Shipping Method: ONTRAC <input checked="" type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> WALK-IN <input type="checkbox"/> FED EX <input type="checkbox"/> Courier: _____	Amount:	PIA#:	Check / Cash	Init.	
Cooling Method: Wet <input checked="" type="checkbox"/> Blue <input type="checkbox"/> None <input type="checkbox"/>	Custody Seal: Y / N		Chilling Process Begun: Y / N <i>Paper, BW</i>		

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$			Were correct containers and preservatives received for the tests requested?		
	Yes	No	NA	Yes	No	NA
	If samples were taken today, is there evidence that chilling has begun?			Were there bubbles in the VOA vials? (Volatiles Only)		
	Yes	No	NA	Yes	No	NA
	Did all bottles arrive unbroken and intact?			Was a sufficient amount of sample received?		
Yes	No	NA	Yes	No	NA	
Did all bottle labels agree with COC?			Do samples have a hold time <72 hours?			
Yes	No	NA	Yes	No	NA	
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?			Was PM notified of discrepancies? PM: _____ By/Time: _____			
Yes	No	NA	Yes	No	NA	
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?			
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—			
	None (P) ^{White Cap}	—	—			
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH > 8	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y N			
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y N			
	HNO_3 (P) ^{Red Cap}	—	—			
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y N			
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y N			
	$\text{NaOH} + \text{ZnAc}$ (P)	pH > 9	Y N			
	Dissolved Oxygen 300ml (g)	—	—			
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—			
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—			
	$\text{Na}_2\text{O}_3\text{S} + \text{HCl}$ (AG) ^{Lt. Pink Label} 525	—	—	2C		
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—	1C		
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547,515,548,THM,524	—	—	2A, 1V		
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505	—	—	3V		
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531	pH < 3	Y N	1V		
	NH_4Cl (AG) ^{Purple Label} 552	—	—			
	EDA (AG) ^{Brown Label} DBPs	—	—			
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—	3V		
	Buffer pH 4 (CG)	—	—			
	None (CG)	—	—			
	H_3PO_4 (CG) ^{Salmon Label}	—	—			
	Other:					
Asbestos 1Liter Plastic w/ Foil	—	—				
Low Level Hg / Metals Double Baggie	—	—				
Bottled Water	—	—				
Clear Glass Jar: 250 / 500 / 1 Liter	—	—				
Soil Tube Brass / Steel / Plastic	—	—				
Tedlar Bag / Plastic Bag	—	—				
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	S P			S P		
	S P			S P		
Comments						

Handwritten: CW
2/24/15

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested												
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter							
Field Parameters:												
										Temp:	19.9°C	
										pH:	6.65	
										Sp Cond:	5750 µS/cm	
										Turb:	0.76 NTU	

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2	Residual	Routine	Other	Repeat		Special	Type	Size
27178		MW-4D (monitoring)	2-19-15	4:45 pm	0.8							27		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Coral Shaw / Geoscience		2-19-15	4:45pm	Is sample for regulatory purposes? Yes / No SEC ✓ = ~37µS does not match GC valve TC 2/20/15
Relinquished by:	Coral Shaw / Geoscience		2-20-15		
Received by:	David Holland		2/20/15	0839	
Relinquished by:					
Received by:					

[] Payment received	Check #	Amount:	Receipt #	Date:
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27178

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA

<2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

* 500mL vacuum filtered pre-riused 0.45 μ membrane filter + Na₂S₂O₃ + H₂SO₄ pH < 2
 * 250mL " " + H₂SO₄ pH < 2
 * 250mL " " no preserve.



California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com

ELAP Certification Number: 2385

Lab Number: AB27893

Collection Date/Time: 3/10/2015 13:40 Sample Collector: SALMON M
Submittal Date/Time: 3/10/2015 15:51 Sample ID

Sample Description: MW-5S (monitoring)

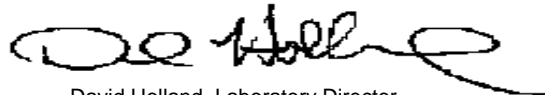
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	50		2	3/12/2015	LRH
Aluminum, Total	EPA200.8	µg/L	14		10	3/12/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	3/19/2015	TC
Arsenic, Total	EPA200.8	µg/L	4		1	3/12/2015	SM
Barium, Dissolved	EPA200.8	µg/L	173		10	3/12/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	61		10	3/12/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	Not Detected		0.25	3/11/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	4.4		2	3/12/2015	TC
Calcium	EPA200.7	mg/L	129		2.5	3/11/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	142		2.5	3/11/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		3/20/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	3/12/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	271		20	3/12/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		3/24/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	7		3	3/10/2015	LRH
Copper, Total	EPA200.8	µg/L	5		4	3/12/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/19/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		3/16/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/17/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		3/18/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	Not Detected		2	3/12/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E		3/13/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	561		10	3/11/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	3/12/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	3/19/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		50	3/11/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		50	3/11/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/24/2015	TC
Lithium	EPA200.8	µg/L	6		1	3/12/2015	SM
Magnesium	EPA200.7	mg/L	58		2.5	3/11/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	62		5	3/11/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	Not Detected		50	3/11/2015	MW
Manganese, Total	EPA200.7	µg/L	Not Detected		50	3/11/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	3/12/2015	HM
Nitrate as NO3	EPA300.0	mg/L	237		20	3/11/2015	HM
Nitrate+Nitrite as N	EPA300.0	mg/L	54.0		2.0	3/11/2015	HM
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		2	3/12/2015	TC

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
D = Method deviates from standard method due to insufficient sample for MS/MSD

Odor Threshold at 60 C	SM2150B	TON	2		1	3/11/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.05		0.03	3/11/2015	LRH
pH (Field Test)	SM4500-H+B	pH	6.46			3/10/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	6.7		0.1	3/10/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E		3/16/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.08		0.03	3/23/2015	LRH
Potassium	EPA200.7	mg/L	2.0	J	2.5	3/11/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	2.40		0.5	3/11/2015	MW
QC Ratio TDS/SEC	Calculation		0.67			3/16/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E		3/19/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	39		2.5	3/11/2015	MW
Sodium	EPA200.7	mg/L	120		2.5	3/11/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	131		2.5	3/11/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	1752		1	3/12/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	1828		1	3/10/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	1231		5	3/12/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	197		20	3/12/2015	TC
Temperature (Field)	SM2550	° C	16.7			3/10/2015	MS
Total Diss. Solids	SM2540C	mg/L	1166		10	3/12/2015	HM
Turbidity	EPA180.1	NTU	0.40		0.05	3/12/2015	LRH
Turbidity (Field)	EPA180.1	NTU	1.31		0.05	3/10/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	Attached	E		3/13/2015	BSK
Zinc, Total	EPA200.8	µg/L	43		20	3/12/2015	SM

Sample Comments: Odor:Salty

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
 H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
 D = Method deviates from standard method due to insufficient sample for MS/MSD

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27893 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	120	0.04350	5.22
Potassium	2	0.02558	0.05
Calcium	129	0.04990	6.44
Magnesium	58	0.08229	4.77
NH3-N	0	0.07143	0.00
		SUM	16.48

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	50	0.02000	1.00
Sulfate	197	0.02082	4.10
Chloride	271	0.02821	7.64
Nitrate-Nitrogen	54	0.07138	3.85
Phosphate-P	0.1	0.01031	0.00
Bromide	4.4	0.01252	0.06
		SUM	16.66

ANION-CATION BALANCE **-1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	1752	
Cation Sum X 100	1648	94%
Anion Sum X 100	1666	95%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
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Monterey CA, 93940**

SAMPLE ID **27893 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	131	0.04350	5.70
Potassium	2.4	0.02558	0.06
Calcium	142	0.04990	7.09
Magnesium	62	0.08229	5.10
NH3-N	0	0.07143	0.00
		SUM	17.95

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	50	0.02000	1.00
Sulfate	197	0.02082	4.10
Chloride	271	0.02821	7.64
Nitrate-Nitrogen	54	0.07138	3.85
Phosphate-P	0.1	0.01031	0.00
Bromide	4.4	0.01252	0.06
		SUM	16.66

ANION-CATION BALANCE **4** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	1752	
Cation Sum X 100	1795	102%
Anion Sum X 100	1666	95%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27893 D

Date Analyzed
Thursday, March 12, 2015

	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	6.4	50	80.5	87.8	8.7	98.2	103.5	5.23	0.05
Aluminum	9.4	50	84.3	79.8	5.5	99.9	102.8	2.85	0.63
Copper	6.1	50	92.8	96.2	3.6	100.1	103.3	3.10	0.06
Zinc	43.9	50	91.9	94.8	3.1	103.0	106.0	2.95	0.09
Arsenic	3.7	50	104.4	101.6	2.7	99.1	99.8	0.72	0.03
Strontium	1230.8	50	73.2	87.4	17.7	100.1	99.1	1.03	0.03
Barium	173.4	50	80.1	90.1	11.8	100.0	97.0	3.01	0.00

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference

Batch # 20150311

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	-0.01	0.00	1.03	103.5%	1.05	104.9%	1.3%	1	1.04	103.7%	1	1.0	99.9%
B 249.772	0.05-5ppm	0.00	0.01	1.01	101.5%	1.04	104.1%	2.5%	1	1.02	101.6%	1	1.0	98.2%
Ca 317.933	50-300ppm	-6.21	-6.08	47.2	94.4%	48.0	96.0%	1.7%	50	49.4	98.8%	50	45.1	90.3%
Ca 396.847	0.5-50ppm	-0.60	-0.39	48.6	97.2%	48.9	97.9%	0.7%	50	49.8	99.7%	50	47.1	94.1%
Cu 324.754	10ppb-100ppm	-21.93	-22.48	963	96.3%	982	98.2%	2.0%	1000	998	99.8%	1000	948.7	94.9%
Cu 327.394	10ppb-100ppm	-19.05	-18.94	962	96.2%	983	98.3%	2.1%	1000	987	98.7%	1000	950.5	95.0%
Fe 238.204	10ppb-100ppm	-3.75	-3.15	963	96.3%	983	98.3%	2.0%	1000	1009	100.9%	1000	947.0	94.7%
Fe 259.940	10ppb-100ppm	-3.79	-0.02	963	96.3%	982	98.2%	2.0%	1000	1005	100.5%	1000	961.7	96.2%
K 766.491	0.5-750ppm	-0.29	-0.27	9.7	97.1%	9.9	98.8%	1.7%	10	9.9	99.3%	10	9.5	94.6%
Mg 202.583	50-1000ppm	-2.75	-2.62	47.4	94.8%	48.9	97.8%	3.2%	50	50.2	100.5%	50	47.3	94.6%
Mg 279.073	0.5-50ppm	-0.13	-0.01	48.0	96.0%	49.0	98.0%	2.0%	50	50.5	100.9%	50	47.4	94.7%
Mn 257.611	10ppb-11ppm	-22.38	-19.28	955	95.5%	971	97.1%	1.7%	1000	999	99.9%	1000	948.2	94.8%
Mn 260.561	10ppb-11ppm	-23.41	-21.36	949	94.9%	975	97.5%	2.8%	1000	1003	100.3%	1000	946.7	94.7%
Na 568.822	50-1000ppm	0.46	0.59	45.9	91.8%	47.6	95.3%	3.8%	50	47.5	94.9%	50	46.8	93.6%
Na 589.592	0.5-50ppm	-0.20	-0.07	48.7	97.3%	49.2	98.4%	1.1%	50	49.6	99.2%	50	47.4	94.9%
Si 251.611	0.5-200ppm	-0.23	-0.04	48.4	96.8%	49.2	98.3%	1.6%	50	49.8	99.5%	50	48.4	96.8%
Si 252.411	0.5-200ppm	-0.24	-0.11	48.8	97.6%	49.9	99.8%	2.2%	50	50.4	100.9%	50	48.6	97.2%
Zn 213.857	10ppb-50ppm	-27.69	14.85	983	98.3%	974	97.4%	0.9%	1000	990	99.0%	1000	938.5	93.8%

Sample ID AB27863

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.15	1.13	97.9%	1.14	99.8%	1.6%	1	1.02	101.6%	2.1%	-0.01
B 249.772	0.14	1.14	100.1%	1.15	100.7%	0.5%	1	1.01	101.4%	0.2%	0.00
Ca 317.933	37.5	87.8	100.5%	88.3	101.7%	0.6%	50	49.9	99.7%	0.9%	-6.08
Ca 396.847	40.2	84.8	89.2%	84.2	88.1%	0.7%	50	50.3	100.7%	1.0%	-0.39
Cu 324.754	-22	967	98.8%	965	98.6%	0.2%	1000	1015	101.5%	1.7%	-21.15
Cu 327.395	-18	968	98.6%	963	98.2%	0.5%	1000	1010	101.0%	2.3%	-19.40
Fe 238.204	21	962	94.1%	968	94.7%	0.6%	1000	997	99.7%	1.2%	-3.82
Fe 259.940	20	992	97.2%	987	96.6%	0.5%	1000	1007	100.7%	0.3%	-2.46
K 766.491	1.3	11.2	99.7%	11.2	99.3%	0.3%	10	10.2	101.9%	2.5%	-0.28
Mg 202.588	14.6	65.3	101.4%	65.5	101.7%	0.3%	50	51.7	103.4%	2.9%	-2.62
Mg 279.077	15.7	61.7	92.1%	61.8	92.1%	0.1%	50	50.0	99.9%	1.0%	-0.03
Mn 257.611	-18	954	97.3%	957	97.5%	0.3%	1000	1002	100.2%	0.3%	-20.75
Mn 260.566	-21	967	98.8%	961	98.2%	0.6%	1000	1006	100.6%	0.2%	-22.97
Na 568.827	150.0	202.2	104.5%	200.2	100.4%	1.0%	50	51.5	102.9%	8.1%	0.09
Na 589.592	118.4	131.4	26.0%	131.3	25.8%	0.0%	50	50.9	101.8%	2.6%	0.01
Si 251.611	23.2	69.9	93.4%	70.0	93.6%	0.1%	50	49.9	99.9%	0.4%	-0.13
Si 252.411	22.9	69.4	92.8%	69.8	93.7%	0.6%	50	49.8	99.5%	1.4%	-0.20
Zn 213.857	-25	916	94.1%	927	95.2%	1.2%	1000	996	99.6%	1%	-28.25



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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	9:18
CCV	40	41	102.5	95-105	10:46

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27893	50	50	0.0	5	16:01

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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MBAS QC Summary (SM 5540C)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.001	---	<0.05	857
ICVL	0.050	0.053	106	80-120	858
ICV	0.250	0.241	96.4	80-120	1024

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27891	0.015	0.250	0.245	0.24	92	90	2.1	80/120	10	953

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary

Date: 3/11/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:15
LCSL	0.03	0.03	100	50-150	14:15
ICV	0.10	0.09	90	90-110	14:15
QCS	0.10	0.09	90	80-120	14:15
CCV	0.10	0.09	90	80-120	14:15

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27893	0.05	0.10	0.15	0.15	100	100	0.0	70-130	10	14:15	14:15

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 3/10/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.84	99.7	95-105	1610

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27893	6.7	6.7	0.0	10	1610

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 3/12/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	1540

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27956	4568	4562	0.1%	10	1540

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	1440
ICVL	100	103	103	80-120	1440
ICV	500	488	97.6	90-110	1440

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27956	2811	2863	1.8	10	1440

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/24/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.106	---	<0.5
ICV	5.0	5.3	106	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27966	0.8	5.0	5.4	5.4	92	92	0.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/19/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.04	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.450	90.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27893	ND	0.500	0.520	0.530	104	106	1.9	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID:

20150311

	F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount	2	20	2	20	2	2
ICVB	0.00	0.02	0.01	0.09	0.00	0.00
ICV	1.92	19.89	2.05	19.96	1.85	1.91
Rec 90-110%	95.83	99.47	102.35	99.78	92.60	95.65
ICVL	0.16	1.81	0.18	1.80	0.16	0.22
Rec 50-150%	79.87	90.58	90.03	90.00	82.18	108.71
Sample ID AB27891	0.08	0.05	0.01	0.02	0.00	0.00
MS	1.79	19.13	1.90	18.89	1.66	1.87
Rec 80-120%	85.78	95.42	94.45	94.38	83.05	93.39
MSD	1.79	19.19	1.90	18.89	1.68	1.87
Rec 80-120%	85.76	95.68	94.28	94.34	83.98	93.67
Diff 10%	0.02	0.27	0.18	0.04	1.11	0.30
CCV	1.91	19.94	2.04	19.97	1.84	1.91
Rec 90-110%	95.41	99.71	102.23	99.85	92.23	95.50
Diff 10%	0.44	0.24	0.12	0.07	0.40	0.16
CCVB	0.01	0.04	0.01	0.07	0.00	0.00



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Phosphorus QC Summary (Hach 8190)

Date: 3/23/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:22
LCSL	0.03	0.05	167	50-150	14:22
ICV	1.00	0.93	93	90-110	14:22
QCS	1.00	0.93	93	80-120	14:22
CCV	1.00	0.97	97	80-120	14:22

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		MS Time	MSD Time
								MS/MSD	RPD		
AB27932	0.00	1.00	0.98	0.99	98	99	1.0	70-130	10	14:22	14:22

Note: The recovery percent of the LCSL was over the acceptance criteria. Data was accepted due ICV, QCS ,CCV and MS recovery percents.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

RPD = Relative Percent Difference; Rec = Recovery



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 3/12/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	11:27
ICV	1.00	0.98	98.0%	95-105	11:27

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27893	0.400	0.400	0.00%	10	11:27

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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A5C1133

3/25/2015

Invoice: A506159

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5C1133 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 3/12/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
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Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 3/12/2015 - 08:00 Report Due: 3/26/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Default Cooler Temperature on Receipt °C: 0.7	Containers Intact COC/Labels Agree Preservation Confirmed Received On Wet Ice Packing Material - Bubble Wrap Sample(s) were received in temperature range. Initial receipt at BSK-FAL
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Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5C1133-01
Sampled By: M. Salmon
Sample Description: MW-5S (monitoring) // AB27893

Sample Date - Time: 03/10/15 - 13:40
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A503030	03/18/15	03/19/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A503030	03/18/15	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	105 %	Acceptable range: 70-130 %						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502899	03/15/15	03/16/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502899	03/15/15	03/16/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502899	03/15/15	03/16/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502899	03/15/15	03/16/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502899	03/15/15	03/16/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502899	03/15/15	03/16/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502899	03/15/15	03/16/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502899	03/15/15	03/16/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502899	03/15/15	03/16/15	
Surrogate: DCPAA	EPA 515.3	81 %	Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502848	03/13/15	03/13/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502848	03/13/15	03/13/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502848	03/13/15	03/13/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502848	03/13/15	03/13/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A502848	03/13/15	03/13/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	

Certificate of Analysis

Sample ID: A5C1133-01
Sampled By: M. Salmon
Sample Description: MW-5S (monitoring) // AB27893

Sample Date - Time: 03/10/15 - 13:40
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	BS1.0, CV0.0
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502848	03/13/15	03/13/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502848	03/13/15	03/13/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502848	03/13/15	03/13/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Toluene	EPA 524.2	0.64	0.50	ug/L	1	A502848	03/13/15	03/13/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502848	03/13/15	03/13/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502848	03/13/15	03/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	82 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	87 %	Acceptable range: 70-130 %						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5C1133-01
Sampled By: M. Salmon
Sample Description: MW-5S (monitoring) // AB27893

Sample Date - Time: 03/10/15 - 13:40
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503033	03/18/15	03/19/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503033	03/18/15	03/19/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	103 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503147	03/19/15	03/20/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503147	03/19/15	03/20/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503147	03/19/15	03/20/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503147	03/19/15	03/20/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503147	03/19/15	03/20/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503147	03/19/15	03/20/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503147	03/19/15	03/20/15	BS1.0, CV0.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503147	03/19/15	03/20/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503147	03/19/15	03/20/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503147	03/19/15	03/20/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502850	03/13/15	03/13/15	
Surrogate: AMPA	EPA 547	100 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502897	03/14/15	03/18/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502842	03/13/15	03/17/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A503030

Prepared: 03/18/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A503030-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/18/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		98	70-130			03/18/15	

Blank Spike (A503030-BS1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		102	70-130			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		94	70-130			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/18/15	

Blank Spike Dup (A503030-BSD1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		105	70-130	3	20	03/19/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	4	20	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		101	70-130			03/19/15	

Matrix Spike (A503030-MS1), Source: A5C0852-01

Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12	ND	105	65-135			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	98	65-135			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.45		101	70-130			03/18/15	

EPA 515.3 - Quality Control

Batch: A502899

Prepared: 03/15/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502899-BLK1)

2,4,5-T	ND	1.0	ug/L							03/16/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/16/15	
2,4-D	ND	10	ug/L							03/16/15	
Bentazon	ND	2.0	ug/L							03/16/15	
Dalapon	ND	10	ug/L							03/16/15	
Dicamba	ND	1.5	ug/L							03/16/15	
Dinoseb	ND	2.0	ug/L							03/16/15	
Pentachlorophenol	ND	0.20	ug/L							03/16/15	
Picloram	ND	1.0	ug/L							03/16/15	
Surrogate: DCPAA	59			58		102	70-130			03/16/15	

Blank Spike (A502899-BS1)

2,4,5-T	3.8	1.0	ug/L	4.0		96	70-130			03/16/15	
2,4,5-TP (Silvex)	0.74	1.0	ug/L	0.80		93	70-130			03/16/15	
2,4-D	0.39	10	ug/L	0.40		97	70-130			03/16/15	
Bentazon	8.0	2.0	ug/L	8.0		100	70-130			03/16/15	
Dalapon	3.9	10	ug/L	4.0		97	70-130			03/16/15	
Dicamba	5.7	1.5	ug/L	6.0		96	70-130			03/16/15	
Dinoseb	0.79	2.0	ug/L	0.80		98	70-130			03/16/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		95	70-130			03/16/15	
Picloram	0.38	1.0	ug/L	0.40		95	70-130			03/16/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502899

Prepared: 03/15/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502899-BS1)

Surrogate: DCPAA	59			58		102	70-130			03/16/15	
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Blank Spike Dup (A502899-BSD1)

2,4,5-T	3.8	1.0	ug/L	4.0		96	70-130	1	20	03/16/15	
2,4,5-TP (Silvex)	0.76	1.0	ug/L	0.80		95	70-130	3	20	03/16/15	
2,4-D	0.40	10	ug/L	0.40		99	70-130	2	20	03/16/15	
Bentazon	7.5	2.0	ug/L	8.0		94	70-130	6	20	03/16/15	
Dalapon	4.0	10	ug/L	4.0		100	70-130	2	20	03/16/15	
Dicamba	5.8	1.5	ug/L	6.0		97	70-130	1	20	03/16/15	
Dinoseb	0.80	2.0	ug/L	0.80		100	70-130	1	20	03/16/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		96	70-130	1	20	03/16/15	
Picloram	0.40	1.0	ug/L	0.40		101	70-130	6	20	03/16/15	
Surrogate: DCPAA	58			58		101	70-130			03/16/15	

Matrix Spike (A502899-MS1), Source: A5C1117-01

2,4,5-T	3.9	1.0	ug/L	4.0	ND	98	70-130			03/16/15	
2,4,5-TP (Silvex)	0.74	1.0	ug/L	0.80	ND	93	70-130			03/16/15	
2,4-D	0.40	10	ug/L	0.40	ND	100	70-130			03/16/15	
Bentazon	8.2	2.0	ug/L	8.0	ND	102	70-130			03/16/15	
Dalapon	4.1	10	ug/L	4.0	ND	102	70-130			03/16/15	
Dicamba	5.9	1.5	ug/L	6.0	ND	99	70-130			03/16/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130			03/16/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130			03/16/15	
Picloram	0.40	1.0	ug/L	0.40	ND	101	70-130			03/16/15	
Surrogate: DCPAA	60			58		103	70-130			03/16/15	

Matrix Spike Dup (A502899-MSD1), Source: A5C1117-01

2,4,5-T	3.9	1.0	ug/L	4.0	ND	99	70-130	1	20	03/16/15	
2,4,5-TP (Silvex)	0.73	1.0	ug/L	0.80	ND	91	70-130	2	20	03/16/15	
2,4-D	0.40	10	ug/L	0.40	ND	100	70-130	0	20	03/16/15	
Bentazon	8.3	2.0	ug/L	8.0	ND	104	70-130	2	20	03/16/15	
Dalapon	4.1	10	ug/L	4.0	ND	102	70-130	0	20	03/16/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	99	70-130	0	20	03/16/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130	0	20	03/16/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130	0	20	03/16/15	
Picloram	0.41	1.0	ug/L	0.40	ND	103	70-130	2	20	03/16/15	
Surrogate: DCPAA	60			58		104	70-130			03/16/15	

EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502848-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							03/13/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							03/13/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502848-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							03/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							03/13/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							03/13/15	
1,1-Dichloroethane	ND	0.50	ug/L							03/13/15	
1,1-Dichloroethene	ND	0.50	ug/L							03/13/15	
1,1-Dichloropropene	ND	0.50	ug/L							03/13/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							03/13/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							03/13/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							03/13/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							03/13/15	
1,2-Dichloroethane	ND	0.50	ug/L							03/13/15	
1,2-Dichloropropane	ND	0.50	ug/L							03/13/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							03/13/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							03/13/15	
1,3-Dichloropropane	ND	0.50	ug/L							03/13/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							03/13/15	
2,2-Dichloropropane	ND	0.50	ug/L							03/13/15	
2-Butanone	ND	5.0	ug/L							03/13/15	
2-Chlorotoluene	ND	0.50	ug/L							03/13/15	
2-Hexanone	ND	10	ug/L							03/13/15	
4-Chlorotoluene	ND	0.50	ug/L							03/13/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							03/13/15	
Acetone	ND	10	ug/L							03/13/15	
Benzene	ND	0.50	ug/L							03/13/15	
Bromobenzene	ND	0.50	ug/L							03/13/15	
Bromochloromethane	ND	0.50	ug/L							03/13/15	
Bromodichloromethane	ND	0.50	ug/L							03/13/15	
Bromoform	ND	0.50	ug/L							03/13/15	
Bromomethane	ND	0.50	ug/L							03/13/15	
Carbon Tetrachloride	ND	0.50	ug/L							03/13/15	
Chlorobenzene	ND	0.50	ug/L							03/13/15	
Chloroethane	ND	0.50	ug/L							03/13/15	
Chloroform	ND	0.50	ug/L							03/13/15	
Chloromethane	ND	0.50	ug/L							03/13/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							03/13/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							03/13/15	
Dibromochloromethane	ND	0.50	ug/L							03/13/15	
Dibromomethane	ND	0.50	ug/L							03/13/15	
Dichlorodifluoromethane	ND	0.50	ug/L							03/13/15	
Dichloromethane	ND	0.50	ug/L							03/13/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							03/13/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							03/13/15	
Ethylbenzene	ND	0.50	ug/L							03/13/15	
Hexachlorobutadiene	ND	0.50	ug/L							03/13/15	
Isopropylbenzene	ND	0.50	ug/L							03/13/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502848-BLK1)

m,p-Xylenes	ND	0.50	ug/L							03/13/15	
Methyl-t-butyl ether	ND	0.50	ug/L							03/13/15	
Naphthalene	ND	0.50	ug/L							03/13/15	
n-Butylbenzene	ND	0.50	ug/L							03/13/15	
n-Propylbenzene	ND	0.50	ug/L							03/13/15	
o-Xylene	ND	0.50	ug/L							03/13/15	
p-Isopropyltoluene	ND	0.50	ug/L							03/13/15	
sec-Butylbenzene	ND	0.50	ug/L							03/13/15	
Styrene	ND	0.50	ug/L							03/13/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							03/13/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							03/13/15	
tert-Butylbenzene	ND	0.50	ug/L							03/13/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							03/13/15	
Toluene	ND	0.50	ug/L							03/13/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							03/13/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							03/13/15	
Trichloroethene (TCE)	ND	0.50	ug/L							03/13/15	
Trichlorofluoromethane	ND	5.0	ug/L							03/13/15	
Vinyl Chloride	ND	0.50	ug/L							03/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.2			5.0		83	70-130			03/13/15	
Surrogate: Bromofluorobenzene	45			50		90	70-130			03/13/15	

Blank Spike (A502848-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			03/13/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		101	70-130			03/13/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130			03/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130			03/13/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/13/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			03/13/15	
1,1-Dichloroethene	10	0.50	ug/L	10		101	70-130			03/13/15	
1,1-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/13/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			03/13/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		109	70-130			03/13/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			03/13/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		102	70-130			03/13/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/13/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			03/13/15	
1,3,5-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		101	70-130			03/13/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			03/13/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		101	70-130			03/13/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130			03/13/15	
2-Butanone	11	5.0	ug/L	10		109	70-130			03/13/15	
2-Chlorotoluene	10	0.50	ug/L	10		101	70-130			03/13/15	
2-Hexanone	10	10	ug/L	10		102	70-130			03/13/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502848-BS1)

4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/13/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		100	70-130			03/13/15	
Acetone	9.5	10	ug/L	10		95	70-130			03/13/15	
Benzene	10	0.50	ug/L	10		102	70-130			03/13/15	
Bromobenzene	10	0.50	ug/L	10		102	70-130			03/13/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			03/13/15	
Bromodichloromethane	10	0.50	ug/L	10		103	70-130			03/13/15	
Bromoform	10	0.50	ug/L	10		104	70-130			03/13/15	
Bromomethane	11	0.50	ug/L	10		105	70-130			03/13/15	
Carbon Tetrachloride	10	0.50	ug/L	10		100	70-130			03/13/15	
Chlorobenzene	10	0.50	ug/L	10		101	70-130			03/13/15	
Chloroethane	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Chloroform	10	0.50	ug/L	10		102	70-130			03/13/15	
Chloromethane	12	0.50	ug/L	10		121	70-130			03/13/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			03/13/15	
cis-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Dibromochloromethane	10	0.50	ug/L	10		104	70-130			03/13/15	
Dibromomethane	10	0.50	ug/L	10		103	70-130			03/13/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		152	70-130			03/13/15	BS High
Dichloromethane	10	0.50	ug/L	10		102	70-130			03/13/15	
Di-isopropyl ether (DIPE)	9.7	3.0	ug/L	10		97	70-130			03/13/15	
Ethyl tert-Butyl Ether (ETBE)	9.5	0.50	ug/L	10		95	70-130			03/13/15	
Ethylbenzene	10	0.50	ug/L	10		100	70-130			03/13/15	
Hexachlorobutadiene	10	0.50	ug/L	10		102	70-130			03/13/15	
Isopropylbenzene	10	0.50	ug/L	10		100	70-130			03/13/15	
m,p-Xylenes	20	0.50	ug/L	20		100	70-130			03/13/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130			03/13/15	
Naphthalene	9.7	0.50	ug/L	10		97	70-130			03/13/15	
n-Butylbenzene	11	0.50	ug/L	10		108	70-130			03/13/15	
n-Propylbenzene	10	0.50	ug/L	10		100	70-130			03/13/15	
o-Xylene	9.9	0.50	ug/L	10		99	70-130			03/13/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Styrene	11	0.50	ug/L	10		115	70-130			03/13/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		101	70-130			03/13/15	
tert-Butyl alcohol (TBA)	9.0	2.0	ug/L	10		90	70-130			03/13/15	
tert-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Toluene	10	0.50	ug/L	10		101	70-130			03/13/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130			03/13/15	
trans-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130			03/13/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			03/13/15	
Trichlorofluoromethane	11	5.0	ug/L	10		108	70-130			03/13/15	
Vinyl Chloride	12	0.50	ug/L	10		122	70-130			03/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.2			5.0		103	70-130			03/13/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502848-BS1)

Surrogate: Bromofluorobenzene 50 50 100 70-130 03/13/15

Blank Spike Dup (A502848-BSD1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10		105	70-130	1	30	03/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.4	10	ug/L	10		94	70-130	1	30	03/13/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130	0	30	03/13/15	
1,1-Dichloroethene	10	0.50	ug/L	10		103	70-130	1	30	03/13/15	
1,1-Dichloropropene	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		103	70-130	2	30	03/13/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		110	70-130	1	30	03/13/15	
1,2,4-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	0	30	03/13/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130	0	30	03/13/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130	0	30	03/13/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	1	30	03/13/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130	1	30	03/13/15	
2,2-Dichloropropane	9.7	0.50	ug/L	10		97	70-130	1	30	03/13/15	
2-Butanone	11	5.0	ug/L	10		106	70-130	3	30	03/13/15	
2-Chlorotoluene	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
2-Hexanone	10	10	ug/L	10		100	70-130	2	30	03/13/15	
4-Chlorotoluene	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	2	30	03/13/15	
Acetone	9.0	10	ug/L	10		90	70-130	5	30	03/13/15	
Benzene	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
Bromobenzene	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
Bromochloromethane	10	0.50	ug/L	10		104	70-130	1	30	03/13/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
Bromoform	10	0.50	ug/L	10		101	70-130	3	30	03/13/15	
Bromomethane	11	0.50	ug/L	10		106	70-130	1	30	03/13/15	
Carbon Tetrachloride	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
Chlorobenzene	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
Chloroethane	9.8	0.50	ug/L	10		98	70-130	1	30	03/13/15	
Chloroform	10	0.50	ug/L	10		102	70-130	1	30	03/13/15	
Chloromethane	12	0.50	ug/L	10		123	70-130	1	30	03/13/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	0	30	03/13/15	
Dibromochloromethane	10	0.50	ug/L	10		102	70-130	2	30	03/13/15	
Dibromomethane	10	0.50	ug/L	10		103	70-130	1	30	03/13/15	
Dichlorodifluoromethane	16	0.50	ug/L	10		157	70-130	3	30	03/13/15	BS High
Dichloromethane	10	0.50	ug/L	10		103	70-130	1	30	03/13/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502848

Prepared: 03/13/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502848-BSD1)

Di-isopropyl ether (DIPE)	9.7	3.0	ug/L	10		97	70-130	0	30	03/13/15	
Ethyl tert-Butyl Ether (ETBE)	9.5	0.50	ug/L	10		95	70-130	0	30	03/13/15	
Ethylbenzene	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
Hexachlorobutadiene	10	0.50	ug/L	10		103	70-130	1	30	03/13/15	
Isopropylbenzene	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
m,p-Xylenes	20	0.50	ug/L	20		101	70-130	1	30	03/13/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	0	30	03/13/15	
Naphthalene	10	0.50	ug/L	10		101	70-130	5	30	03/13/15	
n-Butylbenzene	11	0.50	ug/L	10		110	70-130	2	30	03/13/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130	1	30	03/13/15	
o-Xylene	10	0.50	ug/L	10		101	70-130	2	30	03/13/15	
p-Isopropyltoluene	9.9	0.50	ug/L	10		99	70-130	1	30	03/13/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130	1	30	03/13/15	
Styrene	12	0.50	ug/L	10		116	70-130	1	30	03/13/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		101	70-130	1	30	03/13/15	
tert-Butyl alcohol (TBA)	9.2	2.0	ug/L	10		92	70-130	2	30	03/13/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	1	30	03/13/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	0	30	03/13/15	
Toluene	10	0.50	ug/L	10		102	70-130	0	30	03/13/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130	1	30	03/13/15	
trans-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	0	30	03/13/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130	1	30	03/13/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130	2	30	03/13/15	
Vinyl Chloride	12	0.50	ug/L	10		124	70-130	2	30	03/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			03/13/15	
Surrogate: Bromofluorobenzene	50			50		100	70-130			03/13/15	

EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Alachlor	ND	1.0	ug/L							03/19/15	
Atrazine	ND	0.50	ug/L							03/19/15	
Benzo(a)pyrene	ND	0.10	ug/L							03/19/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							03/19/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							03/19/15	
Bromacil	ND	10	ug/L							03/19/15	
Butachlor	ND	0.38	ug/L							03/19/15	
Diazinon	ND	0.25	ug/L							03/19/15	
Dimethoate	ND	10	ug/L							03/19/15	
Metolachlor	ND	0.50	ug/L							03/19/15	
Metribuzin	ND	0.50	ug/L							03/19/15	
Molinate	ND	2.0	ug/L							03/19/15	
Prometryn	ND	2.0	ug/L							03/19/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Propachlor	ND	0.50	ug/L							03/19/15	
Simazine	ND	1.0	ug/L							03/19/15	
Thiobencarb	ND	1.0	ug/L							03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		96	70-130			03/19/15	

Blank Spike (A503033-BS1)

Alachlor	0.53	1.0	ug/L	0.50		107	70-130			03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		100	70-130			03/19/15	
Benzo(a)pyrene	0.036	0.10	ug/L	0.050		72	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		112	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.84	3.0	ug/L	0.75		113	70-130			03/19/15	
Bromacil	0.54	10	ug/L	0.50		107	70-130			03/19/15	
Butachlor	0.53	0.38	ug/L	0.50		107	70-130			03/19/15	
Diazinon	0.082	0.25	ug/L	0.10		82	70-130			03/19/15	
Dimethoate	0.50	10	ug/L	0.50		100	70-130			03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		100	70-130			03/19/15	
Metribuzin	0.50	0.50	ug/L	0.50		100	70-130			03/19/15	
Molinate	0.49	2.0	ug/L	0.50		98	70-130			03/19/15	
Prometryn	0.85	2.0	ug/L	1.0		85	70-130			03/19/15	
Propachlor	0.26	0.50	ug/L	0.25		105	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18		98	70-130			03/19/15	
Thiobencarb	0.25	1.0	ug/L	0.25		100	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.6			5.0		92	70-130			03/19/15	

Blank Spike Dup (A503033-bsd1)

Alachlor	0.55	1.0	ug/L	0.50		109	70-130	2	30	03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		102	70-130	2	30	03/19/15	
Benzo(a)pyrene	0.035	0.10	ug/L	0.050		70	70-130	3	30	03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		111	70-130	1	30	03/19/15	
Bis(2-ethylhexyl) phthalate	0.83	3.0	ug/L	0.75		111	70-130	1	30	03/19/15	
Bromacil	0.62	10	ug/L	0.50		123	70-130	14	30	03/19/15	
Butachlor	0.55	0.38	ug/L	0.50		109	70-130	2	30	03/19/15	
Diazinon	0.085	0.25	ug/L	0.10		85	70-130	4	30	03/19/15	
Dimethoate	0.63	10	ug/L	0.50		126	70-130	24	30	03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		104	70-130	4	30	03/19/15	
Metribuzin	0.54	0.50	ug/L	0.50		109	70-130	8	30	03/19/15	
Molinate	0.50	2.0	ug/L	0.50		100	70-130	1	30	03/19/15	
Prometryn	0.87	2.0	ug/L	1.0		87	70-130	2	30	03/19/15	
Propachlor	0.29	0.50	ug/L	0.25		117	70-130	11	30	03/19/15	
Simazine	0.18	1.0	ug/L	0.18		103	70-130	5	30	03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25		104	70-130	4	30	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		100	70-130			03/19/15	

Matrix Spike (A503033-MS1), Source: A5C0856-01

Alachlor	0.57	1.0	ug/L	0.51	ND	113	70-130			03/19/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A503033-MS1), Source: A5C0856-01

Atrazine	0.27	0.50	ug/L	0.25	ND	105	70-130			03/19/15	
Benzo(a)pyrene	0.040	0.10	ug/L	0.051	ND	78	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0	ND	110	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.92	3.0	ug/L	0.76	ND	121	70-130			03/19/15	
Bromacil	0.67	10	ug/L	0.51	ND	132	70-130			03/19/15	MS1.0 High
Butachlor	0.57	0.38	ug/L	0.51	ND	113	70-130			03/19/15	
Diazinon	0.10	0.25	ug/L	0.10	ND	102	70-130			03/19/15	
Dimethoate	0.59	10	ug/L	0.51	ND	116	70-130			03/19/15	
Metolachlor	1.1	0.50	ug/L	1.0	ND	106	70-130			03/19/15	
Metribuzin	0.56	0.50	ug/L	0.51	ND	111	70-130			03/19/15	
Molinate	0.52	2.0	ug/L	0.51	ND	102	70-130			03/19/15	
Prometryn	0.98	2.0	ug/L	1.0	ND	96	70-130			03/19/15	
Propachlor	0.27	0.50	ug/L	0.25	ND	107	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18	ND	98	70-130			03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25	ND	101	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.3			5.1		104	70-130			03/19/15	

EPA 531.1 - Quality Control

Batch: A503147

Prepared: 03/19/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A503147-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/19/15	
Aldicarb	ND	3.0	ug/L							03/19/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/19/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/19/15	
Carbaryl	ND	5.0	ug/L							03/19/15	
Carbofuran	ND	5.0	ug/L							03/19/15	
Methiocarb	ND	2.0	ug/L							03/19/15	
Methomyl	ND	2.0	ug/L							03/19/15	
Oxamyl	ND	20	ug/L							03/19/15	
Propoxur	ND	2.0	ug/L							03/19/15	

Blank Spike (A503147-BS1)

3-Hydroxycarbofuran	4.4	3.0	ug/L	4.0		109	80-120			03/19/15	
Aldicarb	4.2	3.0	ug/L	4.0		105	80-120			03/19/15	
Aldicarb Sulfone	4.5	2.0	ug/L	4.0		112	80-120			03/19/15	
Aldicarb Sulfoxide	4.6	3.0	ug/L	4.0		114	80-120			03/19/15	
Carbaryl	4.6	5.0	ug/L	4.0		114	80-120			03/19/15	
Carbofuran	4.4	5.0	ug/L	4.0		111	80-120			03/19/15	
Methiocarb	4.5	2.0	ug/L	4.0		112	80-120			03/19/15	
Methomyl	4.7	2.0	ug/L	4.0		117	80-120			03/19/15	
Oxamyl	4.5	20	ug/L	4.0		112	80-120			03/19/15	
Propoxur	4.3	2.0	ug/L	4.0		107	80-120			03/19/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A503147

Prepared: 03/19/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A503147-BSD1)

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0		112	80-120	3	20	03/20/15	
Aldicarb	4.6	3.0	ug/L	4.0		115	80-120	9	20	03/20/15	
Aldicarb Sulfone	4.4	2.0	ug/L	4.0		110	80-120	2	20	03/20/15	
Aldicarb Sulfoxide	4.5	3.0	ug/L	4.0		114	80-120	0	20	03/20/15	
Carbaryl	4.5	5.0	ug/L	4.0		113	80-120	1	20	03/20/15	
Carbofuran	4.6	5.0	ug/L	4.0		114	80-120	3	20	03/20/15	
Methiocarb	4.4	2.0	ug/L	4.0		109	80-120	3	20	03/20/15	
Methomyl	4.8	2.0	ug/L	4.0		121	80-120	3	20	03/20/15	BS High
Oxamyl	4.5	20	ug/L	4.0		113	80-120	1	20	03/20/15	
Propoxur	4.4	2.0	ug/L	4.0		109	80-120	2	20	03/20/15	

Matrix Spike (A503147-MS1), Source: A5C1133-01

3-Hydroxycarbofuran	4.6	3.0	ug/L	4.0	ND	116	65-135			03/19/15	
Aldicarb	5.0	3.0	ug/L	4.0	ND	106	65-135			03/19/15	
Aldicarb Sulfone	4.5	2.0	ug/L	4.0	ND	111	65-135			03/19/15	
Aldicarb Sulfoxide	4.6	3.0	ug/L	4.0	ND	115	65-135			03/19/15	
Carbaryl	4.5	5.0	ug/L	4.0	ND	114	65-135			03/19/15	
Carbofuran	4.6	5.0	ug/L	4.0	ND	115	65-135			03/19/15	
Methiocarb	4.5	2.0	ug/L	4.0	ND	114	65-135			03/19/15	
Methomyl	4.6	2.0	ug/L	4.0	ND	116	65-135			03/19/15	
Oxamyl	4.6	20	ug/L	4.0	ND	115	65-135			03/19/15	
Propoxur	4.6	2.0	ug/L	4.0	ND	114	65-135			03/19/15	

EPA 547 - Quality Control

Batch: A502850

Prepared: 03/13/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502850-BLK1)

Glyphosate	ND	25	ug/L							03/13/15	
Surrogate: AMPA	110			100		108	70-130			03/13/15	

Blank Spike (A502850-BS1)

Glyphosate	86	25	ug/L	100		86	70-130			03/13/15	
Surrogate: AMPA	90			100		90	70-130			03/13/15	

Blank Spike Dup (A502850-BSD1)

Glyphosate	90	25	ug/L	100		90	70-130	4	30	03/13/15	
Surrogate: AMPA	110			100		112	70-130			03/13/15	

Matrix Spike (A502850-MS1), Source: A5C0898-01

Glyphosate	130	25	ug/L	100	ND	127	70-130			03/13/15	
Surrogate: AMPA	110			100		110	70-130			03/13/15	

Matrix Spike Dup (A502850-MSD1), Source: A5C0898-01

Glyphosate	92	25	ug/L	100	ND	91	70-130	33	30	03/13/15	MS1.0
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502850

Prepared: 03/13/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502850-MSD1), Source: A5C0898-01

Surrogate: AMPA 110 100 104 70-130 03/13/15

EPA 548.1 - Quality Control

Batch: A502897

Prepared: 03/14/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502897-BLK1)

Endothall ND 45 ug/L 03/18/15

Blank Spike (A502897-BS1)

Endothall 13 45 ug/L 20 65 54-105 03/18/15

Blank Spike Dup (A502897-BSD1)

Endothall 12 45 ug/L 20 61 54-105 6 46 03/18/15

Matrix Spike (A502897-MS1), Source: A5C1078-03

Endothall ND 45 ug/L 20 ND 0 54-105 03/18/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A502842

Prepared: 03/13/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502842-BLK1)

Diquat ND 4.0 ug/L 03/17/15

Blank Spike (A502842-BS1)

Diquat 3.1 4.0 ug/L 4.0 78 70-130 03/17/15

Blank Spike Dup (A502842-BSD1)

Diquat 3.4 4.0 ug/L 4.0 84 70-130 7 30 03/17/15

Matrix Spike (A502842-MS1), Source: A5C0711-01

Diquat 2.8 4.0 ug/L 4.0 ND 70 70-130 03/17/15

Matrix Spike (A502842-MS2), Source: A5C0711-02

Diquat 2.9 4.0 ug/L 4.0 ND 71 70-130 03/17/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5C1133



03122015

Monte6227

Turnaround: Standard

Due Date: 3/26/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

0.7

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed: _____

A5C1133
 Monte6227

03/12/2015

10



Page 19 of 20

*Required Fields

Temp: _____

Company/Client Name*: **Monterey Bay Analytical Services**

Report Attention*: **Mason Weidner-Holland**

Invoice To*: **David Holland**

Phone*: **831-375-6227**

Fax: **831-641-0734**

Additional cc's: **David Holland**

PO#: _____

E-mail*: **mweidner@mbasinc.com, dholland@mbasinc.com**

Address*: **4 Justin Court, Suite D**

City*: **Monterey**

State*: **CA**

Zip*: **93940**

Project: **Cal Am**

Project #: _____

How would you like to receive your completed results?*

E-Mail Fax Mail

Reporting Options:

Trace (J-Flag) Swamp EDD Type: _____

Regulatory Carbon Copies

SWRCB (Drinking Water)

Merced Co Fresno Co

Madera Co Tulare Co

Other: _____

Regulatory Compliance

EDT to California SWRCB (Drinking Water)

System Number*: _____

Geotracker #: _____

Sampler Name (Printed/Signature)*: **M. Salmon**

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
1	MW-5S (monitoring)	3/10/15	1340	GW	AB27893	X	X	X	X	X	X	X	X
<p><i>please include excell report</i></p>													

Relinquished by: (Signature and Printed Name) **D. Holland**

Company: **MBAS**

Date: **3/11/15**

Time: **1600**

Received by: (Signature and Printed Name) _____

Company: _____

Relinquished by: (Signature and Printed Name) _____

Company: _____

Date: _____

Time: _____

Received by: (Signature and Printed Name) _____

Company: _____

Received for Lab by: (Signature and Printed Name) **M. Salmon**

Company: **BSK**

Date: **3/11/15**

Time: **1600**

Payment Received at Delivery: _____

Check / Cash

Amount: _____

PIA#: _____

Init: _____

Shipping Method: CONTRAC UPS GSO WALK-IN FED EX Courier: _____

Cooling Method: Wet Blue None

Custody Seal: **Y/N**

Chilling Process Begun: **Y/N**

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$ <u>0.7</u>			Yes	No	NA	Were correct containers and preservatives received for the tests requested?			Yes	No	NA	
	If samples were taken today, is there evidence that chilling has begun?			Yes	No	NA	Were there bubbles in the VOA vials? (Volatiles Only)			Yes	No	NA	
	Did all bottles arrive unbroken and intact?			Yes	No	NA	Was a sufficient amount of sample received?			Yes	No	NA	
	Did all bottle labels agree with COC?			Yes	No	NA	Do samples have a hold time <72 hours?			Yes	No	NA	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?			Yes	No	NA	Was PM notified of discrepancies? PM: _____ By/Time: _____			Yes	No	NA	
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?										
	Bacti Na ₂ S ₂ O ₃	—	—										
	None (P) ^{White Cap}	—	—										
	Cr6 (P) ^{Br. Green Label} NH ₄ OH/(NH ₄) ₂ SO ₄ DW	pH > 8	Y	N									
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW	pH 9-9.5	Y	N									
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW	pH 9.3-9.7	Y	N									
	HNO ₃ (P) ^{Red Cap}	—	—										
	H ₂ SO ₄ (P) or (AG) ^{Yellow Cap/Label}	pH < 2	Y	N									
	NaOH (P) ^{Green Cap}	Cl, pH > 10	Y	N									
	NaOH + ZnAc (P)	pH > 9	Y	N									
	Dissolved Oxygen 300ml (g)	—	—										
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—										
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel	—	—										
	Na ₂ O ₃ S+HCl (AG) ^{Lt. Pink Label} 525	—	—										
	Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549	—	—										
	Na ₂ S ₂ O ₃ (AG) ^{Blue Label} 547, 515, 548, THM, 524	—	—										
	Na ₂ S ₂ O ₃ (CG) ^{Blue Label} 504, 505	—	—										
	Na ₂ S ₂ O ₃ + MCAA (CG) ^{Orange Label} 531	pH < 3	Y	N									
	NH ₄ Cl (AG) ^{Purple Label} 552	—	—										
	EDA (AG) ^{Brown Label} DBPs	—	—										
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—										
	Buffer pH 4 (CG)	—	—										
	None (CG)	—	—										
	H ₃ PO ₄ (CG) ^{Salmon Label}	—	—										
	Other:												
Asbestos 1Liter Plastic w/ Foil	—	—											
Low Level Hg / Metals Double Baggie	—	—											
Bottled Water	—	—											
Clear Glass Jar: 250 / 500 / 1 Liter	—	—											
Soil Tube Brass / Steel / Plastic	—	—											
Tedlar Bag / Plastic Bag	—	—											
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials							
	S P			S P									
	S P			S P									
Comments													

J 3/12/15

2C
1C
20/4V

3V

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

March 18, 2015

Ceres ID: 10619

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on March 12, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

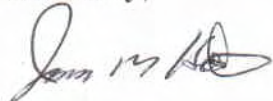
This work was authorized under M.B.A.'s Project # AB27893.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10619-001	MW-5S (monitoring)	3/12/2015	3/10/2015 13:40

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27893		Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
					ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.59			<u>IS</u> ¹³ C-2,3,7,8-TCDD	97.0	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	89.2	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27893		Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
					ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	106	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-5S (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10619-001		Date Received: 12-Mar-15
Project: AB27893			Sample Size: 1.009 L		QC Batch #: 1301		Date Extracted: 16-Mar-15
Date Collected: 10-Mar-15					ZB-5 MS Analysis Date: 17-Mar-15		
Time Collected: 13:40							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.32			IS ¹³ C-2,3,7,8-TCDD	97.0	31 - 137
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	89.5	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10619
 Temperature: 0.4 °C

Reports and invoices will be delivered by email in .pdf format


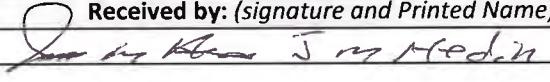
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Monterey Bay Analytical</u> Contact Name: <u>David Holland</u> Address: <u>4 Justin Court Ste D Monterey CA 93940</u> Ph: <u>831-375-6227</u> Email: <u>mweidner@mbasinc.com</u>	Company Name: <u>Same</u> Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection				Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF		
		Date	Time											<input type="checkbox"/> 1998 WHO	<input type="checkbox"/> 2005 WHO	<input type="checkbox"/> Other
1	MW-5S (monitoring)	3/10/2015	1340	0:00	Aq	2	X									AB27893
2																(2,3,7,8 TCDD only)
3																Please include excel
4																report
5																
6																
7																
8																
9																
10																
11																
12																

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
	3/11/2015	16:00		3/12/15	10:35

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: 10619	Date/Time: 3/12/15 10:35
Client Project ID: AD27893	Received Temperature: 0.4°C Acceptable: Y/N
Chain of Custody Relinquished by signed?	Y/N
Custody Seals? Present?	Y/N
	Intact?
	NA: NA
Unlabeled / Illegible Samples	Y/N N
Proper Containers:	Y/N Y
Preservation Acceptable (Chemical or <u>Temperature</u>)?	Y/N Y
Drinking Water, Sodium Thiosulfate present?	Y/N NA
List COC discrepancies:	
3/12/15	
List Damaged Samples:	
3/12/15	

Ceres ID: 10619 PB: 1301 Sample #: 1 Due Date: 3/26/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Method: 1613B
 SOP #: 201.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		chem/date/witness
0-1301-MB001	Method Blank		1.0002	J 3/17/15 NA	J 3/17/15 NA	NA	3/17/15	NA	J 3/17/15 NA
0-1301-OPR001	OPR		1.0002	(A) ↓	↓	↓	↓	↓	↓
10619-1301-001	MW-5S (monitoring)	✓	1.0092	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:15 3/18/15
 Soxhlet Stop: _____

Samples Logged out by: J 08:00 3/18/15
 Samples Returned by: NA
 Note samples Depleted: JA

Sample Extracts Storage Location: Box 15
 Extracts to Instrument: 12:20 3/17/15 J
 Extracts returned to Storage Location: 08:27 3/18/15 J

Chemist: J


Method: 8290A/1613B
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	502115A	102	2/11/20
NSS	B	1	1
CSS	C	1	1
RSS	D	202	1

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	20,30,100,20	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122314A	6/23/15
Na2SO4	1.5g	P101814A	4/16/15
20% Dcm; Hex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/31/15 15:24
Attention: David Holland	Received Date: 03/12/15 09:00
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5C12026	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear David Holland :

Enclosed are the results of analyses for samples received 03/12/15 09:00 with the Chain of Custody document. The samples were received in good condition, at 5.5 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

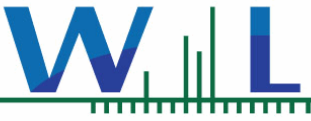
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-5S(Monitoring)	M.Salmon	AB27893	5C12026-01	Water	03/10/15 13:40

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

5C12026-01 MW-5S(Monitoring)

Sampled: 03/10/15 13:40

Sampled By: M.Salmon

Matrix: Water

Sample Note: AB27893

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5C1170

Prepared: 03/19/15 12:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	10	ug/l	1	03/19/15 15:39	

Chlorinated Pesticides and/or PCBs

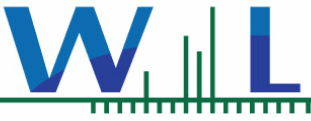
Method: EPA 508

Batch: W5C0924

Prepared: 03/17/15 08:24

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/24/15 21:43	
4,4'-DDE	ND	0.010	ug/l	1	03/24/15 21:43	
4,4'-DDT	ND	0.010	ug/l	1	03/24/15 21:43	
Aldrin	ND	0.010	ug/l	1	03/24/15 21:43	
alpha-BHC	ND	0.010	ug/l	1	03/24/15 21:43	
Aroclor 1016	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1221	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1232	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1242	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1248	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1254	ND	0.10	ug/l	1	03/24/15 21:43	
Aroclor 1260	ND	0.10	ug/l	1	03/24/15 21:43	
beta-BHC	ND	0.010	ug/l	1	03/24/15 21:43	
Chlordane (tech)	ND	0.10	ug/l	1	03/24/15 21:43	
Chlorothalonil	ND	0.050	ug/l	1	03/24/15 21:43	
delta-BHC	ND	0.010	ug/l	1	03/24/15 21:43	
Dieldrin	ND	0.010	ug/l	1	03/24/15 21:43	
Endosulfan I	ND	0.010	ug/l	1	03/24/15 21:43	
Endosulfan II	ND	0.010	ug/l	1	03/24/15 21:43	
Endosulfan sulfate	ND	0.010	ug/l	1	03/24/15 21:43	
Endrin	ND	0.010	ug/l	1	03/24/15 21:43	
Endrin aldehyde	ND	0.010	ug/l	1	03/24/15 21:43	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/24/15 21:43	
Heptachlor	ND	0.010	ug/l	1	03/24/15 21:43	
Heptachlor epoxide	ND	0.010	ug/l	1	03/24/15 21:43	
Hexachlorobenzene	ND	0.050	ug/l	1	03/24/15 21:43	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/24/15 21:43	
Methoxychlor	ND	0.010	ug/l	1	03/24/15 21:43	
PCBs, Total	ND	0.50	ug/l	1	03/24/15 21:43	
Propachlor	ND	0.050	ug/l	1	03/24/15 21:43	
Toxaphene	ND	1.0	ug/l	1	03/24/15 21:43	
Trifluralin	ND	0.010	ug/l	1	03/24/15 21:43	
Surr: Decachlorobiphenyl	52 %	Conc:0.0520	70-130	%		S-GC
Surr: Tetrachloro-meta-xylene	78 %	Conc:0.0775	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

5C12026-01 MW-5S(Monitoring)

Sampled: 03/10/15 13:40

Sampled By: M.Salmon

Matrix: Water

Sample Note: AB27893

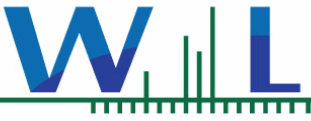
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

Anions by IC, EPA Method 9056 - Quality Control

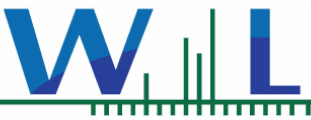
Batch W5C1170 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C1170-BLK1)				Analyzed: 03/19/15 13:27						
Iodide	ND	10	ug/l							
LCS (W5C1170-BS1)				Analyzed: 03/19/15 14:19						
Iodide	40.6	10	ug/l	40.0		102	85-115			
Matrix Spike (W5C1170-MS1)				Source: 5C12026-01		Analyzed: 03/19/15 16:09				
Iodide	35.9	10	ug/l	40.0	ND	90	80-120			
Matrix Spike Dup (W5C1170-MSD1)				Source: 5C12026-01		Analyzed: 03/19/15 16:28				
Iodide	36.8	10	ug/l	40.0	ND	92	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0924 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0924-BLK1)				Analyzed: 03/24/15 20:11						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



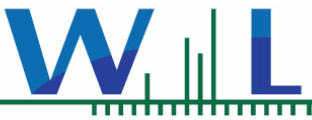
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0924 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0924-BLK1)										
Analyzed: 03/24/15 20:11										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0844		ug/l	0.100		84	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0778		ug/l	0.100		78	70-130			
LCS (W5C0924-BS1)										
Analyzed: 03/24/15 20:42										
4,4'-DDD	0.100	0.010	ug/l	0.100		100	55-142			
4,4'-DDE	0.0925	0.010	ug/l	0.100		93	49-129			
4,4'-DDT	0.0970	0.010	ug/l	0.100		97	54-160			
Aldrin	0.0797	0.010	ug/l	0.100		80	29-115			
alpha-BHC	0.0857	0.010	ug/l	0.100		86	59-131			
beta-BHC	0.0915	0.010	ug/l	0.100		91	63-136			
delta-BHC	0.106	0.010	ug/l	0.100		106	59-137			
Dieldrin	0.0860	0.010	ug/l	0.100		86	59-135			
Endosulfan I	0.0666	0.010	ug/l	0.100		67	28-138			
Endosulfan II	0.0705	0.010	ug/l	0.100		70	53-133			
Endosulfan sulfate	0.0778	0.010	ug/l	0.100		78	58-155			
Endrin	0.0857	0.010	ug/l	0.100		86	57-148			
Endrin aldehyde	0.0837	0.010	ug/l	0.100		84	45-139			
gamma-BHC (Lindane)	0.0892	0.010	ug/l	0.100		89	59-129			
Heptachlor	0.0829	0.010	ug/l	0.100		83	42-136			
Heptachlor epoxide	0.0882	0.010	ug/l	0.100		88	59-134			
Methoxychlor	0.0649	0.010	ug/l	0.100		65	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0803		ug/l	0.100		80	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0756		ug/l	0.100		76	70-130			
LCS Dup (W5C0924-BSD1)										
Analyzed: 03/24/15 21:12										
4,4'-DDD	0.0975	0.010	ug/l	0.100		97	55-142	3	25	
4,4'-DDE	0.0899	0.010	ug/l	0.100		90	49-129	3	25	
4,4'-DDT	0.0937	0.010	ug/l	0.100		94	54-160	4	25	
Aldrin	0.0766	0.010	ug/l	0.100		77	29-115	4	25	
alpha-BHC	0.0818	0.010	ug/l	0.100		82	59-131	5	25	
beta-BHC	0.0933	0.010	ug/l	0.100		93	63-136	2	25	
delta-BHC	0.104	0.010	ug/l	0.100		104	59-137	2	25	
Dieldrin	0.0853	0.010	ug/l	0.100		85	59-135	0.8	25	
Endosulfan I	0.0648	0.010	ug/l	0.100		65	28-138	3	25	
Endosulfan II	0.0696	0.010	ug/l	0.100		70	53-133	1	25	
Endosulfan sulfate	0.0876	0.010	ug/l	0.100		88	58-155	12	25	

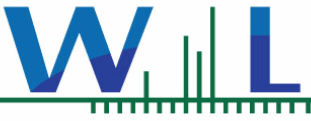


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5C0924 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5C0924-BSD1)				Analyzed: 03/24/15 21:12						
Endrin	0.0840	0.010	ug/l	0.100		84	57-148	2	25	
Endrin aldehyde	0.0852	0.010	ug/l	0.100		85	45-139	2	25	
gamma-BHC (Lindane)	0.0851	0.010	ug/l	0.100		85	59-129	5	25	
Heptachlor	0.0794	0.010	ug/l	0.100		79	42-136	4	25	
Heptachlor epoxide	0.0855	0.010	ug/l	0.100		86	59-134	3	25	
Methoxychlor	0.0716	0.010	ug/l	0.100		72	56-167	10	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0758</i>		<i>ug/l</i>	<i>0.100</i>		<i>76</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0713</i>		<i>ug/l</i>	<i>0.100</i>		<i>71</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/12/15 09:00
Date Reported: 03/31/15 15:24

Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested									
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter				

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2 Residual	Routine	Other	Repeat	Special		Type	Size	
27893		MW-55 (monitoring)	3/10/15	13:40	5.2						24			
													Field Parameters:	
													Temp:	16.7°C
													pH:	6.46
													Sp Cond:	1828 µS/cm
													Turb:	6.31 NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	M. Salmon				Is sample for regulatory purposes? Yes / No (Yes) 2mL 1:1 HNO ₃ to each 125mL 10 pH < 2 L 3/10/15
Relinquished by:	M. Salmon		3/10/15	15:51	
Received by:	MBAS		3/10/15	15:51	
Relinquished by:					
Received by:					

[] Payment received	Check #	Amount:	Receipt #	Date:
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**Table 3-3. Water Quality Analyses for Quarterly Sampling
Monitoring Wells and Test Slant Well**

Constituent	Units	Method Reporting Limit	Method
<i>Physical Properties</i>			
Color (Lab)	Color Units	3.0	SM 2120B/EPA 110.2
Oxidation-Reduction Potential (Field)	mV	-	Field Meter - Myron L 6PII
pH (Lab)	Units	0.10	SM 4500 H+B
pH (Field)	Units	-	Field Meter - YSI Pro Plus
Turbidity (Laboratory)	NTU	0.20	EPA 180.1/SM 2130B
Turbidity (Field)	NTU	-	Field Meter - Hach 2100P
Temperature (Field)	°C	-	Field Meter - YSI Pro Plus
Dissolved Oxygen (Field)	mg/L	-	Field Meter - YSI Pro Plus
Silt Density Index (Field)	-	-	ASTM D4189-07
Threshold Odor Number (Lab)	T.O.N.	1.0	EPA 140.1/SM 2150
Total Dissolved Solids (Lab)	mg/L	10	SM 2540 C
Specific Conductance (Lab)	µmhos/cm	1	SM 2510 B
Specific Conductance (Field)	µS/cm	-	Field Meter - YSI Pro Plus
<i>General Minerals</i>			
Total Cations	meq/L	-	Calculation
Total Anions	meq/L	-	Calculation
Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Bicarbonate Alkalinity as HCO ₃	mg/L	3	SM 2320 B
Carbonate Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Hydroxide Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Total Hardness as CaCO ₃	mg/L	3	Calculation
Aluminum	µg/L	1	EPA 200.7
Arsenic	µg/L	1	EPA 200.7 / EPA 200.8
Barium, Dissolved	µg/L	0.01	EPA 200.7
Boron, Dissolved	µg/L	0.5	EPA 200.8
Bromide, Dissolved	mg/L	0.1	EPA 326.0
Calcium, Dissolved	mg/L	1	EPA 200.7
Chloride, Dissolved	mg/L	1	EPA 300.0
Copper, Total	µg/L	50	EPA 200.7
Fluoride, Dissolved	mg/L	0.10	EPA 300.0 / SM 4500 FC
Iodide, Dissolved	mg/L	0.1	USGS I-2371 / EPA 9056A
Iron, Dissolved	µg/L	100	EPA 200.7 / EPA 200.8
Iron, Total	µg/L	100	EPA 200.7 / EPA 200.8
Lithium	µg/L	10	EPA 200.7 / EPA 6010B
Magnesium, Dissolved	mg/L	1	EPA 200.7

Constituent	Units	Method Reporting Limit	Method
Manganese, Dissolved	µg/L	20	EPA 200.7 / EPA 200.8
Manganese, Total	µg/L	20	EPA 200.7 / EPA 200.8
Mass Balance, Total & Dissolved	meq/L	-	Calculation
MBAS	mg/L	0.050	SM 5540 C / EPA 200.8
Nitrogen, Nitrate as NO ₃	mg/L	1	EPA 353.2 / EPA 300.0
Nitrogen, Nitrite, Dissolved	mg/L as N	1	SM 4500 NO ₂ B
Nitrogen, NO ₂ + NO ₃	mg/L as N	1	EPA 300.0
Nitrogen, Ammonia, Dissolved	mg/L as N	0.1	SM 4500 NH ₃ H / EPA 350.1
Nitrogen, Ammonia + Organic, Diss. (TKN)	mg/L as N	0.1	EPA 351.2
Phosphorus, Dissolved	mg/L as P	0.01	EPA 365.3
Phosphorus, ortho, Dissolved	mg/L as P	0.01	EPA 365.3
Potassium, Dissolved	mg/L	1	EPA 200.7
Silica, Dissolved	mg/L	1	SM 4500 SiE
Sodium, Dissolved	mg/L	1	EPA 200.7
Strontium, Dissolved	mg/L	0.1	EPA 200.7 / EPA 200.8
Sulfate as SO ₄ , dissolved	mg/L	0.5	EPA 300.0
Zinc, Total	µg/L	50	EPA 200.7
<i>Volatile Organic Compounds</i>			
VOCs plus Oxygenates (MTBE)	µg/L	varies	EPA 524.2
<i>EPA Organic Methods</i>			
EDB and DBCP	µg/L	varies	EPA 504.1
Chlorinated Pesticides & PCB's as DCP	µg/L	varies	EPA 508
Chlorinated Acid Herbicides	µg/L	varies	EPA 515
Nitrogen & Phosphorus Pesticides DEHP, DEHA, Benzo(a)Pyrene	µg/L	varies	EPA 525
Carbamates	µg/L	varies	EPA 531.1
Glyphosate	µg/L	varies	EPA 547
Endothall	µg/L	varies	EPA 548.1
Diquat	µg/L	varies	EPA 549.1
Dioxin (2,3,7,8 TCDD)	µg/L	varies	EPA 1613

Total and dissolved iron and manganese will be measured by field filtering samples directly into an acidified container immediately upon collection. A second sample will be collected directly into an acidified container without filtering. This method will provide a reliable and accurate means to determine the amount of dissolved and particulate iron and manganese, which has implications for desalting plant design.

27893

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

Filter 1L, 0.45 μ membrane, vacuum filtered, prerinsed
 + 500 mL + Na₂S₂O₃ + H₂SO₄ to pH < 2 for diss. TKN, NH₃
 + 250mL + H₂SO₄ to pH < 2 for diss. total P
 + 250mL unpreserved for diss. ortho.



Monterey Bay Analytical Services

4 Justin Court Suite D, Monterey, CA 93940

831.375.MBAS

www.MBASinc.com

ELAP Certification Number: 2385

California American Water
 P.O. Box 951, Monterey, CA 93942-0951
 ph: 831-646-3259 / 831-646-3269
 Susy Jacobson

Page 1 of 2

Thursday, April 02, 2015

Lab Number: AB27756

Collection Date/Time: 3/8/2015 10:10 Sample Collector: SOBOWLEW J
 Submittal Date/Time: 3/8/2015 11:43 Sample ID

Sample Description: MW-5M (monitoring)

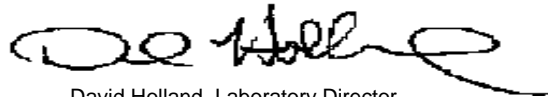
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	195		2	3/12/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		10	3/12/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05	3/19/2015	TC
Arsenic, Total	EPA200.8	µg/L	2		1	3/12/2015	SM
Barium, Dissolved	EPA200.8	µg/L	96		10	3/12/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	238		10	3/12/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	Not Detected		0.5	3/11/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	0.4		0.1	3/9/2015	MW
Calcium	EPA200.7	mg/L	96		1	3/11/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	99		5	3/11/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E		3/19/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10	3/12/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	120		1	3/9/2015	MW
Chlorinated Pesticides and PCB (	EPA508	µg/L	Not Detected	E		3/20/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	Not Detected		3	3/9/2015	LRH
Copper, Total	EPA200.8	µg/L	Not Detected		4	3/12/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E		3/19/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E		3/16/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E		3/17/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E		3/18/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	0.1		0.1	3/9/2015	MW
Glyphosate	EPA547	µg/L	Not Detected	E		3/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	367		10	3/11/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5	3/12/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10	3/19/2015	WECK
Iron	EPA200.7	µg/L	Not Detected		20	3/11/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5	3/24/2015	TC
Lithium	EPA200.8	µg/L	7		1	3/12/2015	SM
Magnesium	EPA200.7	mg/L	31		1	3/11/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	31		10	3/11/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	Not Detected		100	3/11/2015	MW
Manganese, Total	EPA200.7	µg/L	Not Detected		20	3/11/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	3/9/2015	HM
Nitrate as NO3	EPA300.0	mg/L	70		1	3/9/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	16.2		0.1	3/9/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	0.3		0.1	3/9/2015	MW

mg/L: Milligrams per liter (=ppm) µg/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
 H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments.
 D = Method deviates from standard method due to insufficient sample for MS/MSD

Odor Threshold at 60 C	SM2150B	TON	2	1	3/9/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.06	0.03	3/9/2015	LRH
pH (Field Test)	SM4500-H+B	pH	7.23		3/6/2015	JS
pH (Laboratory)	SM4500-H+B	pH (H)	7.3	0.1	3/8/2015	MW
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E	3/12/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.06	0.03	3/9/2015	LRH
Potassium	EPA200.7	mg/L	3.4	1	3/11/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	3.60	1	3/11/2015	MW
QC Ratio TDS/SEC	Calculation		0.60		3/11/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E	3/19/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	35	5	3/11/2015	MW
Sodium	EPA200.7	mg/L	71	20	3/11/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	76	5	3/11/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	1106	1	3/10/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	962	1	3/6/2015	JS
Strontium, Dissolved	EPA200.8	µg/L	630	5	3/12/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	110	1	3/9/2015	MW
Temperature (Field)	SM2550	° C	16.97		3/6/2015	JS
Total Diss. Solids	SM2540C	mg/L	663	10	3/9/2015	HM
Turbidity	EPA180.1	NTU	Not Detected	0.05	3/9/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.47	0.05	3/6/2015	JS
Volatile Org. Compounds (524)	EPA524	µg/L	Not Detected	E	3/12/2015	BSK
Zinc, Total	EPA200.8	µg/L	40	20	3/12/2015	SM

Sample Comments: Odor: Salty

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27756 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	71	0.04350	3.09
Potassium	3.4	0.02558	0.09
Calcium	96	0.04990	4.79
Magnesium	31	0.08229	2.55
NH3-N	0	0.07143	0.00
		SUM	10.52

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	195	0.02000	3.90
Sulfate	110	0.02082	2.29
Chloride	120	0.02821	3.39
Nitrate-Nitrogen	15.9	0.07138	1.13
Phosphate-P	0.1	0.01031	0.00
Bromide	0.4	0.01252	0.01
		SUM	10.72

ANION-CATION BALANCE **-1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	1106	
Cation Sum X 100	1052	95%
Anion Sum X 100	1072	97%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **27756 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	76	0.04350	3.31
Potassium	3.6	0.02558	0.09
Calcium	99	0.04990	4.94
Magnesium	31	0.08229	2.55
NH3-N	0	0.07143	0.00
		SUM	10.89

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	195	0.02000	3.90
Sulfate	110	0.02082	2.29
Chloride	120	0.02821	3.39
Nitrate-Nitrogen	15.9	0.07138	1.13
Phosphate-P	0.1	0.01031	0.00
Bromide	0.4	0.01252	0.01
		SUM	10.72

ANION-CATION BALANCE **1** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	1106	
Cation Sum X 100	1089	98%
Anion Sum X 100	1072	97%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 3/12/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	9:18
CCV	40	41	102.5	95-105	10:46

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27757	80	80	0.0	5	10:46

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Phosphorus QC Summary (Hach 8190)

Date: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:42
LCSL	0.03	0.03	100	50-150	13:42
ICV	0.30	0.29	97	90-110	13:42
QCS	0.30	0.30	100	80-120	13:42
CCV	0.30	0.28	93	80-120	13:42
CCVB	0.00	< 0.03	NA	< 0.03	13:42

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptanc
								MS/MSD
AB27757	0.06	0.30	0.36	0.37	101	103	1.4	70-130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

MBAS QC Summary (SM 5540C)

Date Analyzed: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	907
ICVL	0.050	0.051	102	80-120	908
ICV	0.250	0.267	106.8	80-120	938

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %		Time
								MS/MSD	RPD	
AB27756	0.032	0.250	0.3	0.302	107.2	108	0.7	80/120	10	935

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent
 Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB27848

Date Analyzed
Thursday, March 12, 2015

	ICVB	QCS 50	LCB	LCS	LCSD	LCS-LCSD	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	% Rec	%Rec	%RPD	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%		70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.1	101.7	0.05	106.0	102.5	3.35	26.8	50	84.4	84.7	0.4	98.2	102.8	4.58	0.02
Aluminum	0.0	102.0	2.82	101.4	101.7	0.34	4.4	50	85.1	88.2	3.6	99.9	99.0	0.94	-0.10
Copper	0.0	100.0	0.12	99.4	101.1	1.64	1.7	50	93.1	93.8	0.7	100.1	100.7	0.60	0.05
Zinc	0.1	131.2	1.62	103.3	103.8	0.47	25.7	50	93.8	95.8	2.1	103.0	104.0	0.99	0.06
Arsenic	0.1	101.3	0.20	98.0	98.3	0.25	1.9	50	111.2	113.1	1.7	99.1	99.5	0.36	0.14
Strontium	0.0	101.1	0.14	99.7	99.2	0.56	781.4	50	45.4	57.5	23.5	100.1	100.1	0.02	0.02
Barium	0.0	101.2	0.05	97.9	98.8	0.84	36.9	50	89.8	98.1	8.8	100.0	97.0	3.06	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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<http://www.MBASinc.com>

Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 3/19/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.04	---	<0.05
ICVL	0.050	0.05	100.00%	90-110
ICV	0.500	0.450	90.00%	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27893	ND	0.500	0.520	0.530	104	106	1.9	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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<http://www.MBASinc.com>

pH QC Summary (SM 4500 H+)

Date Analyzed: 3/8/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.8	99.1	95-105	1200

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB27756	7.29	7.37	1.1	10	1200

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery



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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 3/9/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:00
ICV	1.00	0.96	96%	95-105	16:00

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB27799	Not Detected	Not Detected	#VALUE!	10	16:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 3/10/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1020
ICV	24800	24770	99.9%	95-105	1040

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB27766	32720	32870	0.5%	10	1040

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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TDS QC Summary (SM 2540C)

Date Analyzed: 3/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	1050
ICVL	100	111	111	80-120	1050
ICV	500	508	101.6	90-110	1050

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB27766	23100	23500	1.7	10	1120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 3/24/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.106	---	<0.5
ICV	5.0	5.3	106	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27966	0.8	5.0	5.4	5.4	92	92	0.0	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150311 EPA 200.7

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	-0.01	0.00	1.03	103.5%	1.05	104.9%	1.3%	1	1.04	103.7%	1	1.0	99.9%
B 249.772	0.05-5ppm	0.00	0.01	1.01	101.5%	1.04	104.1%	2.5%	1	1.02	101.6%	1	1.0	98.2%
Ca 317.933	50-300ppm	-6.21	-6.08	47.2	94.4%	48.0	96.0%	1.7%	50	49.4	98.8%	50	45.1	90.3%
Ca 396.847	0.5-50ppm	-0.60	-0.39	48.6	97.2%	48.9	97.9%	0.7%	50	49.8	99.7%	50	47.1	94.1%
Cu 324.754	10ppb-100ppm	-21.93	-22.48	963	96.3%	982	98.2%	2.0%	1000	998	99.8%	1000	948.7	94.9%
Cu 327.394	10ppb-100ppm	-19.05	-18.94	962	96.2%	983	98.3%	2.1%	1000	987	98.7%	1000	950.5	95.0%
Fe 238.204	10ppb-100ppm	-3.75	-3.15	963	96.3%	983	98.3%	2.0%	1000	1009	100.9%	1000	947.0	94.7%
Fe 259.940	10ppb-100ppm	-3.79	-0.02	963	96.3%	982	98.2%	2.0%	1000	1005	100.5%	1000	961.7	96.2%
K 766.491	0.5-750ppm	-0.29	-0.27	9.7	97.1%	9.9	98.8%	1.7%	10	9.9	99.3%	10	9.5	94.6%
Mg 202.583	50-1000ppm	-2.75	-2.62	47.4	94.8%	48.9	97.8%	3.2%	50	50.2	100.5%	50	47.3	94.6%
Mg 279.071	0.5-50ppm	-0.13	-0.01	48.0	96.0%	49.0	98.0%	2.0%	50	50.5	100.9%	50	47.4	94.7%
Mn 257.611	10ppb-11ppm	-22.38	-19.28	955	95.5%	971	97.1%	1.7%	1000	999	99.9%	1000	948.2	94.8%
Mn 260.561	10ppb-11ppm	-23.41	-21.36	949	94.9%	975	97.5%	2.8%	1000	1003	100.3%	1000	946.7	94.7%
Na 568.821	50-1000ppm	0.46	0.59	45.9	91.8%	47.6	95.3%	3.8%	50	47.5	94.9%	50	46.8	93.6%
Na 589.592	0.5-50ppm	-0.20	-0.07	48.7	97.3%	49.2	98.4%	1.1%	50	49.6	99.2%	50	47.4	94.9%
Si 251.611	0.5-200ppm	-0.23	-0.04	48.4	96.8%	49.2	98.3%	1.6%	50	49.8	99.5%	50	48.4	96.8%
Si 252.411	0.5-200ppm	-0.24	-0.11	48.8	97.6%	49.9	99.8%	2.2%	50	50.4	100.9%	50	48.6	97.2%
Zn 213.857	10ppb-50ppm	-27.69	14.85	983	98.3%	974	97.4%	0.9%	1000	990	99.0%	1000	938.5	93.8%

Matrix Spikes

Sample ID ab27760

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	1.96	2.88	92.3%	2.91	95.0%	0.9%	1	1.03	102.6%	1.1%	0.00
B 249.772	1.97	2.89	91.3%	2.90	92.6%	0.4%	1	1.02	101.8%	0.2%	0.00
Ca 317.933	13.9	65.2	102.6%	65.4	102.9%	0.3%	50	50.0	100.0%	1.2%	-6.07
Ca 396.847	19.0	64.3	90.7%	64.6	91.2%	0.4%	50	49.4	98.9%	0.8%	-0.39
Cu 324.754	1212	2122	91.0%	2122	91.0%	0.0%	1000	999	99.9%	0.1%	-21.41
Cu 327.394	1217	2122	90.5%	2130	91.3%	0.3%	1000	1000	100.0%	1.3%	-18.32
Fe 238.204	8	955	94.7%	951	94.2%	0.5%	1000	999	99.9%	0.9%	-4.08
Fe 259.940	12	975	96.3%	969	95.7%	0.6%	1000	1001	100.1%	0.3%	-3.08
K 766.491	2.2	11.9	97.4%	12.0	98.9%	1.2%	10	10.1	100.5%	1.2%	-0.28
Mg 202.581	12.9	63.1	100.3%	62.9	100.0%	0.2%	50	51.1	102.1%	1.6%	-2.70
Mg 279.077	14.2	60.3	92.1%	60.2	92.0%	0.1%	50	49.5	99.1%	1.8%	0.00
Mn 257.611	-15	952	96.7%	958	97.3%	0.6%	1000	1001	100.1%	0.3%	-20.17
Mn 260.561	-17	964	98.1%	962	97.8%	0.2%	1000	1006	100.6%	0.3%	-20.97
Na 568.821	112.6	158.6	92.0%	159.7	94.2%	0.7%	50	51.3	102.6%	7.8%	-0.01
Na 589.592	104.7	107.5	5.5%	107.8	6.2%	0.3%	50	49.1	98.3%	0.9%	0.08
Si 251.611	15.4	62.2	93.7%	62.3	93.9%	0.2%	50	49.6	99.1%	0.4%	-0.12
Si 252.411	15.3	62.7	94.9%	62.4	94.2%	0.5%	50	49.8	99.6%	1.3%	-0.17
Zn 213.857	19	957	93.8%	967	94.8%	1.0%	1000	1000	100.0%	1%	-29.29

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831.375.MBAS (6227), 831.641.0734 (Fax)

MontereyBayAnalytical@usa.net

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

Batch ID:

20150309

	F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount	2	20	2	20	2	2
ICVB	0.03	0.12	0.03	0.16	0.08	0.00
ICV	1.91	19.72	2.10	20.08	1.94	1.91
Rec 90-110%	95.29	98.59	105.11	100.39	96.83	95.61
ICVL	0.17	1.89	0.21	1.79	0.24	0.23
Rec 50-150%	87.09	94.31	103.55	89.26	118.72	117.03
Sample ID AB27761	2.56	158.75	0.34	33.38	0.37	0.58
MS	4.46	179.81	2.41	53.48	2.31	2.47
Rec 80-120%	95.09	105.30	103.66	100.48	96.91	94.32
MSD	4.46	179.95	2.41	53.34	2.30	2.47
Rec 80-120%	95.21	106.02	103.81	99.80	96.56	94.24
Diff 10%	0.05	0.08	0.12	0.26	0.31	0.07
CCV	1.95	19.73	2.10	20.22	1.92	1.88
Rec 90-110%	97.68	98.64	104.91	101.08	96.11	94.07
Diff 10%	2.48	0.05	0.19	0.69	0.74	1.62
CCVB	0.02	0.00	0.00	0.00	0.00	0.00



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5C0789

3/20/2015

Invoice: A505825

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5C0789 Cal Am

Dear David Holland,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 3/10/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montieth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montieth , at (800) 877-8310 or (559) 497-2888 x201.



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: Monterey Bay Analytical Report To: David Holland Project #: - Received: 3/10/2015 - 08:00 Report Due: 3/24/2015	Invoice To: Monterey Bay Analytical Invoice Attn: David Holland Project PO#: -
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Sample Receipt Conditions

Cooler: Cooler #2 Temperature on Receipt °C: 2.6	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Initial receipt at BSK-FAL
---	--

Cooler: Default Cooler Temperature on Receipt °C: 2.6	Containers Intact COC/Labels Agree Received On Wet Ice Received On Blue Ice Packing Material - Bubble Wrap Packing Material - Paper Initial receipt at BSK-FAL
--	--

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

- BS Blank spike recoveries did not meet acceptance limits.
- BS1.0 Blank spike recovery for this analyte was biased high; no material impact on reported result as sample is ND for this parameter.
- BS3.0 BS/BSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- BS4.0 BS/BSD RPD exceeded the method acceptance limit as one of the blank spikes recovered outside limits.
- CV0.0 CCV recovery was above method acceptance limits; no material impact on reported result as sample is ND for this parameter.
- MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5C0789-01
Sampled By: Josh Sobolew
Sample Description: MW-5M (monitoring) // AB27756

Sample Date - Time: 03/08/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno
Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>EDB and DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A503030	03/18/15	03/19/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A503030	03/18/15	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	98 %	Acceptable range: 70-130 %						
<u>Chlorinated Acid Herbicides by GC-ECD</u>									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A502705	03/10/15	03/12/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A502705	03/10/15	03/12/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A502705	03/10/15	03/12/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A502705	03/10/15	03/12/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A502705	03/10/15	03/12/15	
Surrogate: DCPAA	EPA 515.3	103 %	Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A502806	03/12/15	03/12/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	

Certificate of Analysis

Sample ID: A5C0789-01
Sampled By: Josh Sobolew
Sample Description: MW-5M (monitoring) // AB27756

Sample Date - Time: 03/08/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	BS1.0, CV0.0
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A502806	03/12/15	03/12/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A502806	03/12/15	03/12/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A502806	03/12/15	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	83 %							Acceptable range: 70-130 %
Surrogate: Bromofluorobenzene	EPA 524.2	89 %							Acceptable range: 70-130 %
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5C0789-01
Sampled By: Josh Sobolew
Sample Description: MW-5M (monitoring) // AB27756

Sample Date - Time: 03/08/15 - 10:10
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Total Xylenes, EPA 524.2		ND	0.50	ug/L					
<u>Semi-Volatile Organics by GC-MS</u>									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503033	03/18/15	03/19/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503033	03/18/15	03/19/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503033	03/18/15	03/19/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503033	03/18/15	03/19/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503033	03/18/15	03/19/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503033	03/18/15	03/19/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503033	03/18/15	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	101 %	<i>Acceptable range: 70-130 %</i>						
<u>Carbamates by HPLC</u>									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503013	03/17/15	03/19/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	BS1.0, BS4.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503013	03/17/15	03/19/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503013	03/17/15	03/19/15	
<u>Glyphosate by HPLC</u>									
Glyphosate	EPA 547	ND	25	ug/L	1	A502659	03/10/15	03/10/15	
Surrogate: AMPA	EPA 547	103 %	<i>Acceptable range: 70-130 %</i>						
<u>Endothall by GC-MS</u>									
Endothall	EPA 548.1	ND	45	ug/L	1	A502773	03/11/15	03/18/15	
<u>Diquat by HPLC</u>									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502842	03/13/15	03/17/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A503030

Prepared: 03/18/2015

Prep Method: EPA 504.1

Analyst: PYA

Blank (A503030-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							03/18/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.45			0.46		98	70-130			03/18/15	

Blank Spike (A503030-BS1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		102	70-130			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		94	70-130			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		100	70-130			03/18/15	

Blank Spike Dup (A503030-BSD1)

Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		105	70-130	3	20	03/19/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		98	70-130	4	20	03/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		101	70-130			03/19/15	

Matrix Spike (A503030-MS1), Source: A5C0852-01

Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12	ND	105	65-135			03/18/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	98	65-135			03/18/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.45		101	70-130			03/18/15	

EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank (A502705-BLK1)

2,4,5-T	ND	1.0	ug/L							03/11/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							03/11/15	
2,4-D	ND	10	ug/L							03/11/15	
Bentazon	ND	2.0	ug/L							03/11/15	
Dalapon	ND	10	ug/L							03/11/15	
Dicamba	ND	1.5	ug/L							03/11/15	
Dinoseb	ND	2.0	ug/L							03/11/15	
Pentachlorophenol	ND	0.20	ug/L							03/11/15	
Picloram	ND	1.0	ug/L							03/11/15	
Surrogate: DCPAA	60			58		103	70-130			03/11/15	

Blank Spike (A502705-BS1)

2,4,5-T	4.3	1.0	ug/L	4.0		107	70-130			03/11/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80		98	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40		109	70-130			03/11/15	
Bentazon	8.5	2.0	ug/L	8.0		106	70-130			03/11/15	
Dalapon	4.3	10	ug/L	4.0		107	70-130			03/11/15	
Dicamba	6.3	1.5	ug/L	6.0		104	70-130			03/11/15	
Dinoseb	0.80	2.0	ug/L	0.80		99	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		98	70-130			03/11/15	
Picloram	0.36	1.0	ug/L	0.40		90	70-130			03/11/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 515.3 - Quality Control

Batch: A502705

Prepared: 03/10/2015

Prep Method: EPA 515.3

Analyst: AAR

Blank Spike (A502705-BS1)

Surrogate: DCPAA	58			58		100	70-130			03/11/15	
Blank Spike Dup (A502705-BSD1)											
2,4,5-T	4.2	1.0	ug/L	4.0		105	70-130	1	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80		96	70-130	2	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130	1	20	03/11/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130	1	20	03/11/15	
Dalapon	3.9	10	ug/L	4.0		97	70-130	9	20	03/11/15	
Dicamba	6.2	1.5	ug/L	6.0		103	70-130	2	20	03/11/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130	5	20	03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		97	70-130	1	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40		117	70-130	25	20	03/11/15	BS3.0
Surrogate: DCPAA	57			58		99	70-130			03/11/15	

Matrix Spike (A502705-MS1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130			03/11/15	
2,4,5-TP (Silvex)	0.74	1.0	ug/L	0.80	ND	93	70-130			03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130			03/11/15	
Dalapon	4.2	10	ug/L	4.0	ND	104	70-130			03/11/15	
Dicamba	6.2	1.5	ug/L	6.0	ND	104	70-130			03/11/15	
Dinoseb	0.82	2.0	ug/L	0.80	ND	102	70-130			03/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	97	70-130			03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	116	70-130			03/11/15	
Surrogate: DCPAA	59			58		101	70-130			03/11/15	

Matrix Spike Dup (A502705-MSD1), Source: A5C0131-01

2,4,5-T	4.2	1.0	ug/L	4.0	ND	105	70-130	0	20	03/11/15	
2,4,5-TP (Silvex)	0.77	1.0	ug/L	0.80	ND	96	70-130	4	20	03/11/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130	0	20	03/11/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	105	70-130	0	20	03/11/15	
Dalapon	4.1	10	ug/L	4.0	ND	102	70-130	2	20	03/11/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130	1	20	03/11/15	
Dinoseb	0.84	2.0	ug/L	0.80	ND	105	70-130	3	20	03/11/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	95	70-130	2	20	03/11/15	
Picloram	0.47	1.0	ug/L	0.40	ND	118	70-130	1	20	03/11/15	
Surrogate: DCPAA	58			58		100	70-130			03/11/15	

EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							03/12/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,1-Dichloroethene	ND	0.50	ug/L							03/12/15	
1,1-Dichloropropene	ND	0.50	ug/L							03/12/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,2-Dichloroethane	ND	0.50	ug/L							03/12/15	
1,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
1,3-Dichloropropane	ND	0.50	ug/L							03/12/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							03/12/15	
2,2-Dichloropropane	ND	0.50	ug/L							03/12/15	
2-Butanone	ND	5.0	ug/L							03/12/15	
2-Chlorotoluene	ND	0.50	ug/L							03/12/15	
2-Hexanone	ND	10	ug/L							03/12/15	
4-Chlorotoluene	ND	0.50	ug/L							03/12/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							03/12/15	
Acetone	ND	10	ug/L							03/12/15	
Benzene	ND	0.50	ug/L							03/12/15	
Bromobenzene	ND	0.50	ug/L							03/12/15	
Bromochloromethane	ND	0.50	ug/L							03/12/15	
Bromodichloromethane	ND	0.50	ug/L							03/12/15	
Bromoform	ND	0.50	ug/L							03/12/15	
Bromomethane	ND	0.50	ug/L							03/12/15	
Carbon Tetrachloride	ND	0.50	ug/L							03/12/15	
Chlorobenzene	ND	0.50	ug/L							03/12/15	
Chloroethane	ND	0.50	ug/L							03/12/15	
Chloroform	ND	0.50	ug/L							03/12/15	
Chloromethane	ND	0.50	ug/L							03/12/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Dibromochloromethane	ND	0.50	ug/L							03/12/15	
Dibromomethane	ND	0.50	ug/L							03/12/15	
Dichlorodifluoromethane	ND	0.50	ug/L							03/12/15	
Dichloromethane	ND	0.50	ug/L							03/12/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							03/12/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							03/12/15	
Ethylbenzene	ND	0.50	ug/L							03/12/15	
Hexachlorobutadiene	ND	0.50	ug/L							03/12/15	
Isopropylbenzene	ND	0.50	ug/L							03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A502806-BLK1)

m,p-Xylenes	ND	0.50	ug/L							03/12/15	
Methyl-t-butyl ether	ND	0.50	ug/L							03/12/15	
Naphthalene	ND	0.50	ug/L							03/12/15	
n-Butylbenzene	ND	0.50	ug/L							03/12/15	
n-Propylbenzene	ND	0.50	ug/L							03/12/15	
o-Xylene	ND	0.50	ug/L							03/12/15	
p-Isopropyltoluene	ND	0.50	ug/L							03/12/15	
sec-Butylbenzene	ND	0.50	ug/L							03/12/15	
Styrene	ND	0.50	ug/L							03/12/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							03/12/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							03/12/15	
tert-Butylbenzene	ND	0.50	ug/L							03/12/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							03/12/15	
Toluene	ND	0.50	ug/L							03/12/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							03/12/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							03/12/15	
Trichloroethene (TCE)	ND	0.50	ug/L							03/12/15	
Trichlorofluoromethane	ND	5.0	ug/L							03/12/15	
Vinyl Chloride	ND	0.50	ug/L							03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.3			5.0		85	70-130			03/12/15	
Surrogate: Bromofluorobenzene	46			50		91	70-130			03/12/15	

Blank Spike (A502806-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130			03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5	10	ug/L	10		95	70-130			03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
1,1-Dichloropropene	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		109	70-130			03/12/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130			03/12/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			03/12/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		107	70-130			03/12/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			03/12/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
2,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Butanone	11	5.0	ug/L	10		107	70-130			03/12/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
2-Hexanone	11	10	ug/L	10		106	70-130			03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		104	70-130			03/12/15	
Acetone	9.4	10	ug/L	10		94	70-130			03/12/15	
Benzene	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			03/12/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130			03/12/15	
Bromomethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			03/12/15	
Chlorobenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
Chloroethane	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Chloroform	10	0.50	ug/L	10		102	70-130			03/12/15	
Chloromethane	12	0.50	ug/L	10		122	70-130			03/12/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			03/12/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Dibromochloromethane	9.9	0.50	ug/L	10		99	70-130			03/12/15	
Dibromomethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		155	70-130			03/12/15	BS High
Dichloromethane	10	0.50	ug/L	10		102	70-130			03/12/15	
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130			03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.7	0.50	ug/L	10		97	70-130			03/12/15	
Ethylbenzene	10	0.50	ug/L	10		103	70-130			03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			03/12/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			03/12/15	
m,p-Xylenes	21	0.50	ug/L	20		104	70-130			03/12/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		100	70-130			03/12/15	
Naphthalene	9.9	0.50	ug/L	10		99	70-130			03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		110	70-130			03/12/15	
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			03/12/15	
o-Xylene	10	0.50	ug/L	10		104	70-130			03/12/15	
p-Isopropyltoluene	10	0.50	ug/L	10		100	70-130			03/12/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Styrene	12	0.50	ug/L	10		117	70-130			03/12/15	
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130			03/12/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		100	70-130			03/12/15	
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130			03/12/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Toluene	10	0.50	ug/L	10		102	70-130			03/12/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		104	70-130			03/12/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			03/12/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130			03/12/15	
Vinyl Chloride	13	0.50	ug/L	10		126	70-130			03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		103	70-130			03/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A502806-BS1)

Surrogate: Bromofluorobenzene 50 50 100 70-130 03/12/15

Blank Spike Dup (A502806-BSD1)

1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
1,1,1-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	3	30	03/12/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3	10	ug/L	10		93	70-130	3	30	03/12/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,1-Dichloroethene	10	0.50	ug/L	10		101	70-130	3	30	03/12/15	
1,1-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	2	30	03/12/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10		106	70-130	2	30	03/12/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130	7	30	03/12/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
1,2-Dichloroethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
1,2-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		100	70-130	7	30	03/12/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	03/12/15	
1,4-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
2-Butanone	10	5.0	ug/L	10		101	70-130	5	30	03/12/15	
2-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	3	30	03/12/15	
2-Hexanone	10	10	ug/L	10		100	70-130	6	30	03/12/15	
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	5	30	03/12/15	
Acetone	9.0	10	ug/L	10		90	70-130	4	30	03/12/15	
Benzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromobenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Bromoform	9.2	0.50	ug/L	10		92	70-130	0	30	03/12/15	
Bromomethane	9.3	0.50	ug/L	10		93	70-130	4	30	03/12/15	
Carbon Tetrachloride	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	3	30	03/12/15	
Chloroethane	9.2	0.50	ug/L	10		92	70-130	5	30	03/12/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Chloromethane	12	0.50	ug/L	10		118	70-130	3	30	03/12/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
cis-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Dibromochloromethane	9.7	0.50	ug/L	10		97	70-130	2	30	03/12/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130	3	30	03/12/15	
Dichlorodifluoromethane	15	0.50	ug/L	10		146	70-130	6	30	03/12/15	BS High
Dichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A502806

Prepared: 03/12/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A502806-BSD1)

Di-isopropyl ether (DIPE)	9.5	3.0	ug/L	10		95	70-130	3	30	03/12/15	
Ethyl tert-Butyl Ether (ETBE)	9.4	0.50	ug/L	10		94	70-130	3	30	03/12/15	
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Hexachlorobutadiene	10	0.50	ug/L	10		100	70-130	4	30	03/12/15	
Isopropylbenzene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
m,p-Xylenes	20	0.50	ug/L	20		99	70-130	5	30	03/12/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		97	70-130	2	30	03/12/15	
Naphthalene	10	0.50	ug/L	10		100	70-130	1	30	03/12/15	
n-Butylbenzene	11	0.50	ug/L	10		106	70-130	3	30	03/12/15	
n-Propylbenzene	9.7	0.50	ug/L	10		97	70-130	4	30	03/12/15	
o-Xylene	9.8	0.50	ug/L	10		98	70-130	6	30	03/12/15	
p-Isopropyltoluene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
sec-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Styrene	11	0.50	ug/L	10		109	70-130	7	30	03/12/15	
tert-Amyl Methyl Ether (TAME)	9.7	3.0	ug/L	10		97	70-130	2	30	03/12/15	
tert-Butyl alcohol (TBA)	9.1	2.0	ug/L	10		91	70-130	9	30	03/12/15	
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	5	30	03/12/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	5	30	03/12/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	4	30	03/12/15	
trans-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	4	30	03/12/15	
trans-1,3-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	4	30	03/12/15	
Trichloroethene (TCE)	9.7	0.50	ug/L	10		97	70-130	5	30	03/12/15	
Trichlorofluoromethane	11	5.0	ug/L	10		106	70-130	4	30	03/12/15	
Vinyl Chloride	12	0.50	ug/L	10		120	70-130	5	30	03/12/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0		102	70-130			03/12/15	
Surrogate: Bromofluorobenzene	50			50		100	70-130			03/12/15	

EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Alachlor	ND	1.0	ug/L							03/19/15	
Atrazine	ND	0.50	ug/L							03/19/15	
Benzo(a)pyrene	ND	0.10	ug/L							03/19/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							03/19/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							03/19/15	
Bromacil	ND	10	ug/L							03/19/15	
Butachlor	ND	0.38	ug/L							03/19/15	
Diazinon	ND	0.25	ug/L							03/19/15	
Dimethoate	ND	10	ug/L							03/19/15	
Metolachlor	ND	0.50	ug/L							03/19/15	
Metribuzin	ND	0.50	ug/L							03/19/15	
Molinate	ND	2.0	ug/L							03/19/15	
Prometryn	ND	2.0	ug/L							03/19/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Blank (A503033-BLK1)

Propachlor	ND	0.50	ug/L							03/19/15	
Simazine	ND	1.0	ug/L							03/19/15	
Thiobencarb	ND	1.0	ug/L							03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.8			5.0		96	70-130			03/19/15	

Blank Spike (A503033-BS1)

Alachlor	0.53	1.0	ug/L	0.50		107	70-130			03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		100	70-130			03/19/15	
Benzo(a)pyrene	0.036	0.10	ug/L	0.050		72	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		112	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.84	3.0	ug/L	0.75		113	70-130			03/19/15	
Bromacil	0.54	10	ug/L	0.50		107	70-130			03/19/15	
Butachlor	0.53	0.38	ug/L	0.50		107	70-130			03/19/15	
Diazinon	0.082	0.25	ug/L	0.10		82	70-130			03/19/15	
Dimethoate	0.50	10	ug/L	0.50		100	70-130			03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		100	70-130			03/19/15	
Metribuzin	0.50	0.50	ug/L	0.50		100	70-130			03/19/15	
Molinate	0.49	2.0	ug/L	0.50		98	70-130			03/19/15	
Prometryn	0.85	2.0	ug/L	1.0		85	70-130			03/19/15	
Propachlor	0.26	0.50	ug/L	0.25		105	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18		98	70-130			03/19/15	
Thiobencarb	0.25	1.0	ug/L	0.25		100	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.6			5.0		92	70-130			03/19/15	

Blank Spike Dup (A503033-BSD1)

Alachlor	0.55	1.0	ug/L	0.50		109	70-130	2	30	03/19/15	
Atrazine	0.25	0.50	ug/L	0.25		102	70-130	2	30	03/19/15	
Benzo(a)pyrene	0.035	0.10	ug/L	0.050		70	70-130	3	30	03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0		111	70-130	1	30	03/19/15	
Bis(2-ethylhexyl) phthalate	0.83	3.0	ug/L	0.75		111	70-130	1	30	03/19/15	
Bromacil	0.62	10	ug/L	0.50		123	70-130	14	30	03/19/15	
Butachlor	0.55	0.38	ug/L	0.50		109	70-130	2	30	03/19/15	
Diazinon	0.085	0.25	ug/L	0.10		85	70-130	4	30	03/19/15	
Dimethoate	0.63	10	ug/L	0.50		126	70-130	24	30	03/19/15	
Metolachlor	1.0	0.50	ug/L	1.0		104	70-130	4	30	03/19/15	
Metribuzin	0.54	0.50	ug/L	0.50		109	70-130	8	30	03/19/15	
Molinate	0.50	2.0	ug/L	0.50		100	70-130	1	30	03/19/15	
Prometryn	0.87	2.0	ug/L	1.0		87	70-130	2	30	03/19/15	
Propachlor	0.29	0.50	ug/L	0.25		117	70-130	11	30	03/19/15	
Simazine	0.18	1.0	ug/L	0.18		103	70-130	5	30	03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25		104	70-130	4	30	03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.0			5.0		100	70-130			03/19/15	

Matrix Spike (A503033-MS1), Source: A5C0856-01

Alachlor	0.57	1.0	ug/L	0.51	ND	113	70-130			03/19/15	
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BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 525.2 - Quality Control

Batch: A503033

Prepared: 03/18/2015

Prep Method: EPA 525.2

Analyst: KHH

Matrix Spike (A503033-MS1), Source: A5C0856-01

Atrazine	0.27	0.50	ug/L	0.25	ND	105	70-130			03/19/15	
Benzo(a)pyrene	0.040	0.10	ug/L	0.051	ND	78	70-130			03/19/15	
Bis(2-ethylhexyl) adipate	1.1	3.0	ug/L	1.0	ND	110	70-130			03/19/15	
Bis(2-ethylhexyl) phthalate	0.92	3.0	ug/L	0.76	ND	121	70-130			03/19/15	
Bromacil	0.67	10	ug/L	0.51	ND	132	70-130			03/19/15	MS1.0 High
Butachlor	0.57	0.38	ug/L	0.51	ND	113	70-130			03/19/15	
Diazinon	0.10	0.25	ug/L	0.10	ND	102	70-130			03/19/15	
Dimethoate	0.59	10	ug/L	0.51	ND	116	70-130			03/19/15	
Metolachlor	1.1	0.50	ug/L	1.0	ND	106	70-130			03/19/15	
Metribuzin	0.56	0.50	ug/L	0.51	ND	111	70-130			03/19/15	
Molinate	0.52	2.0	ug/L	0.51	ND	102	70-130			03/19/15	
Prometryn	0.98	2.0	ug/L	1.0	ND	96	70-130			03/19/15	
Propachlor	0.27	0.50	ug/L	0.25	ND	107	70-130			03/19/15	
Simazine	0.17	1.0	ug/L	0.18	ND	98	70-130			03/19/15	
Thiobencarb	0.26	1.0	ug/L	0.25	ND	101	70-130			03/19/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.3			5.1		104	70-130			03/19/15	

EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank (A503013-BLK1)

3-Hydroxycarbofuran	ND	3.0	ug/L							03/18/15	
Aldicarb	ND	3.0	ug/L							03/18/15	
Aldicarb Sulfone	ND	2.0	ug/L							03/18/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							03/18/15	
Carbaryl	ND	5.0	ug/L							03/18/15	
Carbofuran	ND	5.0	ug/L							03/18/15	
Methiocarb	ND	2.0	ug/L							03/18/15	
Methomyl	ND	2.0	ug/L							03/18/15	
Oxamyl	ND	20	ug/L							03/18/15	
Propoxur	ND	2.0	ug/L							03/18/15	

Blank Spike (A503013-BS1)

3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb	4.1	3.0	ug/L	4.0		103	80-120			03/18/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		104	80-120			03/18/15	
Carbaryl	4.1	5.0	ug/L	4.0		103	80-120			03/18/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120			03/18/15	
Methiocarb	4.3	2.0	ug/L	4.0		106	80-120			03/18/15	
Methomyl	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	
Oxamyl	4.2	20	ug/L	4.0		104	80-120			03/18/15	
Propoxur	4.0	2.0	ug/L	4.0		101	80-120			03/18/15	

**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 531.1 - Quality Control

Batch: A503013

Prepared: 03/17/2015

Prep Method: EPA 531.1

Analyst: AAR

Blank Spike Dup (A503013-BSD1)

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0		111	80-120	9	20	03/19/15	
Aldicarb	4.2	3.0	ug/L	4.0		104	80-120	1	20	03/19/15	
Aldicarb Sulfone	4.3	2.0	ug/L	4.0		109	80-120	7	20	03/19/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0		109	80-120	4	20	03/19/15	
Carbaryl	4.3	5.0	ug/L	4.0		108	80-120	5	20	03/19/15	
Carbofuran	4.2	5.0	ug/L	4.0		105	80-120	0	20	03/19/15	
Methiocarb	4.5	2.0	ug/L	4.0		112	80-120	5	20	03/19/15	
Methomyl	5.0	2.0	ug/L	4.0		124	80-120	21	20	03/19/15	BS High
Oxamyl	4.4	20	ug/L	4.0		109	80-120	5	20	03/19/15	
Propoxur	4.4	2.0	ug/L	4.0		110	80-120	8	20	03/19/15	

Matrix Spike (A503013-MS1), Source: A5C0576-01

3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0	ND	113	65-135			03/19/15	
Aldicarb	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbaryl	3.9	5.0	ug/L	4.0	ND	98	65-135			03/19/15	
Carbofuran	4.0	5.0	ug/L	4.0	ND	99	65-135			03/19/15	
Methiocarb	3.9	2.0	ug/L	4.0	ND	98	65-135			03/19/15	
Methomyl	4.3	2.0	ug/L	4.0	ND	108	65-135			03/19/15	
Oxamyl	3.9	20	ug/L	4.0	ND	98	65-135			03/19/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	97	65-135			03/19/15	

EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Blank (A502659-BLK1)

Glyphosate	ND	25	ug/L							03/10/15	
Surrogate: AMPA	110			100		107	70-130			03/10/15	

Blank Spike (A502659-BS1)

Glyphosate	99	25	ug/L	100		99	70-130			03/10/15	
Surrogate: AMPA	100			100		104	70-130			03/10/15	

Blank Spike Dup (A502659-BSD1)

Glyphosate	110	25	ug/L	100		106	70-130	7	30	03/10/15	
Surrogate: AMPA	110			100		111	70-130			03/10/15	

Matrix Spike (A502659-MS1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	97	70-130			03/10/15	
Surrogate: AMPA	120			100		114	70-130			03/10/15	

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Glyphosate	100	25	ug/L	100	ND	98	70-130	1	30	03/10/15	
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**BSK Associates Fresno
Organics Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 547 - Quality Control

Batch: A502659

Prepared: 03/10/2015

Prep Method: EPA 547

Analyst: WPR

Matrix Spike Dup (A502659-MSD1), Source: A5C0425-01

Surrogate: AMPA 100 100 103 70-130 03/10/15

EPA 548.1 - Quality Control

Batch: A502773

Prepared: 03/11/2015

Prep Method: EPA 548.1

Analyst: KHH

Blank (A502773-BLK1)

Endothall ND 45 ug/L 03/17/15

Blank Spike (A502773-BS1)

Endothall 13 45 ug/L 20 64 54-105 03/17/15

Blank Spike Dup (A502773-BSD1)

Endothall 13 45 ug/L 20 63 54-105 1 46 03/18/15

Matrix Spike (A502773-MS1), Source: A5C0722-01

Endothall ND 45 ug/L 20 ND 0 54-105 03/18/15 MS1.0 **Low**

EPA 549.2 - Quality Control

Batch: A502842

Prepared: 03/13/2015

Prep Method: EPA 549.2

Analyst: PYA

Blank (A502842-BLK1)

Diquat ND 4.0 ug/L 03/17/15

Blank Spike (A502842-BS1)

Diquat 3.1 4.0 ug/L 4.0 78 70-130 03/17/15

Blank Spike Dup (A502842-BSD1)

Diquat 3.4 4.0 ug/L 4.0 84 70-130 7 30 03/17/15

Matrix Spike (A502842-MS1), Source: A5C0711-01

Diquat 2.8 4.0 ug/L 4.0 ND 70 70-130 03/17/15

Matrix Spike (A502842-MS2), Source: A5C0711-02

Diquat 2.9 4.0 ug/L 4.0 ND 71 70-130 03/17/15

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-13
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A5C0789



03102015

Monte6227

Turnaround: Standard

Due Date: 3/24/2015



Monterey Bay Analytical





1414 Stanislaus St., Fresno, CA 93706
 (559) 497-2888 · Fax (559) 497-2893
 www.bskassociates.com

26,24

Turnaround Time Request

Standard - 10 business days

Rush (Surcharge may apply)

Date needed:

A5C0789
 Monte6227

03/10/2015
 10



***Required Fields** Temp:

Company/Client Name*: **Monterey Bay Analytical Services**

Report Attention*: **Mason Weidner-Holland**

Invoice To*: **David Holland**

Phone*: **831-375-6227**

Fax*: **831-641-0734**

Address*: **4 Justin Court, Suite D**

City*: **Monterey**

State*: **CA**

Zip*: **93940**

Project: **Cal Am**

Project #: _____

How would you like to receive your completed results?*

E-Mail Fax Mail

Reporting Options:

Trace (J-Flag) Swamp EDD Type: _____

Regulatory Carbon Copies

SWRCB (Drinking Water)

Merced Co Fresno Co

Madera Co Tulare Co

Other: _____

Regulatory Compliance

EDT to California SWRCB (Drinking Water)

System Number*: _____

Geotracker #: _____

Sampler Name (Printed/Signature)*: **Josh Sobolew**

E-mail*: **mweidner@mbasinc.com, dholland@mbasinc.com**

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

#	Sample Description*	Sampled*		Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
		Date	Time										
1	MW-5M (monitoring)	3/8/15	1010	GW	AB27756	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name) *[Signature]* Company **MBAS** Date **3/9/15** Time **1600**

Received by: (Signature and Printed Name) *[Signature]* Company _____

Relinquished by: (Signature and Printed Name) _____ Company _____ Date _____ Time _____

Received by: (Signature and Printed Name) *[Signature]* Company _____

Received for Lab by: (Signature and Printed Name) *[Signature]* Date _____ Time _____ Payment Received at Delivery: _____

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____

Cooling Method: Wet Blue None

Amount: _____ PIA#: _____ Unit: _____

Custody Seal: **YN**

Chilling Process Begun: **YN**

Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf



Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$ <u>26, 240</u>	Yes No NA	Were correct containers and preservatives received for the tests requested?	Yes No NA
	If samples were taken today, is there evidence that chilling has begun?	Yes No <u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)	Yes No NA
	Did all bottles arrive unbroken and intact?	<u>Yes</u> No	Was a sufficient amount of sample received?	Yes No
	Did all bottle labels agree with COC?	<u>Yes</u> No	Do samples have a hold time <72 hours?	Yes <u>No</u>
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No <u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes No <u>NA</u>

Bottles Received	Bottles Received/chlorine checks are either N/A or are performed in the lab "—" means preservation/chlorine checks are either N/A or are performed in the lab	Checks		Passed?					
		—	—	Y	N				
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)									
Bacti $\text{Na}_2\text{S}_2\text{O}_3$									
None (P) ^{White Cap}									
Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW		pH > 8	Y	N					
Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW		pH 9-9.5	Y	N					
Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW		pH 9.3-9.7	Y	N					
HNO_3 (P) ^{Red Cap}		—	—						
H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}		pH < 2	Y	N					
NaOH (P) ^{Green Cap}		Cl, pH > 10	Y	N					
NaOH + ZnAc (P)		pH > 9	Y	N					
Dissolved Oxygen 300ml (g)		—	—						
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—						
HCl (AG) ^{Lt. Blue Label} O&G, Diesel		—	—						
$\text{Na}_2\text{O}_3\text{S}+\text{HCl}$ (AG) ^{Lt. Pink Label} 525		—	—						
$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549		—	—						
$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547, 515, 548, THM, 524		—	—						
$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505		—	—						
$\text{Na}_2\text{S}_2\text{O}_3$ + MCAA (CG) ^{Orange Label} 531		pH < 3	<u>Y</u>	N					
NH_4Cl (AG) ^{Purple Label} 552		—	—						
EDA (AG) ^{Brown Label} DBPs		—	—						
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—	—						
Buffer pH 4 (CG)		—	—						
None (CG)		—	—						
H_3PO_4 (CG) ^{Salmon Label}		—	—						
Other:									
Asbestos 1Liter Plastic w/ Foil		—	—						
Low Level Hg / Metals Double Baggie		—	—						
Bottled Water		—	—						
Clear Glass Jar: 250 / 500 / 1 Liter		—	—						
Soil Tube Brass / Steel / Plastic		—	—						
Tedlar Bag / Plastic Bag		—	—						

Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	S P			S P		
	S P			S P		

Comments

3/10/15

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

March 18, 2015

Ceres ID: 10613

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on March 10, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

This work was authorized under M.B.A.'s Project # AB27756.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10613-001	MW-5M (monitoring)	3/10/2015	3/8/2015 10:10

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB27756		Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
					ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.59			<u>IS</u> ¹³ C-2,3,7,8-TCDD	97.0	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	89.2	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB27756		Sample Size:	1.000 L	QC Batch #:	1301	Date Extracted:	16-Mar-15
					ZB-5 MS Analysis Date:	17-Mar-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	106	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-5M (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10613-001		Date Received: 10-Mar-15
Project: AB27756			Sample Size: 1.023 L		QC Batch #: 1301		Date Extracted: 16-Mar-15
Date Collected: 8-Mar-15					ZB-5 MS Analysis Date: 17-Mar-15		
Time Collected: 10:10							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.59			<u>IS</u> ¹³ C-2,3,7,8-TCDD	104	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	97.7	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
El Dorado Hills, CA 95762
Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10613
Temperature: 1.3 °C

Reports and invoices will be delivered by email in .pdf format

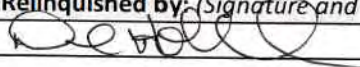
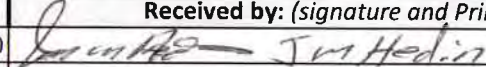
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: _____ Monterey Bay Analytical Contact Name: _____ David Holland Address: 4 Justin Court Ste D Monterey CA 93940 Ph: 831-375-6227 Email: mweidner@mbasinc.com	Company Name: _____ Same Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
E: Effluent SD: Sediment C: Clay SO: Solid
I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
	Date	Time	Comments									<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
1	MW-5M (monitoring)	3/8/2015	1010	Aq	2	X						AB27756
2												(2,3,7,8 TCDD only)
3												Please include excel report
4												
5												
6												
7												
8												
9												
10												
11												
12												

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
	3/9/2015	16:00	 Jim Hedin	3/10/15	10:28

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10613</u>	Date/Time: <u>3/10/15 10:20</u>
Client Project ID: <u>AD 27756</u>	Received Temperature: <u>1.3°C</u> Acceptable: <u>Y</u> /N
Chain of Custody Relinquished by signed?	<u>Y</u> /N
Custody Seals? Present?	Y/N
Intact?	Y/N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	Y/ <u>N</u>
Proper Containers:	<u>Y</u> N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>Y</u> /N
Drinking Water, Sodium Thiosulfate present?	Y/N/ <u>NA</u>
List COC discrepancies:	
3/10/15	
List Damaged Samples:	
3/10/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10613 PB: 1301 Sample #: 1 Due Date: 3/24/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Sample Volume Calculation

Instructions:

1. Calibrate balance
2. Tare balance
3. Place Full sample bottle with cap on balance. Record weight as Sample+Bottle Wt
4. Weigh empty bottle and cap. Record as Bottle Wt.
5. Calculate sample Volume (assuming 1g = 1ml) as follows.

$$\text{Sample Volume} = (\text{Sample} + \text{Bottle Wt}) - \text{Empty Bottle Wt.}$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10613-1	1538.85	516.30	1.0232

Chemist: J Date: 3/16/15

Method: 1613B
 SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness				chem/date/witness
0-1301-MB001	Method Blank		1.000L	3/16/15 NA	3/17/15 NA	NA	3/17/15	NO	3/17/15 NA
0-1301-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10613-1301-001	MW-5M (monitoring)	✓	1.023L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:15 3/18/15
 Soxhlet Stop: _____

Samples Logged out by: 08:00 3/18/15
 Samples Returned by: NA
 Note samples Depleted: 1*

Sample Extracts Storage Location: Box 15
 Extracts to Instrument: 12:20 3/17/15
 Extracts returned to Storage Location: 08:27 3/18/15

Chemist: [Signature]

Method: 8290A/1613B
 SOP #: 302.1/301.1

Ceres Analytical Laboratory
 Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	102	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	0 0	202	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	20,30,100,20	145782	2/5/16
Sigel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid Al	6g	P122314A	6/23/15
Na2SO4	1.5g	P101814A	4/16/15
20% Ocm; Hex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services 4 Justin Court, Suite D Monterey CA, 93940	Report Date: 03/27/15 14:11
Attention: David Holland	Received Date: 03/10/15 09:20
Phone: (831) 375-6227	Turn Around: Normal
Fax: (831) 641-0734	Client Project: Cal Am
Work Order(s): 5C10012	

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

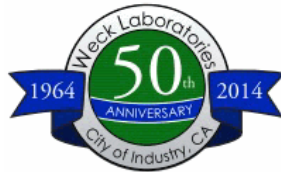
Dear David Holland :

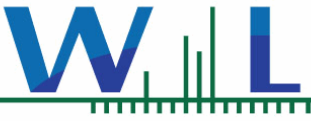
Enclosed are the results of analyses for samples received 03/10/15 09:20 with the Chain of Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager





Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

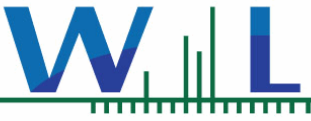
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-5M(Monitoring)	Josh Sobolew	AB27756	5C10012-01	Water	03/08/15 10:10

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

5C10012-01 MW-5M(Monitoring)

Sampled: 03/08/15 10:10

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27756

Anions by IC, EPA Method 9056

Method: EPA 9056M

Batch: W5C1170

Prepared: 03/19/15 12:00

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	10	ug/l	1	03/19/15 14:56	

Chlorinated Pesticides and/or PCBs

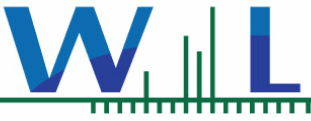
Method: EPA 508

Batch: W5C0606

Prepared: 03/11/15 08:49

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4'-DDD	ND	0.010	ug/l	1	03/20/15 19:10	
4,4'-DDE	ND	0.010	ug/l	1	03/20/15 19:10	
4,4'-DDT	ND	0.010	ug/l	1	03/20/15 19:10	
Aldrin	ND	0.010	ug/l	1	03/20/15 19:10	
alpha-BHC	ND	0.010	ug/l	1	03/20/15 19:10	
Aroclor 1016	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1221	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1232	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1242	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1248	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1254	ND	0.10	ug/l	1	03/20/15 19:10	
Aroclor 1260	ND	0.10	ug/l	1	03/20/15 19:10	
beta-BHC	ND	0.010	ug/l	1	03/20/15 19:10	
Chlordane (tech)	ND	0.10	ug/l	1	03/20/15 19:10	
Chlorothalonil	ND	0.050	ug/l	1	03/20/15 19:10	
delta-BHC	ND	0.010	ug/l	1	03/20/15 19:10	
Dieldrin	ND	0.010	ug/l	1	03/20/15 19:10	
Endosulfan I	ND	0.010	ug/l	1	03/20/15 19:10	
Endosulfan II	ND	0.010	ug/l	1	03/20/15 19:10	
Endosulfan sulfate	ND	0.010	ug/l	1	03/20/15 19:10	
Endrin	ND	0.010	ug/l	1	03/20/15 19:10	
Endrin aldehyde	ND	0.010	ug/l	1	03/20/15 19:10	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	03/20/15 19:10	
Heptachlor	ND	0.010	ug/l	1	03/20/15 19:10	
Heptachlor epoxide	ND	0.010	ug/l	1	03/20/15 19:10	
Hexachlorobenzene	ND	0.050	ug/l	1	03/20/15 19:10	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	03/20/15 19:10	
Methoxychlor	ND	0.010	ug/l	1	03/20/15 19:10	
PCBs, Total	ND	0.50	ug/l	1	03/20/15 19:10	
Propachlor	ND	0.050	ug/l	1	03/20/15 19:10	
Toxaphene	ND	1.0	ug/l	1	03/20/15 19:10	
Trifluralin	ND	0.010	ug/l	1	03/20/15 19:10	
Surr: Decachlorobiphenyl	79 %	Conc:0.0792	70-130	%		
Surr: Tetrachloro-meta-xylene	75 %	Conc:0.0749	70-130	%		



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

5C10012-01 MW-5M(Monitoring)

Sampled: 03/08/15 10:10

Sampled By: Josh Sobolew

Matrix: Water

Sample Note: AB27756

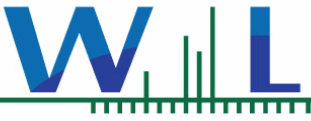
Chlorinated Pesticides and/or PCBs



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

QUALITY CONTROL SECTION



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Anions by IC, EPA Method 9056 - Quality Control

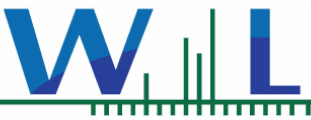
Batch W5C1170 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C1170-BLK1)				Analyzed: 03/19/15 13:27						
Iodide	ND	10	ug/l							
LCS (W5C1170-BS1)				Analyzed: 03/19/15 14:19						
Iodide	40.6	10	ug/l	40.0		102	85-115			
Matrix Spike (W5C1170-MS1)				Source: 5C12026-01		Analyzed: 03/19/15 16:09				
Iodide	35.9	10	ug/l	40.0	ND	90	80-120			
Matrix Spike Dup (W5C1170-MSD1)				Source: 5C12026-01		Analyzed: 03/19/15 16:28				
Iodide	36.8	10	ug/l	40.0	ND	92	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)				Analyzed: 03/20/15 17:07						
4,4'-DDD	ND	0.010	ug/l							
4,4'-DDE	ND	0.010	ug/l							
4,4'-DDT	ND	0.010	ug/l							
Aldrin	ND	0.010	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.10	ug/l							
Aroclor 1221	ND	0.10	ug/l							
Aroclor 1232	ND	0.10	ug/l							
Aroclor 1242	ND	0.10	ug/l							
Aroclor 1248	ND	0.10	ug/l							
Aroclor 1254	ND	0.10	ug/l							
Aroclor 1260	ND	0.10	ug/l							
beta-BHC	ND	0.010	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
Chlorothalonil	ND	0.050	ug/l							
delta-BHC	ND	0.010	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.010	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.010	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.010	ug/l							
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Hexachlorobenzene	ND	0.050	ug/l							



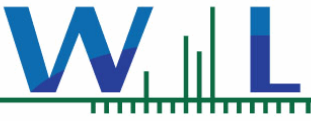
Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5C0606 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5C0606-BLK1)										
Analyzed: 03/20/15 17:07										
Hexachlorocyclopentadiene	ND	0.050	ug/l							
Methoxychlor	ND	0.010	ug/l							
PCBs, Total	ND	0.50	ug/l							
Propachlor	ND	0.050	ug/l							
Toxaphene	ND	1.0	ug/l							
Trifluralin	ND	0.010	ug/l							
<i>Surr: Decachlorobiphenyl</i>	0.0856		ug/l	0.100		86	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0768		ug/l	0.100		77	70-130			
LCS (W5C0606-BS1)										
Analyzed: 03/20/15 17:38										
4,4'-DDD	0.0893	0.010	ug/l	0.100		89	55-142			
4,4'-DDE	0.0851	0.010	ug/l	0.100		85	49-129			
4,4'-DDT	0.0908	0.010	ug/l	0.100		91	54-160			
Aldrin	0.0741	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.0784	0.010	ug/l	0.100		78	59-131			
beta-BHC	0.0850	0.010	ug/l	0.100		85	63-136			
delta-BHC	0.0948	0.010	ug/l	0.100		95	59-137			
Dieldrin	0.0807	0.010	ug/l	0.100		81	59-135			
Endosulfan I	0.0616	0.010	ug/l	0.100		62	28-138			
Endosulfan II	0.0670	0.010	ug/l	0.100		67	53-133			
Endosulfan sulfate	0.0885	0.010	ug/l	0.100		88	58-155			
Endrin	0.0829	0.010	ug/l	0.100		83	57-148			
Endrin aldehyde	0.0674	0.010	ug/l	0.100		67	45-139			
gamma-BHC (Lindane)	0.0816	0.010	ug/l	0.100		82	59-129			
Heptachlor	0.0836	0.010	ug/l	0.100		84	42-136			
Heptachlor epoxide	0.0814	0.010	ug/l	0.100		81	59-134			
Methoxychlor	0.0735	0.010	ug/l	0.100		74	56-167			
<i>Surr: Decachlorobiphenyl</i>	0.0789		ug/l	0.100		79	70-130			
<i>Surr: Tetrachloro-meta-xylene</i>	0.0696		ug/l	0.100		70	70-130			
LCS Dup (W5C0606-BSD1)										
Analyzed: 03/20/15 18:08										
4,4'-DDD	0.105	0.010	ug/l	0.100		105	55-142	16	25	
4,4'-DDE	0.0946	0.010	ug/l	0.100		95	49-129	11	25	
4,4'-DDT	0.104	0.010	ug/l	0.100		104	54-160	14	25	
Aldrin	0.0801	0.010	ug/l	0.100		80	29-115	8	25	
alpha-BHC	0.0847	0.010	ug/l	0.100		85	59-131	8	25	
beta-BHC	0.0960	0.010	ug/l	0.100		96	63-136	12	25	
delta-BHC	0.108	0.010	ug/l	0.100		108	59-137	13	25	
Dieldrin	0.0914	0.010	ug/l	0.100		91	59-135	12	25	
Endosulfan I	0.0678	0.010	ug/l	0.100		68	28-138	10	25	
Endosulfan II	0.0743	0.010	ug/l	0.100		74	53-133	10	25	
Endosulfan sulfate	0.0994	0.010	ug/l	0.100		99	58-155	12	25	

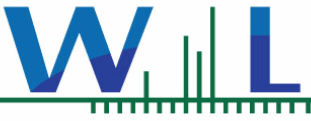


Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Chlorinated Pesticides and/or PCBs - Quality Control**Batch W5C0606 - EPA 508**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5C0606-BSD1)				Analyzed: 03/20/15 18:08						
Endrin	0.0919	0.010	ug/l	0.100		92	57-148	10	25	
Endrin aldehyde	0.0676	0.010	ug/l	0.100		68	45-139	0.2	25	
gamma-BHC (Lindane)	0.0899	0.010	ug/l	0.100		90	59-129	10	25	
Heptachlor	0.0914	0.010	ug/l	0.100		91	42-136	9	25	
Heptachlor epoxide	0.0895	0.010	ug/l	0.100		90	59-134	10	25	
Methoxychlor	0.0735	0.010	ug/l	0.100		73	56-167	0.1	25	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0831</i>		<i>ug/l</i>	<i>0.100</i>		<i>83</i>	<i>70-130</i>			
<i>Surr: Tetrachloro-meta-xylene</i>	<i>0.0696</i>		<i>ug/l</i>	<i>0.100</i>		<i>70</i>	<i>70-130</i>			



Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 03/10/15 09:20
Date Reported: 03/27/15 14:11

Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Chain of Custody / Analysis Request



4 Justin Court, Suite D
 Monterey, CA 93940
 (831) 375-MBAS (6227)
 (831) 641-0734 (Fax)

MontereyBayAnalytical@USA.net

Analysis Requested										
See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balance	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter					
Field Parameters:										
Temp: 16.97°C										
pH: 7.23										
Cond: 962 µS/cm										
Turb: 0.47 NTU										

Client / Company Name: California American Water - Monterey Peninsula Water Supply Project	email address to sent report & invoice: travis.peterson@amwater.com , susan.jacobson@amwater.com , nreynolds@geoscience-water.com , bvillalobos@geoscience-water.com		
Attn: Travis Peterson (CalAm)	Drinking water [] Wastewater [] Monitoring Well [X] Soil [] Sludge []		
Mailing Address: PO Box 951 Monterey, CA 93942-0951	For State or Local Health Department reporting, the System # is _____		
Billing Address: PO Box 951 Monterey, CA 93942-0951	Phone # (831) 646-3295 / (831) 646-3269	Fax # (831) 333-1343	

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling		Receiving Temp.	Coliform Analysis					# Cont.	Container		
			Date	Time		CL2	Residual	Routine	Other	Repeat		Special	Type	Size
27756		MW-5M (Monitoring)	3/8/15	10:10 AM	12.5°C							24		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Josh Sobolew Nathan Reynolds / GEOSCIENCE		3/8/15	10:10 AM	Is sample for regulatory purposes? Yes / No 2mL 1:1 HNO ₃ to each 125mL PH 4.2 L3 3/9/15
Relinquished by:	Josh Sobolew / GSSIT		3/8/15	11:45 AM	
Received by:					
Relinquished by:					
Received by:	Mallise Wach		3/8/15	11:45	

[] Payment received	Check #	Amount:	Receipt #	Date:
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**Table 3-3. Water Quality Analyses for Quarterly Sampling
Monitoring Wells and Test Slant Well**

Constituent	Units	Method Reporting Limit	Method
Physical Properties			
Color (Lab)	Color Units	3.0	SM 2120B/EPA 110.2
Oxidation-Reduction Potential (Field)	mV	-	Field Meter - Myron L 6PII
pH (Lab)	Units	0.10	SM 4500 H+B
pH (Field)	Units	-	Field Meter - YSI Pro Plus
Turbidity (Laboratory)	NTU	0.20	EPA 180.1/SM 2130B
Turbidity (Field)	NTU	-	Field Meter - Hach 2100P
Temperature (Field)	°C	-	Field Meter - YSI Pro Plus
Dissolved Oxygen (Field)	mg/L	-	Field Meter - YSI Pro Plus
Silt Density Index (Field)	-	-	ASTM D4189-07
Threshold Odor Number (Lab)	T.O.N.	1.0	EPA 140.1/SM 2150
Total Dissolved Solids (Lab)	mg/L	10	SM 2540 C
Specific Conductance (Lab)	µmhos/cm	1	SM 2510 B
Specific Conductance (Field)	µS/cm	-	Field Meter - YSI Pro Plus
General Minerals			
Total Cations	meq/L	-	Calculation
Total Anions	meq/L	-	Calculation
Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Bicarbonate Alkalinity as HCO ₃	mg/L	3	SM 2320 B
Carbonate Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Hydroxide Alkalinity as CaCO ₃	mg/L	3	SM 2320 B
Total Hardness as CaCO ₃	mg/L	3	Calculation
Aluminum	µg/L	1	EPA 200.7
Arsenic	µg/L	1	EPA 200.7 / EPA 200.8
Barium, Dissolved	µg/L	0.01	EPA 200.7
Boron, Dissolved	µg/L	0.5	EPA 200.8
Bromide, Dissolved	mg/L	0.1	EPA 326.0
Calcium, Dissolved	mg/L	1	EPA 200.7
Chloride, Dissolved	mg/L	1	EPA 300.0
Copper, Total	µg/L	50	EPA 200.7
Fluoride, Dissolved	mg/L	0.10	EPA 300.0 / SM 4500 FC
Iodide, Dissolved	mg/L	0.1	USGS I-2371 / EPA 9056A
Iron, Dissolved	µg/L	100	EPA 200.7 / EPA 200.8
Iron, Total	µg/L	100	EPA 200.7 / EPA 200.8
Lithium	µg/L	10	EPA 200.7 / EPA 6010B
Magnesium, Dissolved	mg/L	1	EPA 200.7

Constituent	Units	Method Reporting Limit	Method
Manganese, Dissolved	µg/L	20	EPA 200.7 / EPA 200.8
Manganese, Total	µg/L	20	EPA 200.7 / EPA 200.8
Mass Balance, Total & Dissolved	meq/L	-	Calculation
MBAS	mg/L	0.050	SM 5540 C / EPA 200.8
Nitrogen, Nitrate as NO ₃	mg/L	1	EPA 353.2 / EPA 300.0
Nitrogen, Nitrite, Dissolved	mg/L as N	1	SM 4500 NO ₂ B
Nitrogen, NO ₂ + NO ₃	mg/L as N	1	EPA 300.0
Nitrogen, Ammonia, Dissolved	mg/L as N	0.1	SM 4500 NH ₃ H / EPA 350.1
Nitrogen, Ammonia + Organic, Diss. (TKN)	mg/L as N	0.1	EPA 351.2
Phosphorus, Dissolved	mg/L as P	0.01	EPA 365.3
Phosphorus, ortho, Dissolved	mg/L as P	0.01	EPA 365.3
Potassium, Dissolved	mg/L	1	EPA 200.7
Silica, Dissolved	mg/L	1	SM 4500 SiE
Sodium, Dissolved	mg/L	1	EPA 200.7
Strontium, Dissolved	mg/L	0.1	EPA 200.7 / EPA 200.8
Sulfate as SO ₄ , dissolved	mg/L	0.5	EPA 300.0
Zinc, Total	µg/L	50	EPA 200.7
<i>Volatile Organic Compounds</i>			
VOCs plus Oxygenates (MTBE)	µg/L	varies	EPA 524.2
<i>EPA Organic Methods</i>			
EDB and DBCP	µg/L	varies	EPA 504.1
Chlorinated Pesticides & PCB's as DCP	µg/L	varies	EPA 508
Chlorinated Acid Herbicides	µg/L	varies	EPA 515
Nitrogen & Phosphorus Pesticides DEHP, DEHA, Benzo(a)Pyrene	µg/L	varies	EPA 525
Carbamates	µg/L	varies	EPA 531.1
Glyphosate	µg/L	varies	EPA 547
Endothall	µg/L	varies	EPA 548.1
Diquat	µg/L	varies	EPA 549.1
Dioxin (2,3,7,8 TCDD)	µg/L	varies	EPA 1613

Total and dissolved iron and manganese will be measured by field filtering samples directly into an acidified container immediately upon collection. A second sample will be collected directly into an acidified container without filtering. This method will provide a reliable and accurate means to determine the amount of dissolved and particulate iron and manganese, which has implications for desalting plant design.

27756

CAI AND W - Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry $\leq 6^{\circ}\text{C}$ Micro $\leq 10^{\circ}\text{C}$

YES

NO

NA <2 Hr

Is there evidence of chilling?

YES

NO

NA

Did bottles arrive intact?

YES

NO

NA

Did bottle labels agree with COC?

YES

NO

NA

Discrepancy Documentation:

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Person Contacted: _____ Method: In Person/Phone/Email _____

Problem _____

Resolution _____

Sample Split/Filtration

Lab ID	Cont. Size	Pres	Date/Initials

Lab ID	Cont. Size	Pres	Date/Initials

Comments

vacuum filter 1L, 0.45 μ membrane filter pre-rinsed

500ML + H₂SO₄ + Na₂S₂O₃ diss. TKN, NH₃

250ML no preserve diss. PO₄³⁻

250ML + H₂SO₄ diss. total P LJ 3/9/15



Monterey Bay Analytical Services

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www.MBASinc.com

ELAP Certification Number: 2385

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Page 1 of 2

Thursday, March 26, 2015

Lab Number: AB26966

Collection Date/Time: 2/17/2015 14:02 Sample Collector: SHAW C

Submittal Date/Time: 2/17/2015 15:56 Sample ID Coliform Designation:

Sample Description: MW-5D (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	112		2		2/26/2015	LRH
Aluminum, Total	EPA200.8	µg/L	Not Detected		10	1000	2/20/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	Not Detected		0.05		2/23/2015	TC
Arsenic, Total	EPA200.8	µg/L	4		1	10	2/20/2015	SM
Barium, Dissolved	EPA200.8	µg/L	562		10		2/20/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	137		10		2/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	0.09		0.05		2/27/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	3.3		0.1		2/19/2015	TC
Calcium	EPA200.7	mg/L	360		2.5		3/6/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	363		2.5		3/6/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	Not Detected	E			2/24/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	Not Detected		10		2/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	1168		1		2/20/2015	TC
Chlorinated Pesticides and PCB (EP	EPA508	µg/L	Not Detected	E			2/27/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	Not Detected		3	15	2/17/2015	LRH
Copper, Total	EPA200.8	µg/L	13		4	1300	2/20/2015	SM
DBCP & EDB	EPA504.1	µg/L	Not Detected	E			2/24/2015	BSK
Dioxin	EPA 1613	pg/L	Not Detected	E			2/26/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	Not Detected	E			3/3/2015	BSK
Endothall	EPA548.1	µg/L	Not Detected	E			2/21/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	0.1		0.1		2/19/2015	TC
Glyphosate	EPA547	µg/L	Not Detected	E			2/20/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	1484		10		3/9/2015	MW
Hydroxide	SM2320B	mg/L	Not Detected		5		2/27/2015	LRH
Iodide	EPA9056M	µg/L	Not Detected	E	10		2/26/2015	WECK
Iron	EPA200.7	µg/L	39		10	300	2/27/2015	MW
Iron, Dissolved	EPA200.7	µg/L	Not Detected		10	300	2/27/2015	MW
Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	Not Detected		0.5		2/25/2015	TC
Lithium	EPA200.8	µg/L	75		1		2/20/2015	SM
Magnesium	EPA200.7	mg/L	142		0.5		2/27/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	135		1		2/27/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	340		10	50	2/27/2015	MW
Manganese, Total	EPA200.7	µg/L	336		10	50	2/27/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	Not Detected		0.05	0.50	2/18/2015	HM
Nitrate as NO3	EPA300.0	mg/L	3		1	45	2/19/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	0.8		0.1		2/19/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	Not Detected		0.1		2/19/2015	TC
Odor Threshold at 60 C	SM2150B	TON	3		1	3	2/18/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	0.04		0.03		2/19/2015	LRH
pH (Field Test)	SM4500-H+B	pH	7.00				2/17/2015	CS
pH (Laboratory)	SM4500-H+B	pH (H)	7.5		0.1		2/17/2015	HM

mg/L : Milligrams per liter ug/L : Micrograms per liter PQL : Practical Quantitation Limit MCL : Maximum Contamination Level

H = Analyzed outside of hold time E = Analysis performed by External Laboratory; See Report attachments. T = Temperature Exceedance

Lab Number: AB26966

Collection Date/Time: 2/17/2015 14:02

Sample Collector: SHAW C

Submittal Date/Time: 2/17/2015 15:56

Sample ID

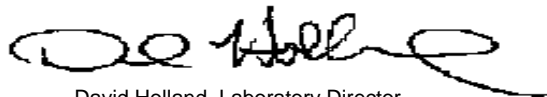
Coliform Designation:

Sample Description: MW-5D (monitoring)

Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed	Analyst:
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	Not Detected	E			2/27/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	0.04		0.03		2/25/2015	LRH
Potassium	EPA200.7	mg/L	7.8		0.5		2/27/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	7.10		0.1		2/27/2015	MW
QC Ratio TDS/SEC	Calculation		0.69				2/20/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	Not Detected	E			2/24/2015	BSK
Silica as SiO ₂ , Dissolved	EPA200.7	mg/L	45		0.5		2/27/2015	MW
Sodium	EPA200.7	mg/L	161		0.5		2/27/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	136		0.5		2/27/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	3775		1	900	2/17/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	3961		1		2/17/2015	CS
Strontium, Dissolved	EPA200.8	µg/L	2777		5		2/20/2015	SM
Sulfate	EPA300.0	mg/L	58		5	250	2/20/2015	TC
Temperature (Field)	SM2550	° C	21.3				2/17/2015	CS
Total Diss. Solids	SM2540C	mg/L	2616		10	500	2/18/2015	HM
Turbidity	EPA180.1	NTU	0.25		0.05	5.0	2/17/2015	LRH
Turbidity (Field)	EPA180.1	NTU	0.71		0.05		2/17/2015	CS
Volatile Org. Compounds (524)	EPA524	µg/L	Attached	E			2/24/2015	BSK
Zinc, Total	EPA200.8	µg/L	51		20	5000	2/20/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26966 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	136	0.04350	5.92
Potassium	7.1	0.02558	0.18
Calcium	363	0.04990	18.11
Magnesium	135	0.08229	11.11
NH3-N	0	0.07143	0.00
		SUM	35.32

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	112	0.02000	2.24
Sulfate	58	0.02082	1.21
Chloride	1168	0.02821	32.95
Nitrate-Nitrogen	0.8	0.07138	0.06
Phosphate-P	0.0	0.01031	0.00
Bromide	3.3	0.01252	0.04
		SUM	36.50

ANION-CATION BALANCE **-2** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	3775	
Cation Sum X 100	3532	94%
Anion Sum X 100	3650	97%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.

**Monterey Bay Analytical Services
4 Justin Court Ste D
Monterey CA, 93940**

SAMPLE ID **26966 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	161	0.04350	7.00
Potassium	7.8	0.02558	0.20
Calcium	360	0.04990	17.96
Magnesium	142	0.08229	11.69
NH3-N	0	0.07143	0.00
		SUM	36.85

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	112	0.02000	2.24
Sulfate	58	0.02082	1.21
Chloride	1168	0.02821	32.95
Nitrate-Nitrogen	0.8	0.07138	0.06
Phosphate-P	0.0	0.01031	0.00
Bromide	3.3	0.01252	0.04
		SUM	36.50

ANION-CATION BALANCE **0** (% DIFFERENCE)

Note: Anion-cation sums must balance because all potable waters are electrically neutral. For anion sums below 10.0 meq/L, a 2% difference is acceptable. For anion sums between 10.0 - 800 meq/L, a 5% difference is acceptable. If the difference exceeds the above criteria, the sample should be reanalyzed.

ION SUM AND MEASURED CONDUCTIVITY:

Conductivity	3775	
Cation Sum X 100	3685	98%
Anion Sum X 100	3650	97%

Note: In Natural Waters, Ion sum (cation or anion) X 100 should be within 10% of the measured conductivity. If either sum is out of range, recheck analysis.



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 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 2/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	10:03
CCV	40	40	100	95-105	11:51
CCV 2	40	40	100	95-105	15:27

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26942	686	671	2.2	5	10:03
AB26997	171	173	1.2	5	11:10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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Kjeldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 2/25/2015

Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.090	---	<0.5
LCS	5.0	4.9	98	90-110

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26892	0.5	5.0	5.5	5.6	100	102	1.8	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery



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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 2/23/2015

Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1300
ICVL	0.050	0.04	80.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1330
CCV1	0.500	0.490	98.00%	90-110	1330

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB27199	0.000	0.500	0.480	0.460	96	92	4.3	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery



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Orthophosphate QC Summary (Hach 8048)

Date: 2/19/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.003	---	< 0.03	10:08
LCSL	0.03	0.03	100	50-150	10:08
ICV	1.00	1.04	104	90-110	10:08
QCS	1.00	1.04	104	80-120	10:08
CCV	1.00	1.02	102	80-120	10:08

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptanc
								MS/MSD
AB26966	0.04	1.00	1.08	1.08	104	104	0.0	70-130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

e Criteria %	MS	
RPD	Time	MSD Time
10	10:08	10:08



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<http://www.MBASinc.com>

MBAS QC Summary (SM 5540C)

Date Analyzed: 2/18/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
ICVB	---	0.015	---	<0.05
ICVL	0.050	0.05	100	80-120
ICV	0.250	0.236	94.4	80-120

Spiked Sample ID	Sample (mg/L)	Spiked (mg/L)	MS (mg/L)	MSD (mg/L)	MS % Rec	MSD % Rec	MS-MSD % RPD	Acceptance Criteria %	
								MS/MSD	RPD
AB26932	0.035	0.250	0.271	0.266	94.4	92.4	1.9	80/120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB26966

Date Analyzed
Friday, February 20, 2015

	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	75.0	50	117.4	103.4	12.7	97.2	123.8	24.05	0.10
Aluminum	8.8	50	97.3	93.4	4.1	97.1	106.5	9.30	-0.03
Chromium	7.7	50	106.3	104.9	1.3	99.0	101.3	2.27	0.08
Copper	12.9	50	90.5	88.7	2.0	99.7	102.2	2.42	0.52
Zinc	51.4	50	99.2	97.2	2.0	98.8	106.6	7.60	0.38
Arsenic	3.9	50	101.1	103.5	2.3	99.5	96.7	2.88	0.07
Strontium	2783.1	50	143.6	-9.8	229.3	97.4	98.0	0.68	0.01
Barium	528.9	50	94.8	95.5	0.7	100.2	95.2	5.13	0.02

ICVB=Initial Calibration Verification Blank; QCS=Quality Control Sample; LCB=Laboratory Control Blank; LCS/D=Laboratory Control Standard/Duplicate; MS/D=Matrix Spike/Duplicate; ICV=Instrument Calibration Verification; CCV=Continuing Calibration Verification; RPD=Relative Percent Difference



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<http://www.MBASinc.com>

Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 2/17/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1450
ICV	24800	24810	100.0%	95-105	1450

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB26966	3775	3786	0.3%	10	1700

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

RPD = Relative Percent Difference; Rec = Recovery



4 Justin Court Ste D, Monterey, CA 93940
 831.375.MBAS (6227), 831.641.0734 (Fax)
 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

TDS QC Summary (SM 2540C)

Date Analyzed: 2/18/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<10	1030
ICVL	100	97	97	80-120	1030
ICV	500	491	98.2	90-110	1030

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB26946 TDS	1237	1200	3.0	10	1030

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery



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pH QC Summary (SM 4500 H+)

Date Analyzed: 2/17/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
IPC	6.86	6.84	99.7	95-105	15:50

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB26966	7.5	7.5	0.0	10	16:00

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID: **BATCH #** 20150219

	F	Cl	NO2-N	SO4	Br	NO3-N	PO4-P
Spike amount	2	20	2	20	2	2	2
ICVB	0.00	0.12	0.04	0.00	0.00	0.00	0.00
ICV	2.00	20.26	2.05	20.28	1.90	1.93	1.93
Rec 90-110%	99.99	101.31	102.39	101.40	94.94	96.65	96.41
ICVL	0.21	1.91	0.19	1.76	0.24	0.23	0.19
Rec 50-150%	102.73	95.28	97.15	88.08	119.90	112.83	97.10
Sample ID AB26990	0.04	138.96	0.22	101.63	3.41	26.06	0.00
MS	1.89	151.04	2.17	116.10	5.20	26.19	2.26
Rec 80-120%	92.64	60.38	97.52	72.34	89.59	6.60	113.10
MSD	1.91	150.59	2.15	115.89	5.25	26.11	2.15
Rec 80-120%	93.51	58.16	96.42	71.29	92.03	2.54	107.31
Diff 10%	0.91	0.29	1.01	0.18	0.94	0.31	5.25
CCV	2.00	20.36	2.07	20.45	1.92	1.93	2.03
Rec 90-110%	99.78	101.80	103.61	102.23	95.88	96.66	101.71
Diff 10%	0.22	0.48	1.18	0.81	0.98	0.01	5.35
CCVB	0.00	0.10	0.04	0.00	0.09	0.00	0.00

4 Justin Court Ste D, Monterey

831.375.MBAS (6227), 831.64

MontereyBayAnalytical@usa.

<http://www.MBASinc.com>

300.0 QC Report

All units expressed in mg/L

20150220

	Cl	SO4
Spike amount	20	20
ICVB	0.10	0.00
ICV	19.89	20.06
Rec 90-110%	99.46	100.29
ICVL	1.82	1.66
Rec 50-150%	91.15	83.01
Sample ID AB27181	36.12	10.83
MS	55.65	30.38
Rec 80-120%	97.62	97.73
MSD	55.68	30.45
Rec 80-120%	97.82	98.08
Diff 10%	0.07	0.23
CCV	19.94	20.21
Rec 90-110%	99.70	101.07
Diff 10%	0.23	0.77
CCVB	0.10	0.00

Batch # 20150227

Analyte/ WL	Range	IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
		Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	0.98	97.7%	0.96	96.1%	1.7%	1	0.94	93.8%	1	0.93	92.5%
B 249.772	0.05-5ppm	0.01	0.01	1.04	103.6%	1.01	101.3%	2.3%	1	0.99	98.7%	1	1.00	99.8%
Ca 317.933	50-300ppm	-3.43	-3.51	47.7	95.4%	46.8	93.5%	1.9%	50	46.7	93.3%	50	45.77	91.5%
Ca 396.847	0.5-50ppm	-0.51	-0.65	51.9	103.8%	51.0	102.1%	1.7%	50	49.7	99.5%	50	49.76	99.5%
Cu 324.754	10ppb-100ppm	-8.30	-10.83	1070	107.0%	1050	105.0%	1.9%	1000	1028	102.8%	1000	1034.5	103.5%
Cu 327.394	10ppb-100ppm	-6.44	-7.99	1086	108.6%	1059	105.9%	2.5%	1000	1036	103.6%	1000	1057.6	105.8%
Fe 238.204	10ppb-100ppm	1.81	3.14	950	95.0%	943	94.3%	0.8%	1000	925	92.5%	1000	931.19	93.1%
Fe 259.940	10ppb-100ppm	-4.29	-1.60	1013	101.3%	993	99.3%	2.0%	1000	974	97.4%	1000	994.75	99.5%
K 766.491	0.5-750ppm	0.09	0.08	10.9	109.3%	10.5	105.0%	4.1%	10	10.6	106.3%	10	10.52	105.2%
Mg 202.583	50-1000ppm	-0.31	-0.45	52.4	104.9%	52.0	104.0%	0.8%	50	51.0	102.0%	50	51.10	102.2%
Mg 279.071	0.5-50ppm	0.01	-0.08	52.6	105.1%	51.5	103.1%	2.0%	50	51.1	102.2%	50	51.03	102.1%
Mn 257.611	10ppb-11ppm	-9.11	-11.09	985	98.5%	967	96.7%	1.8%	1000	955	95.5%	1000	969.08	96.9%
Mn 260.561	10ppb-11ppm	-8.74	-12.88	986	98.6%	971	97.1%	1.5%	1000	960	96.0%	1000	975.47	97.5%
Na 568.821	50-1000ppm	5.80	5.26	58.4	116.8%	58.1	116.2%	0.5%	50	55.6	111.3%	50	57.37	114.7%
Na 589.592	0.5-50ppm	-0.41	-0.48	55.1	110.1%	54.7	109.4%	0.6%	50	53.4	106.8%	50	53.68	107.4%
Si 251.611	0.5-200ppm	0.14	-0.10	50.0	100.0%	49.0	97.9%	2.1%	50	48.5	97.0%	50	49.52	99.0%
Si 252.411	0.5-200ppm	0.20	-0.02	49.5	99.0%	48.3	96.7%	2.4%	50	48.3	96.6%	50	49.00	98.0%
Zn 213.857	10ppb-50ppm	-19.01	14.37	960	96.0%	952	95.2%	0.8%	1000	939	93.9%	1000	935.71	93.6%

Sample ID AB26995

Analyte/ WL	Sample Value	MS Value	%Rec 70-130%	MSD Value	%Rec 70-130%	%Diff	CCV (90-110%)			%Diff 10%	CC Blank
							Value	Result	%Rec		
B 249.678	0.25	2.13	94.4%	2.12	93.5%	0.9%	1	0.93	93.5%	0.3%	0.01
B 249.772	0.26	2.29	101.2%	2.31	102.2%	0.8%	1	1.01	100.7%	2.0%	0.00
Ca 317.933	47.5	149.1	101.7%	148.3	100.8%	0.6%	50	47.3	94.6%	1.4%	-3.50
Ca 396.847	55.6	151.9	96.3%	151.9	96.3%	0.0%	50	50.9	101.8%	2.3%	-0.62
Cu 324.754	-3	2167	108.5%	2182	109.3%	0.7%	1000	1064	106.4%	3.4%	-10.41
Cu 327.395	0	2185	109.2%	2201	110.1%	0.7%	1000	1075	107.5%	3.7%	-9.87
Fe 238.204	26	1936	95.5%	1946	96.0%	0.5%	1000	945	94.5%	2.1%	-0.02
Fe 259.940	20	2067	102.3%	2072	102.6%	0.2%	1000	1006	100.6%	3.2%	-4.55
K 766.491	23.3	44.9	108.3%	45.3	110.0%	0.7%	10	11.2	111.5%	4.8%	0.04
Mg 202.588	34.9	143.4	108.4%	143.4	108.4%	0.0%	50	53.2	106.5%	4.3%	-0.41
Mg 279.077	34.1	139.8	105.7%	139.9	105.7%	0.0%	50	52.2	104.4%	2.2%	-0.04
Mn 257.611	44	2045	100.0%	2057	100.6%	0.6%	1000	969	96.9%	1.5%	-10.64
Mn 260.566	50	2111	103.0%	2110	103.0%	0.0%	1000	999	99.9%	3.9%	-9.37
Na 568.821	116.4	232.3	115.9%	232.8	116.4%	0.2%	50	60.9	121.9%	9.1%	5.61
Na 589.592	107.8	217.4	109.6%	219.2	111.4%	0.8%	50	55.2	110.3%	3.2%	-0.47
Si 251.611	33.6	134.3	100.7%	134.1	100.5%	0.2%	50	50.4	100.8%	3.8%	-0.13
Si 252.411	32.5	130.6	98.1%	130.6	98.2%	0.1%	50	48.7	97.3%	0.8%	-0.12
Zn 213.857	-33	1968	100.0%	1965	99.9%	0.1%	1000	957	95.7%	2%	-26.20



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 MontereyBayAnalytical@usa.net
<http://www.MBASinc.com>

Turbidity QC Summary (EPA 180.1)

Date Analyzed: 2/17/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	16:15
ICV	1.00	1.05	105.0%	95-105	16:15

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB26932	28.0	28.0	0.00%	10	16:15

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
 RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

February 27, 2015

Ceres ID: 10600

Monterey Bay Analytical
Mr. David Holland
4 Justin Court, Ste. D
Monterey, CA 93940

Mr. Holland,

Enclosed please find the results for one aqueous sample received on February 19, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

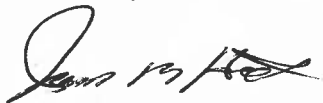
This work was authorized under M.B.A.'s Project # AB26966.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

The Sample Tracking Section includes all external and internal chain of custodies, laboratory bench sheets, and any special instructions received.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
10600-001	MW-5D (monitoring)	2/19/2015	2/17/2015 14:02

Section II: Data Summary

Sample ID: Method Blank								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-MB001	Date Received:	NA
Project:	AB26966		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c	Qualifiers
2,3,7,8-TCDD	ND	1.42			<u>IS</u> ¹³ C-2,3,7,8-TCDD	98.3	31 - 137	
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	95.7	42 - 164	
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.			
Analyst:	JMH			Reviewed by:	BS			

Sample ID: Ongoing Precision and Recovery								
Client Data			Sample Data		Laboratory Data			
Name:	Monterey Bay Analytical		Matrix:	Aqueous	Lab Sample ID:	0-OPR001	Date Received:	NA
Project:	AB26966		Sample Size:	1.000 L	QC Batch #:	1296	Date Extracted:	25-Feb-15
					ZB-5 MS Analysis Date:	26-Feb-15		
Analyte	Conc. (ng/ml)	Limits^a	Qualifiers		Labeled Standards	Conc.	Limits^a	Qualifiers
2,3,7,8-TCDD	10.1	7.3-14.6			IS ¹³ C-2,3,7,8-TCDD	106	25-141	
					CRS ³⁷ Cl ₄ -2,3,7,8-TCDD	10.4	3.7-15.8	
					<i>a. Method acceptance criteria .</i>			
Analyst: JMH				Reviewed by: BS				

Sample ID: MW-5D (monitoring)							
Client Data			Sample Data		Laboratory Data		
Name: Monterey Bay Analytical			Matrix: Aqueous		Lab Sample ID: 10600-001		Date Received: 19-Feb-15
Project: AB26966			Sample Size: 1.016 L		QC Batch #: 1296		Date Extracted: 25-Feb-15
Date Collected: 17-Feb-15					ZB-5 MS Analysis Date: 26-Feb-15		
Time Collected: 14:02							
Analyte	Conc. (pg/L)	DL^a	EMPC^b	Qualifiers	Labeled Standards	% R	LCL-UCL^c Qualifiers
2,3,7,8-TCDD	ND	1.53			<u>IS</u> ¹³ C-2,3,7,8-TCDD	90.3	31 - 137
					<u>CRS</u> ³⁷ Cl ₄ -2,3,7,8-TCDD	93.7	42 - 164
					<i>a.</i> Sample specific estimated detection limit. <i>b.</i> Estimated maximum possible concentration. <i>c.</i> Lower control limit - upper control limit.		
Analyst: JMH				Reviewed by: BS			

Section VI: Sample Tracking

Ceres Analytical Laboratory, Inc.

Chain of Custody

Ceres Use Only

Pg. ___ of ___

4919 Windplay Dr. Suite 1
 El Dorado Hills, CA 95762
 Tel: (916)932-5011

Please Print in Pen

Ceres Project ID: 10600
 Temperature: 1.1 °C

Reports and invoices will be delivered by email in .pdf format

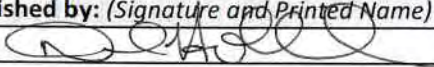
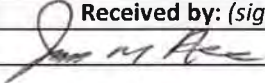
Client Information	Invoice Information (if different from Client Info)	Project Information
Company Name: <u>Monterey Bay Analytical</u> Contact Name: <u>David Holland</u> Address: <u>4 Justin Court Ste D Monterey CA 93940</u> Ph: <u>831-375-6227</u> Email: <u>mweidner@mbasinc.com</u>	Company Name: <u>Same</u> Contact Name: _____ Address: _____ Ph: _____ Fx: _____ Email: _____	Ceres Quote #: _____ P.O. # _____ Project ID: _____ TAT (business days) _____ Std 15 days; Rush TAT available please call

Matrix abbreviations:

A: Aqueous S: Soil AS: Ash DW: Drinking Water
 E: Effluent SD: Sediment C: Clay SO: Solid
 I: Influent SL: Sludge CS: Clay Slurry O: Other (please comment)

	Sample ID	Sample Collection			Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF
		Date	Time										<input type="checkbox"/> 1998 WHO <input type="checkbox"/> 2005 WHO <input type="checkbox"/> Other
													Comments
1	MW-5D (monitoring)	2/17/2015	0:00 1402	Aq	2	X							AB26966
2													(2,3,7,8 TCDD only)
3													Please include excel
4													report
5													
6													
7													
8													
9													
10													
11													
12													

Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (signature and Printed Name)	Date	Time
David Holland 	2/18/2015	16:00	 Joe M Hill	2/18/15	10:12

Client understands that all terms described in the proposals, quotations, and/or the general terms and conditions of Ceres Analytical Laboratory will be followed.
 Ceres Analytical Laboratory reserves the right to terminate its service or withhold delivery of reports, if in Ceres' discretion the terms of the project have been broken.

Sample Receipt Check List

Ceres ID: <u>10600</u>	Date/Time: <u>2/19/15 10:12</u>
Client Project ID: <u>AB26966</u>	Received Temperature: <u>1.1°C</u> Acceptable: <u>Y</u> / N
Chain of Custody Relinquished by signed?	<u>Y</u> / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	Y / <u>N</u>
Proper Containers:	<u>Y</u> / N
Preservation Acceptable (Chemical or Temperature)?	<u>Y</u> / N
Drinking Water, Sodium Thiosulfate present?	Y / N / <u>NA</u>
List COC discrepancies:	
<u>2/19/15</u>	
List Damaged Samples:	
<u>2/19/15</u>	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10600 PB: 1296 Sample #: 1 Due Date: 3/5/15

Matrix (circle one): Drinking Water Aqueous Effluent Influent Ash
Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (check one): 1613 2,3,7,8-TCDD 8290 2,3,7,8-TCDD
 1613 2,3,7,8-TCDD/F 8290 2,3,7,8-TCDD/F
 1613 Cl₄-Cl₈ 8290 Cl₄-Cl₈

Instructions:

Method: 1613B
 SOP #: 381.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR	CSS	AP	AB/AC	FC	RSS
				chem/date/witness	chem/date/witness		chem/date/witness		
0-1296-MB001	Method Blank		1.000 L	2/25/15 [Signature]	2/25/15 [Signature]	NA	2/26/15 [Signature]	NA	2/26/15 [Signature]
0-1296-OPR001	OPR		1.000 L	(A) ↓	↓	↓	↓	↓	↓
10600-1296-001	MW-5D (monitoring)	✓	1.016 L	↓	↓	↓	↓	↓	↓

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:30 2/25/15
 Soxhlet Stop: 07:30 2/26/15

Samples Logged out by: [Signature] 07:30 2/25/15
 Samples Returned by: NA
 Note samples Depleted: 1

Sample Extracts Storage Location: Box 14
 Extracts to Instrument: 11:45 2/26/15 [Signature]
 Extracts returned to Storage Location: _____

Chemist: [Signature]

Method: 8290A/1613B
SOP #: 302.1/301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	5021115A	10.1	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	30.1	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145258	2/5/16
Hexanes	3020, 100, 20ml	143512	4/24/15
S: gel	4g	P012615A	7/26/15
Basic gel	4g	P021915A	8/19/15
Acid gel	8g	P021915B	8/19/15
Acid A1	6g	P122314A	6/23/15
Nansdy	1.5g	P101614A	4/16/15
20% DemitHex	30ml	L102714A	4/27/15

Chemist: 

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery