CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5B19011

Report Date: 03/09/15 16:26

Received Date: 02/19/15 09:15

Turn Around: Normal

Client Project: Cal Am

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 02/19/15 09:15 with the Chain of Custody document. The samples were received in good condition, at 4.7 °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: 02/19/15 09:15
Date Reported: 03/09/15 16:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-5D(Monitoring)	Coral Shaw	AB26966	5B19011-01	Water	02/17/15 14:02

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

5B19011-01 MW-5D(Monitoring)

Sampled: 02/17/15 14:02 **Sampled By:** Coral Shaw **Matrix:** Water

Sample Note: AB26966

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	25	ug/l	2.5	02/26/15 15:11	

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 02:15	
4,4´-DDE	ND		0.010	ug/l	1	02/27/15 02:15	
4,4´-DDT	ND		0.010	ug/l	1	02/27/15 02:15	
Aldrin	ND		0.010	ug/l	1	02/27/15 02:15	
alpha-BHC	ND		0.010	ug/l	1	02/27/15 02:15	
Aroclor 1016	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1221	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1232	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1242	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1248	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1254	ND		0.10	ug/l	1	02/27/15 02:15	
Aroclor 1260	ND		0.10	ug/l	1	02/27/15 02:15	
beta-BHC	ND		0.010	ug/l	1	02/27/15 02:15	
Chlordane (tech)	ND		0.10	ug/l	1	02/27/15 02:15	
Chlorothalonil	ND		0.050	ug/l	1	02/27/15 02:15	
delta-BHC	ND		0.010	ug/l	1	02/27/15 02:15	
Dieldrin	ND		0.010	ug/l	1	02/27/15 02:15	
Endosulfan I	ND		0.010	ug/l	1	02/27/15 02:15	
Endosulfan II	ND		0.010	ug/l	1	02/27/15 02:15	
Endosulfan sulfate	ND		0.010	ug/l	1	02/27/15 02:15	
Endrin	ND		0.010	ug/l	1	02/27/15 02:15	
Endrin aldehyde	ND		0.010	ug/l	1	02/27/15 02:15	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	02/27/15 02:15	
Heptachlor	ND		0.010	ug/l	1	02/27/15 02:15	
Heptachlor epoxide	ND		0.010	ug/l	1	02/27/15 02:15	
Hexachlorobenzene	ND		0.050	ug/l	1	02/27/15 02:15	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	02/27/15 02:15	
Methoxychlor	ND		0.010	ug/l	1	02/27/15 02:15	
PCBs, Total	ND		0.50	ug/l	1	02/27/15 02:15	
Propachlor	ND		0.050	ug/l	1	02/27/15 02:15	
Toxaphene	ND		1.0	ug/l	1	02/27/15 02:15	
Trifluralin	ND		0.010	ug/l	1	02/27/15 02:15	
Surr: Decachlorobiphenyl	*58 %*	Conc:*0.0575*	*70-130*	%			S-GC
Surr: Tetrachloro-meta-xylene	*80 %*	Conc:*0.0796*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

5B19011-01 **MW-5D(Monitoring)**

Sampled: 02/17/15 14:02 **Sampled By:** Coral Shaw **Matrix:** Water

Sample Note: AB26966

Chlorinated Pesticides and/or PCBs

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QUALITY CONTROL SECTION

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

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							

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

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							
Surr: Decachlorobiphenyl	*0.0896*		*ug/l*	*0.100*		*90*	*70-130*			
Surr: Tetrachloro-meta-xylene	*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			
Surr: Decachlorobiphenyl	*0.0892*		*ug/l*	*0.100*		*89*	*70-130*			
Surr: Tetrachloro-meta-xylene	*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	

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Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

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	
Surr: Decachlorobiphenyl	*0.0895*		*ug/l*	*0.100*		*90*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0783*		*ug/l*	*0.100*		*78*	*70-130*			

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Date Received: 02/19/15 09:15
Date Reported: 03/09/15 16:26

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.

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BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5B1592
3/04/2015
Invoice: A504544

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5B1592 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 2/19/2015. 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 Montierth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montierth , 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	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	2/19/2015 - 11:09		
Report Due:	3/05/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 2.9

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet Ice
Received On Blue 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.
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: A5B1592-01
Sampled By: Coral Shaw
Sample Description: MW-5D (monitoring) // AB26966

Sample Date - Time: 02/17/15 - 14:02
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A502026	02/24/15	02/24/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A502026	02/24/15	02/24/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	105 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
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	103 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A501991	02/23/15	02/23/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A501991	02/23/15	02/23/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A501991	02/23/15	02/23/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A501991	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1592-01
Sampled By: Coral Shaw
Sample Description: MW-5D (monitoring) // AB26966

Sample Date - Time: 02/17/15 - 14:02
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	A501991	02/23/15	02/23/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A501991	02/23/15	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A501991	02/23/15	02/23/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A501991	02/23/15	02/23/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Toluene	EPA 524.2	**1.4**	0.50	ug/L	1	A501991	02/23/15	02/23/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A501991	02/23/15	02/23/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A501991	02/23/15	02/23/15	

Certificate of Analysis

Sample ID: A5B1592-01
Sampled By: Coral Shaw
Sample Description: MW-5D (monitoring) // AB26966

Sample Date - Time: 02/17/15 - 14:02
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	100 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	101 %	*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					
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	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	107 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/24/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/24/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/24/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A502103	02/24/15	02/24/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/24/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A502103	02/24/15	02/24/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/24/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A502103	02/24/15	02/24/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/24/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A502103	02/24/15	02/24/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A501867	02/20/15	02/20/15	
Surrogate: AMPA	EPA 547	101 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A501985	02/20/15	02/21/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A502063	02/24/15	03/03/15	BS2.0

Certificate of Analysis

Sample ID: A5B1592-01
Sampled By: Coral Shaw
Sample Description: MW-5D (monitoring) // AB26966

Sample Date - Time: 02/17/15 - 14:02
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
EPA 504.1 - Quality Control											
Batch: A502026										Prepared: 02/24/2015	
Prep Method: EPA 504.1										Analyst: PYA	
Blank (A502026-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							02/24/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							02/24/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.45*			*0.46*		*99*	*70-130*			02/24/15	
Blank Spike (A502026-BS1)											
Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12		109	70-130			02/24/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12		95	70-130			02/24/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*100*	*70-130*			02/24/15	
Blank Spike Dup (A502026-BSD1)											
Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		103	70-130	5	20	02/25/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		102	70-130	7	20	02/25/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.45*			*0.46*		*99*	*70-130*			02/25/15	
Matrix Spike (A502026-MS1), Source: A5B1650-01											
Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12	ND	107	65-135			02/24/15	
Ethylene Dibromide (EDB)	0.12	0.020	ug/L	0.12	ND	98	65-135			02/24/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.45*			*0.45*		*99*	*70-130*			02/24/15	
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	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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	
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: A501991										Prepared: 02/23/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A501991-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

EPA 524.2 - Quality Control

Batch: A501991 Prepared: 02/23/2015

Prep Method: EPA 524.2 Analyst: JGB

Blank (A501991-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
EPA 524.2 - Quality Control											
Batch: A501991										Prepared: 02/23/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A501991-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	*5.3*			*5.0*		*106*	*70-130*			02/23/15	
Surrogate: Bromofluorobenzene	*55*			*50*		*110*	*70-130*			02/23/15	
Blank Spike (A501991-BS1)											
1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130			02/23/15	
1,1,1-Trichloroethane	11	0.50	ug/L	10		110	70-130			02/23/15	
1,1,2,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130			02/23/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	12	10	ug/L	10		118	70-130			02/23/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		101	70-130			02/23/15	
1,1-Dichloroethane	11	0.50	ug/L	10		108	70-130			02/23/15	
1,1-Dichloroethene	11	0.50	ug/L	10		110	70-130			02/23/15	
1,1-Dichloropropene	11	0.50	ug/L	10		107	70-130			02/23/15	
1,2,3-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			02/23/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			02/23/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		103	70-130			02/23/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/23/15	
1,2-Dichloroethane	10	0.50	ug/L	10		104	70-130			02/23/15	
1,2-Dichloropropane	10	0.50	ug/L	10		103	70-130			02/23/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		104	70-130			02/23/15	
1,3-Dichlorobenzene	9.2	0.50	ug/L	10		92	70-130			02/23/15	
1,3-Dichloropropane	10	0.50	ug/L	10		101	70-130			02/23/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			02/23/15	
2,2-Dichloropropane	12	0.50	ug/L	10		119	70-130			02/23/15	
2-Butanone	9.2	5.0	ug/L	10		92	70-130			02/23/15	
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/23/15	
2-Hexanone	9.5	10	ug/L	10		95	70-130			02/23/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A501991										Prepared: 02/23/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A501991-BS1)												
4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			02/23/15		
4-Methyl-2-pentanone	11	5.0	ug/L	10		113	70-130			02/23/15		
Acetone	9.5	10	ug/L	10		95	70-130			02/23/15		
Benzene	10	0.50	ug/L	10		101	70-130			02/23/15		
Bromobenzene	10	0.50	ug/L	10		100	70-130			02/23/15		
Bromochloromethane	11	0.50	ug/L	10		113	70-130			02/23/15		
Bromodichloromethane	11	0.50	ug/L	10		108	70-130			02/23/15		
Bromoform	13	0.50	ug/L	10		130	70-130			02/23/15		
Bromomethane	14	0.50	ug/L	10		141	70-130			02/23/15	BS	***High***
Carbon Tetrachloride	12	0.50	ug/L	10		115	70-130			02/23/15		
Chlorobenzene	10	0.50	ug/L	10		100	70-130			02/23/15		
Chloroethane	10	0.50	ug/L	10		100	70-130			02/23/15		
Chloroform	11	0.50	ug/L	10		105	70-130			02/23/15		
Chloromethane	7.5	0.50	ug/L	10		75	70-130			02/23/15		
cis-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130			02/23/15		
cis-1,3-Dichloropropene	11	0.50	ug/L	10		111	70-130			02/23/15		
Dibromochloromethane	11	0.50	ug/L	10		114	70-130			02/23/15		
Dibromomethane	11	0.50	ug/L	10		107	70-130			02/23/15		
Dichlorodifluoromethane	8.8	0.50	ug/L	10		88	70-130			02/23/15		
Dichloromethane	10	0.50	ug/L	10		103	70-130			02/23/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		105	70-130			02/23/15		
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		110	70-130			02/23/15		
Ethylbenzene	10	0.50	ug/L	10		100	70-130			02/23/15		
Hexachlorobutadiene	11	0.50	ug/L	10		106	70-130			02/23/15		
Isopropylbenzene	10	0.50	ug/L	10		100	70-130			02/23/15		
m,p-Xylenes	20	0.50	ug/L	20		102	70-130			02/23/15		
Methyl-t-butyl ether	21	0.50	ug/L	20		104	70-130			02/23/15		
Naphthalene	9.1	0.50	ug/L	10		91	70-130			02/23/15		
n-Butylbenzene	10	0.50	ug/L	10		103	70-130			02/23/15		
n-Propylbenzene	10	0.50	ug/L	10		102	70-130			02/23/15		
o-Xylene	10	0.50	ug/L	10		102	70-130			02/23/15		
p-Isopropyltoluene	10	0.50	ug/L	10		102	70-130			02/23/15		
sec-Butylbenzene	10	0.50	ug/L	10		103	70-130			02/23/15		
Styrene	12	0.50	ug/L	10		120	70-130			02/23/15		
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		100	70-130			02/23/15		
tert-Butyl alcohol (TBA)	9.1	2.0	ug/L	10		91	70-130			02/23/15		
tert-Butylbenzene	10	0.50	ug/L	10		102	70-130			02/23/15		
Tetrachloroethene (PCE)	10	0.50	ug/L	10		102	70-130			02/23/15		
Toluene	10	0.50	ug/L	10		101	70-130			02/23/15		
trans-1,2-Dichloroethene	11	0.50	ug/L	10		108	70-130			02/23/15		
trans-1,3-Dichloropropene	11	0.50	ug/L	10		109	70-130			02/23/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		102	70-130			02/23/15		
Trichlorofluoromethane	11	5.0	ug/L	10		109	70-130			02/23/15		
Vinyl Chloride	9.0	0.50	ug/L	10		90	70-130			02/23/15		
Surrogate: 1,2-Dichlorobenzene-d4	*5.0*			*5.0*		*101*	*70-130*			02/23/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A501991										Prepared: 02/23/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A501991-BS1)												
Surrogate: Bromofluorobenzene	*50*			*50*		*100*	*70-130*			02/23/15		
Blank Spike Dup (A501991-BSD1)												
1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	8	30	02/23/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130	6	30	02/23/15		
1,1,2,2-Tetrachloroethane	9.0	0.50	ug/L	10		90	70-130	6	30	02/23/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		113	70-130	4	30	02/23/15		
1,1,2-Trichloroethane	9.4	0.50	ug/L	10		94	70-130	7	30	02/23/15		
1,1-Dichloroethane	10	0.50	ug/L	10		101	70-130	7	30	02/23/15		
1,1-Dichloroethene	10	0.50	ug/L	10		103	70-130	7	30	02/23/15		
1,1-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	8	30	02/23/15		
1,2,3-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130	6	30	02/23/15		
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	7	30	02/23/15		
1,2,4-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	7	30	02/23/15		
1,2-Dichlorobenzene	9.3	0.50	ug/L	10		93	70-130	7	30	02/23/15		
1,2-Dichloroethane	9.8	0.50	ug/L	10		98	70-130	7	30	02/23/15		
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130	3	30	02/23/15		
1,3,5-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130	6	30	02/23/15		
1,3-Dichlorobenzene	8.4	0.50	ug/L	10		84	70-130	10	30	02/23/15		
1,3-Dichloropropane	9.5	0.50	ug/L	10		95	70-130	6	30	02/23/15		
1,4-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	6	30	02/23/15		
2,2-Dichloropropane	11	0.50	ug/L	10		108	70-130	9	30	02/23/15		
2-Butanone	8.8	5.0	ug/L	10		88	70-130	5	30	02/23/15		
2-Chlorotoluene	9.4	0.50	ug/L	10		94	70-130	7	30	02/23/15		
2-Hexanone	8.8	10	ug/L	10		88	70-130	8	30	02/23/15		
4-Chlorotoluene	9.4	0.50	ug/L	10		94	70-130	6	30	02/23/15		
4-Methyl-2-pentanone	9.2	5.0	ug/L	10		92	70-130	20	30	02/23/15		
Acetone	8.8	10	ug/L	10		88	70-130	8	30	02/23/15		
Benzene	9.4	0.50	ug/L	10		94	70-130	7	30	02/23/15		
Bromobenzene	9.3	0.50	ug/L	10		93	70-130	8	30	02/23/15		
Bromochloromethane	11	0.50	ug/L	10		105	70-130	7	30	02/23/15		
Bromodichloromethane	10	0.50	ug/L	10		101	70-130	6	30	02/23/15		
Bromoform	12	0.50	ug/L	10		123	70-130	5	30	02/23/15		
Bromomethane	15	0.50	ug/L	10		145	70-130	3	30	02/23/15	BS	***High***
Carbon Tetrachloride	11	0.50	ug/L	10		108	70-130	7	30	02/23/15		
Chlorobenzene	9.4	0.50	ug/L	10		94	70-130	6	30	02/23/15		
Chloroethane	9.3	0.50	ug/L	10		93	70-130	8	30	02/23/15		
Chloroform	9.8	0.50	ug/L	10		98	70-130	6	30	02/23/15		
Chloromethane	7.3	0.50	ug/L	10		73	70-130	3	30	02/23/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130	7	30	02/23/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		103	70-130	7	30	02/23/15		
Dibromochloromethane	11	0.50	ug/L	10		105	70-130	8	30	02/23/15		
Dibromomethane	9.9	0.50	ug/L	10		99	70-130	8	30	02/23/15		
Dichlorodifluoromethane	8.4	0.50	ug/L	10		84	70-130	5	30	02/23/15		
Dichloromethane	9.6	0.50	ug/L	10		96	70-130	7	30	02/23/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A501991										Prepared: 02/23/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike Dup (A501991-BSD1)											
Di-isopropyl ether (DIPE)	9.6	3.0	ug/L	10		96	70-130	9	30	02/23/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		102	70-130	8	30	02/23/15	
Ethylbenzene	9.4	0.50	ug/L	10		94	70-130	6	30	02/23/15	
Hexachlorobutadiene	10	0.50	ug/L	10		100	70-130	6	30	02/23/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130	5	30	02/23/15	
m,p-Xylenes	19	0.50	ug/L	20		95	70-130	7	30	02/23/15	
Methyl-t-butyl ether	19	0.50	ug/L	20		97	70-130	8	30	02/23/15	
Naphthalene	8.6	0.50	ug/L	10		86	70-130	6	30	02/23/15	
n-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	7	30	02/23/15	
n-Propylbenzene	9.5	0.50	ug/L	10		95	70-130	7	30	02/23/15	
o-Xylene	9.4	0.50	ug/L	10		94	70-130	8	30	02/23/15	
p-Isopropyltoluene	9.5	0.50	ug/L	10		95	70-130	6	30	02/23/15	
sec-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	7	30	02/23/15	
Styrene	11	0.50	ug/L	10		114	70-130	6	30	02/23/15	
tert-Amyl Methyl Ether (TAME)	9.4	3.0	ug/L	10		94	70-130	7	30	02/23/15	
tert-Butyl alcohol (TBA)	7.9	2.0	ug/L	10		79	70-130	14	30	02/23/15	
tert-Butylbenzene	9.4	0.50	ug/L	10		94	70-130	8	30	02/23/15	
Tetrachloroethene (PCE)	9.4	0.50	ug/L	10		94	70-130	7	30	02/23/15	
Toluene	9.5	0.50	ug/L	10		95	70-130	6	30	02/23/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130	7	30	02/23/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130	8	30	02/23/15	
Trichloroethene (TCE)	9.5	0.50	ug/L	10		95	70-130	6	30	02/23/15	
Trichlorofluoromethane	10	5.0	ug/L	10		102	70-130	7	30	02/23/15	
Vinyl Chloride	8.3	0.50	ug/L	10		83	70-130	8	30	02/23/15	
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*101*	*70-130*			02/23/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*101*	*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	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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: 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
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: 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***

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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: 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

A5B1592

02192015

Monte6227

Turnaround: Standard

Due Date: 3/5/2015

Monterey Bay Analytical

Printed: 2/19

BSK Associates Engineers & Laboratories
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:

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Monte6227 10

*Required Fields

Temp: 2.9

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	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: _____

Sampler Name (Printed/Signature)*: Coral Shaw

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
	MW-5D (monitoring)	2/17/15	1402	GW	AB26966	X	X	X	X	X	X	X	X	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	2/18/15	1600		
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 2/19/15	Time 11:09	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: (ONTRAC) UPS GSO WALK-IN FED EX Courier: _____
Cooling Method: (Wet) (Blue) None
BW/Paper
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

BSK Associates SR-FL-0002-12

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Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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?	1					
Bacti $Na_2S_2O_3$	—	—						
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						
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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A, 4V					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—						
$Na_2S_2O_3$ + 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	—	—						

2/19/15 MW

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: MW @ 12:11 Labels checked by: @ RUSH Paged by:

Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
269966		MW-5D	2-17-15	14:02	2.1						27		
		(monitoring)											

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:	21.3 °C		
		pH:	7.00		
		Sp Cond:	3,961 µs/cm		
		Turb:	0.71 NTU		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Coral Shaw / Geoscience		2-17-15	14:02	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Coral Shaw / Geoscience		2-17-15		
Received by:	MBAS		2/17/15	1556	2 mL 1:1 HNO_3 to each 125 mL for metals
Relinquished by:					
Received by:					

[ ] Payment received Check # Amount: Receipt # Date:

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_2B
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_3H / 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

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.

CalAmDW_ Geoscience

26966

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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

500 mL vacuum filtered for diss. TKN + H_2SO_4 + $Na_2S_2O_3$

250mL " for diss. total phosphorus + H_2SO_4

250mL " for diss. ortho phosphate

(pre-rinsed 0.45µ membrane filter)

LJ 2/17/15

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

 Wednesday, April 29, 2015

Lab Number: AB28822

Collection Date/Time: 4/5/2015 8:20 Sample Collector: KHALIGHI A

Submittal Date/Time: 4/6/2015 9:21 Sample ID

Sample Description: MW-6S

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**366**		2	4/14/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	4/13/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**0.45**		0.05	4/8/2015	TC
Arsenic, Total	EPA200.8	µg/L	**16**		1	4/13/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**105**		10	4/13/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**447**		10	4/14/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	**Not Detected**		0.5	4/10/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**0.2**		0.1	4/6/2015	MW
Calcium	EPA200.7	mg/L	**93**		0.5	4/10/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**92**		5	4/24/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		4/9/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	4/14/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	**57**		1	4/6/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Attached**	E		4/15/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**20**	H	6	4/7/2015	LRH
Copper, Total	EPA200.8	µg/L	**Not Detected**		4	4/13/2015	SM
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		4/15/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		4/10/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		4/10/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		4/12/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.2**		0.1	4/6/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		4/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**393**		10	4/13/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	4/14/2015	LRH
Iodide	EPA9056M	µg/L	**35**	E	10	4/10/2015	WECK
Iron	EPA200.7	µg/L	**315**		10	4/10/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

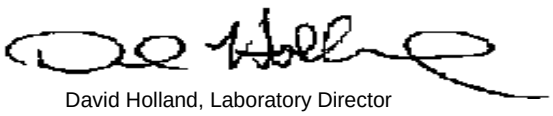
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Iron, Dissolved	EPA200.7	µg/L	**351**		100	4/10/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**1.0**		0.5	4/14/2015	TC
Lithium	EPA200.8	µg/L	**6**		1	4/13/2015	SM
Magnesium	EPA200.7	mg/L	**39**		0.5	4/10/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**37**		5	4/24/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**2090**		100	4/10/2015	MW
Manganese, Total	EPA200.7	µg/L	**1880**		10	4/10/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**	H	0.05	4/7/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**Not Detected**		1	4/6/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**0.5**		0.1	4/6/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.5**		0.1	4/6/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**2**	H	1	4/7/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**1.55**		0.15	4/6/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.07**			4/5/2015	AK
pH (Laboratory)	SM4500-H+B	pH (H)	**7.1**		0.1	4/6/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		4/11/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**1.38**		0.03	4/13/2015	LRH
Potassium	EPA200.7	mg/L	**7.6**		0.5	4/10/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**7.2**		5	4/24/2015	MW
QC Ratio TDS/SEC	Calculation		**0.61**			4/9/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		4/10/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**34**		5	4/10/2015	MW
Sodium	EPA200.7	mg/L	**79**		5	4/24/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**79**		5	4/24/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**989**		1	4/8/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**869**		1	4/5/2015	AK
Strontium, Dissolved	EPA200.8	µg/L	**561**		2.5	4/13/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**87**		1	4/6/2015	MW
Temperature (Field)	SM2550	° C	**3.0**			4/6/2015	AK
Total Diss. Solids	SM2540C	mg/L	**608**		10	4/7/2015	HM
Turbidity	EPA180.1	NTU	**2.6**	H	0.05	4/7/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.62**		0.05	4/5/2015	AK
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		4/10/2015	BSK
Zinc, Total	EPA200.8	µg/L	**Not Detected**		20	4/13/2015	SM

Sample Comments: Odor:Earthy

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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

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4 Justin Court Ste D
Monterey CA, 93940

SAMPLE ID **28822 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	79	0.04350	3.44
Potassium	7.6	0.02558	0.19
Calcium	93	0.04990	4.64
Magnesium	39	0.08229	3.21
NH3-N	0.45	0.07143	0.03
		SUM	11.51

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	366	0.02000	7.32
Sulfate	87	0.02082	1.81
Chloride	57	0.02821	1.61
Nitrate-Nitrogen	0	0.07138	0.00
Phosphate-P	1.50	0.01031	0.02
Bromide	0.2	0.01252	0.00
		SUM	10.76

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	989	
Cation Sum X 100	1151	**116%**
Anion Sum X 100	1076	**109%**

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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SAMPLE ID **28822 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	79	0.04350	3.44
Potassium	7.2	0.02558	0.18
Calcium	92	0.04990	4.59
Magnesium	37	0.08229	3.04
NH3-N	0.45	0.07143	0.03
		SUM	11.29

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	366	0.02000	7.32
Sulfate	87	0.02082	1.81
Chloride	57	0.02821	1.61
Nitrate-Nitrogen	0	0.07138	0.00
Phosphate-P	1.50	0.01031	0.02
Bromide	0.2	0.01252	0.00
		SUM	10.76

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	989	
Cation Sum X 100	1129	**114%**
Anion Sum X 100	1076	**109%**

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: 4/14/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	9:49
CCV	40	40	100	95-105	11:27

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28840	41	40	2.5	5	9:49

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 4/7/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.011	---	<0.05	913
ICVL	0.050	0.046	92	80-120	915
ICV	0.250	0.286	114.4	80-120	1011

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	
AB28815	0.035	0.250	0.268	0.27	93.2	94	0.7	80/120	10	932

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
AB28938

Date Analyzed
Monday, April 13, 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	105.8	0.10	119.3	124.2	4.03	21.8	50	91.2	98.4	7.6	102.4	107.8	5.12	0.04
Aluminum	0.0	95.8	1.68	107.2	110.9	3.39	4.4	50	84.5	89.4	5.6	102.1	96.6	5.53	-0.08
Copper	0.0	101.4	0.13	105.7	110.8	4.73	33.7	50	84.1	91.3	8.2	101.7	102.1	0.39	0.11
Zinc	0.1	106.7	1.24	113.5	120.1	5.65	71.7	50	85.4	95.3	11.0	101.5	106.2	4.50	0.29
Arsenic	0.1	100.0	-0.04	100.9	107.2	6.10	4.7	50	99.1	105.1	5.9	100.7	102.5	1.73	0.05
Strontium	0.0	101.8	0.01	106.8	110.7	3.51	783.0	50	-8.1	73.3	249.7	102.7	104.6	1.86	0.09
Barium	0.0	99.7	0.02	102.9	107.8	4.65	289.7	50	55.6	78.1	33.7	100.8	98.6	2.19	0.07

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: 4/8/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.043	86.00%	50-150	1100
ICV	0.500	0.450	90.00%	90-110	1100
CCVB1	---	0.01	---	<0.05	1130
CCV1	0.500	0.530	106.00%	90-110	1130
CCVB2	---	0.02	---	<0.05	1130
CCV2	0.500	0.550	110.00%	90-110	1130

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	
AB28829	0.000	0.500	0.460	0.460	92	92	0.0	85-120	10	1100

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: 4/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	15:31
LCSL	0.03	0.03	100	50-150	15:31
ICV	0.10	0.09	90	90-110	15:31
QCS	0.10	0.10	100	80-120	15:31
CCV	0.10	0.10	100	80-120	15:31

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		
AB28815	0.32	0.10	0.48	0.40	160	80	18	70-130	10	15:31	15:31

Note: MS was over the acceptance criteria. Data was accepted due recovery percents of LCSL, QCS, ICV and CCV.

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: 4/13/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:06
LCSL	0.03	0.03	100	50-150	14:06
ICV	1.00	0.97	97	90-110	14:06
QCS	1.00	0.96	96	80-120	14:06
CCV	1.00	0.98	98	80-120	14:06

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		
AB29146	0.09	1.00	0.80	0.77	71	68	3.8	70-130	10	14:06	14:06

Note: MSD was lower than the acceptance criteria. Data was accepted due LCSL, ICV, QCS, CCV and MS recovery percents.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

ICV= Initial Calibration Verification, CCV= Continuing Calibration Verification, RPD = Relative Percent Difference; Rec = Recovery

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TDS QC Summary (SM 2540C)

Date Analyzed: 4/7/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<10	1410
ICVL	100	94	94	80-120	1410
ICV	500	503	100.6	90-110	1410

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28970	768	751	2.2	10	1520

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: 4/14/2015
Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.050	---	<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
AB28806	ND	5.0	5.6	5.4	112	108	3.6	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150410

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	1.10	110.2%	1.10	110.1%	0.1%	1	1.04	103.9%	1	1.0	103.7%
B 249.772	0.05-5ppm	0.00	0.00	1.09	109.5%	1.09	109.1%	0.3%	1	1.04	104.2%	1	1.0	103.8%
Fe 238.204	10ppb-100ppm	1.35	1.67	1008	100.8%	1006	100.6%	0.2%	1000	996	99.6%	1000	982.1	98.2%
Fe 259.940	10ppb-100ppm	2.08	-0.68	1018	101.8%	1017	101.7%	0.1%	1000	1003	100.3%	1000	995.8	99.6%
K 766.491	0.5-750ppm	-0.10	-0.11	10.8	108.0%	10.8	108.3%	0.2%	10	10.6	105.6%	10	10.2	102.2%
Mn 257.610	10ppb-11ppm	-0.93	-1.34	1031	103.1%	1029	102.9%	0.2%	1000	1002	100.2%	1000	994.1	99.4%
Mn 260.568	10ppb-11ppm	-1.90	-1.74	1032	103.2%	1040	104.0%	0.8%	1000	1008	100.8%	1000	994.0	99.4%
Si 251.611	0.5-200ppm	-0.01	-0.09	52.2	104.4%	51.9	103.9%	0.5%	50	49.9	99.9%	50	50.5	101.0%
Si 252.411	0.5-200ppm	-0.02	-0.01	52.0	104.1%	51.9	103.9%	0.2%	50	49.8	99.6%	50	50.4	100.7%

Sample ID AB28818

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	2.25	3.26	100.9%	3.24	98.1%	0.9%	1	1.10	109.7%	5.4%	0.01
B 249.772	2.28	3.29	100.7%	3.28	99.6%	0.3%	1	1.12	111.9%	7.2%	0.01
Fe 238.204	12	1046	103.4%	1035	102.3%	1.1%	1000	1069	106.9%	7.0%	1.56
Fe 259.940	10	1064	105.3%	1063	105.3%	0.0%	1000	1077	107.7%	7.1%	3.04
K 766.491	2.8	14.0	111.8%	13.6	108.4%	2.4%	10	11.3	112.6%	6.4%	-0.13
Mn 257.610	36	1087	105.1%	1079	104.4%	0.7%	1000	1078	107.8%	7.2%	-0.53
Mn 260.568	37	1094	105.7%	1088	105.1%	0.5%	1000	1088	108.8%	7.6%	-0.75
Si 251.611	17.4	69.7	104.7%	69.3	103.8%	0.6%	50	53.7	107.4%	7.3%	-0.01
Si 252.411	17.2	69.1	103.7%	68.5	102.6%	0.8%	50	53.1	106.2%	6.4%	0.07

Batch # 201500424

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
Ca 317.933	50-300ppm	-4.60	-4.59	48.3	96.6%	49.0	98.1%	1.6%	50	48.8	97.5%	50	46.7	93.3%
Ca 396.847	0.5-50ppm	-0.30	-0.29	49.1	98.1%	50.2	100.4%	2.3%	50	49.5	99.0%	50	48.3	96.5%
K 766.491	0.5-750ppm	0.10	0.08	9.8	98.0%	10.0	99.6%	1.6%	10	9.9	99.1%	10	9.5	94.9%
Mg 202.582	50-1000ppm	-1.48	-1.42	49.3	98.7%	51.0	102.0%	3.3%	50	50.2	100.5%	50	49.0	98.1%
Mg 279.078	0.5-50ppm	-0.05	-0.10	48.7	97.3%	49.7	99.4%	2.1%	50	49.4	98.8%	50	47.5	95.0%
Na 568.821	50-1000ppm	10.90	10.62	53.9	107.7%	53.1	106.2%	1.4%	50	53.0	106.1%	50	53.7	107.4%
Na 589.592	0.5-50ppm	0.02	0.04	49.8	99.6%	50.7	101.3%	1.7%	50	50.2	100.4%	50	48.8	97.6%

Sample ID AB29364

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
Ca 317.933	42.4	89.8	94.8%	90.8	96.7%	1.1%	50	48.4	96.7%	0.8%	-4.56
Ca 396.847	43.3	83.1	79.5%	84.8	82.8%	2.0%	50	48.5	97.0%	2.0%	-0.27
K 766.491	2.2	11.4	91.6%	11.6	93.9%	2.0%	10	9.7	96.9%	2.3%	0.09
Mg 202.582	25.5	72.6	94.2%	74.4	97.9%	2.5%	50	50.6	101.2%	0.7%	-1.45
Mg 279.078	24.8	69.7	89.9%	71.0	92.3%	1.7%	50	48.9	97.8%	1.0%	-0.04
Na 568.821	102.7	148.3	91.1%	149.5	93.7%	0.9%	50	54.2	108.4%	2.2%	10.33
Na 589.592	96.7	139.6	85.7%	142.5	91.5%	2.1%	50	49.5	99.0%	1.4%	0.02

MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY
4 Justin Court Ste D, Monterey, CA 93940
831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

pH QC Summary (SM 4500 H+)

Date Analyzed: 4/6/2015
Time Analyzed: 17:30

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.7	98	95-105	17:30

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB28840	8.6	8.6	0	10	17:30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

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MontereyBayAnalytical@usa.net
http://www.MBASinc.com

Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 4/8/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1411	99.9%	95-105	1315
ICV	24800	24820	100.1%	95-105	1445

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB28824	569	570	0.2%	10	1330

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

Turbidity QC Summary (EPA 180.1)

Date Analyzed: 4/7/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	11:28
ICV	1.00	1.03	103.0%	95-105	11:28

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB28936	Not Detected	Not Detected	0.00%	10	11:28

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
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: **20150406**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.02	0.00	0.01	0.00	0.00	0.00
	ICV	2.00	19.63	2.03	19.82	1.84	1.88
	Rec 90-110%	99.91	98.17	101.58	99.08	91.77	93.95
	ICVL	0.17	1.42	0.18	1.21	0.21	0.20
	Rec 50-150%	87.09	70.88	87.58	60.39	104.19	98.28
Sample ID	**AB28840**	0.79	8.01	0.10	9.77	0.24	0.07
	MS	2.55	26.43	1.94	27.72	2.02	1.79
	Rec 80-120%	88.18	92.10	92.41	89.76	88.83	85.98
	MSD	2.46	26.40	1.94	27.64	1.99	1.79
	Rec 80-120%	83.59	91.95	92.09	89.35	87.54	85.94
	Diff 10%	3.66	0.11	0.33	0.30	1.30	0.05
	CCV	1.94	19.68	2.03	19.89	1.82	1.88
	Rec 90-110%	97.02	98.41	101.31	99.47	90.82	94.11
	Diff 10%	2.94	0.24	0.26	0.39	1.04	0.17
	CCVB	0.02	0.00	0.01	0.00	0.00	0.00

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

April 13, 2015 Ceres ID: 10634

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 April 8, 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 # AB28822.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10634-001	MW-6S (monitoring)	4/8/2015	4/5/2015	8:20

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB28822

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1310
ZB-5 MS Analysis Date: 10-Apr-15
Date Received: NA
Date Extracted: 9-Apr-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.10		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	97.8	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	94.4	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB28822	Sample Size:	1.000 L	QC Batch #:	1310	Date Extracted:	9-Apr-15
				ZB-5 MS Analysis Date:	10-Apr-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	10.3	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	104	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	10.0	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

EPA Method 1613B *Ceres Analytical Laboratory*

Sample ID:	**MW-6S (monitoring)**						
Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10634-001	Date Received:	8-Apr-15
Project:	AB28822	Sample Size:	0.993 L	QC Batch #:	1310	Date Extracted:	9-Apr-15
Date Collected:	5-Apr-15			ZB-5 MS Analysis Date:	10-Apr-15		
Time Collected:	8:20						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.28		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	88.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	95.5	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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: 10634

Temperature: 2.6 °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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-6S (monitoring)	4/5/2015 820	0:00	Aq	2	X							AB28822
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
D. Holland	4/7/2015	16:00	Hedia	4/8/15	10:38

Client understands that all terms desribed 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: 10634	Date/Time: 4/8/15 10:38
Client Project ID: AB 28822	Received Temperature: 2.6 °C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies:	
List Damaged Samples:	

Ceres Analytical Laboratory — Process Request

Ceres ID: 10634 PB: 1310 Sample #s: 1 Due Date: 4/22/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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:

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt.

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10634-1	1509.24g	516.07g	0.993L

Chemist: _____ Date: 4/9/15

Method: 1613B

SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

				ISS/PAR	CSS				RSS
Ceres ID	Client ID	Ver.	wt/vol	chem/date/witness	chem/date/witness	AP	AB/AC	FC	chem/date/witness
0-1310-MB001	Method Blank		1.000L	[A] 4/9/15	4/10/15	NA	4/10/15	NA	4/10/15
0-1310-OPR001	OPR		1.000L						
10634-1310-001	MW-6S (monitoring)	✓	0.993L						

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:00 4/9/15

Soxhlet Stop: 07:25 4/10/15

Samples Logged out by: 10:15 4/9/15

Samples Returned by: NA

Note samples Depleted: NA

Sample Extracts Storage Location: Box 15

Extracts to Instrument: 11:00 4/10/15

Extracts returned to Storage Location: _____

Chemist: _____

Method: 1613B/8270A
SOP #: 301.1 / 302.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10	
NSS	B	↓	
CSS	C	D	
RSS	D	20	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	30,30,100,20ml	145782	2/5/16
Si Gel	4g	P031615A	9/16/15
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% Dcm:Hex	30ml	L040115A	10/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5D08010

Report Date: 04/24/15 08:08

Received Date: 04/08/15 09:05

Turn Around: Normal

Client Project: Cal Am

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 04/08/15 09:05 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: 04/08/15 09:05
Date Reported: 04/24/15 08:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-6S(Monitoring) (AB28822)	Azad Khaligh	5D08010-01	Water	04/05/15 08:20

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

5D08010-01 MW-6S(Monitoring)

Sampled: 04/05/15 08:20 **Sampled By:** Azad Khaligh **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5D0594 Prepared: 04/10/15 11:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	**35**	10	ug/l	1	04/10/15 12:07	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5D0533 Prepared: 04/10/15 08:18 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	04/15/15 02:39	
4,4´-DDE	ND		0.010	ug/l	1	04/15/15 02:39	
4,4´-DDT	ND		0.010	ug/l	1	04/15/15 02:39	
Aldrin	ND		0.010	ug/l	1	04/15/15 02:39	
alpha-BHC	ND		0.010	ug/l	1	04/15/15 02:39	
Aroclor 1016	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1221	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1232	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1242	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1248	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1254	ND		0.10	ug/l	1	04/15/15 02:39	
Aroclor 1260	ND		0.10	ug/l	1	04/15/15 02:39	
beta-BHC	ND		0.010	ug/l	1	04/15/15 02:39	
Chlordane (tech)	ND		0.10	ug/l	1	04/15/15 02:39	
Chlorothalonil	ND		0.050	ug/l	1	04/15/15 02:39	
delta-BHC	ND		0.010	ug/l	1	04/15/15 02:39	
Dieldrin	ND		0.010	ug/l	1	04/15/15 02:39	
Endosulfan I	ND		0.010	ug/l	1	04/15/15 02:39	
Endosulfan II	ND		0.010	ug/l	1	04/15/15 02:39	
Endosulfan sulfate	ND		0.010	ug/l	1	04/15/15 02:39	
Endrin	ND		0.010	ug/l	1	04/15/15 02:39	
Endrin aldehyde	ND		0.010	ug/l	1	04/15/15 02:39	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	04/15/15 02:39	
Heptachlor	ND		0.010	ug/l	1	04/15/15 02:39	
Heptachlor epoxide	ND		0.010	ug/l	1	04/15/15 02:39	
Hexachlorobenzene	ND		0.050	ug/l	1	04/15/15 02:39	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	04/15/15 02:39	
Methoxychlor	ND		0.010	ug/l	1	04/15/15 02:39	
PCBs, Total	ND		0.50	ug/l	1	04/15/15 02:39	
Propachlor	ND		0.050	ug/l	1	04/15/15 02:39	
Toxaphene	ND		1.0	ug/l	1	04/15/15 02:39	
Trifluralin	ND		0.010	ug/l	1	04/15/15 02:39	
Surr: Decachlorobiphenyl	*103 %*	Conc:*0.103*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*73 %*	Conc:*0.0726*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

QUALITY CONTROL SECTION

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

Anions by IC, EPA Method 9056 - Quality Control

Batch W5D0594 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0594-BLK1)				Analyzed: 04/10/15 13:38						
Iodide	ND	10	ug/l							
LCS (W5D0594-BS1)				Analyzed: 04/10/15 11:51						
Iodide	39.6	10	ug/l	40.0		99	85-115			
Matrix Spike (W5D0594-MS1)	**Source: 5D08010-01**			Analyzed: 04/10/15 13:08						
Iodide	70.8	10	ug/l	40.0	35.5	88	80-120			
Matrix Spike Dup (W5D0594-MSD1)	**Source: 5D08010-01**			Analyzed: 04/10/15 13:23						
Iodide	70.1	10	ug/l	40.0	35.5	86	80-120	1	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0533-BLK1)				Analyzed: 04/14/15 13:22						
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							

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0533-BLK1)				Analyzed: 04/14/15 13:22						
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	*0.118*		*ug/l*	*0.100*		*118*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0695*		*ug/l*	*0.100*		*70*	*70-130*			
LCS (W5D0533-BS1)				Analyzed: 04/14/15 13:52						
4,4´-DDD	0.136	0.010	ug/l	0.100		136	55-142			
4,4´-DDE	0.118	0.010	ug/l	0.100		118	49-129			
4,4´-DDT	0.133	0.010	ug/l	0.100		133	54-160			
Aldrin	0.0738	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.110	0.010	ug/l	0.100		110	59-131			
beta-BHC	0.131	0.010	ug/l	0.100		131	63-136			
delta-BHC	0.138	0.010	ug/l	0.100		138	59-137			Q-08
Dieldrin	0.113	0.010	ug/l	0.100		113	59-135			
Endosulfan I	0.107	0.010	ug/l	0.100		107	28-138			
Endosulfan II	0.109	0.010	ug/l	0.100		109	53-133			
Endosulfan sulfate	0.115	0.010	ug/l	0.100		115	58-155			
Endrin	0.115	0.010	ug/l	0.100		115	57-148			
Endrin aldehyde	0.109	0.010	ug/l	0.100		109	45-139			
gamma-BHC (Lindane)	0.115	0.010	ug/l	0.100		115	59-129			
Heptachlor	0.0963	0.010	ug/l	0.100		96	42-136			
Heptachlor epoxide	0.111	0.010	ug/l	0.100		111	59-134			
Methoxychlor	0.0847	0.010	ug/l	0.100		85	56-167			
Surr: Decachlorobiphenyl	*0.116*		*ug/l*	*0.100*		*116*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0704*		*ug/l*	*0.100*		*70*	*70-130*			
LCS (W5D0533-BS2)				Analyzed: 04/14/15 17:27						
Aroclor 1016	1.23	0.10	ug/l	1.00		123	49-152			
Aroclor 1260	1.24	0.10	ug/l	1.00		124	52-146			
Surr: Decachlorobiphenyl	*0.133*		*ug/l*	*0.100*		*133*	*70-130*			*S-11*
Surr: Tetrachloro-meta-xylene	*0.0753*		*ug/l*	*0.100*		*75*	*70-130*			
LCS Dup (W5D0533-BSD1)				Analyzed: 04/14/15 14:23						
4,4´-DDD	0.147	0.010	ug/l	0.100		147	55-142	8	25	Q-08
4,4´-DDE	0.128	0.010	ug/l	0.100		128	49-129	8	25	
4,4´-DDT	0.148	0.010	ug/l	0.100		148	54-160	10	25	
Aldrin	0.0843	0.010	ug/l	0.100		84	29-115	13	25	
alpha-BHC	0.118	0.010	ug/l	0.100		118	59-131	7	25	
beta-BHC	0.138	0.010	ug/l	0.100		138	63-136	5	25	Q-08

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5D0533-BSD1)				Analyzed: 04/14/15 14:23						
delta-BHC	0.142	0.010	ug/l	0.100		142	59-137	3	25	Q-08
Dieldrin	0.123	0.010	ug/l	0.100		123	59-135	8	25	
Endosulfan I	0.115	0.010	ug/l	0.100		115	28-138	7	25	
Endosulfan II	0.117	0.010	ug/l	0.100		117	53-133	8	25	
Endosulfan sulfate	0.124	0.010	ug/l	0.100		124	58-155	8	25	
Endrin	0.125	0.010	ug/l	0.100		125	57-148	8	25	
Endrin aldehyde	0.125	0.010	ug/l	0.100		125	45-139	13	25	
gamma-BHC (Lindane)	0.122	0.010	ug/l	0.100		122	59-129	7	25	
Heptachlor	0.105	0.010	ug/l	0.100		105	42-136	8	25	
Heptachlor epoxide	0.119	0.010	ug/l	0.100		119	59-134	7	25	
Methoxychlor	0.109	0.010	ug/l	0.100		109	56-167	25	25	
Surr: Decachlorobiphenyl	*0.124*		*ug/l*	*0.100*		*124*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0716*		*ug/l*	*0.100*		*72*	*70-130*			
LCS Dup (W5D0533-BSD2)				Analyzed: 04/14/15 17:58						
Aroclor 1016	1.17	0.10	ug/l	1.00		117	49-152	5	25	
Aroclor 1260	1.20	0.10	ug/l	1.00		120	52-146	3	25	
Surr: Decachlorobiphenyl	*0.122*		*ug/l*	*0.100*		*122*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0730*		*ug/l*	*0.100*		*73*	*70-130*			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:08

Notes and Definitions

S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
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.

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5D0720
4/21/2015
Invoice: A508079

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5D0720 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 4/8/2015. 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 Montierth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montierth , 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	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	4/08/2015 - 09:30		
Report Due:	4/22/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 0.3

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue 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.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
MS2.1	MS/MSD RPD exceeds control limit. Reportable results in parent sample may have some degree of variability, higher than that inherent in the method.
SR2.0	Surrogate recovery exceeds lower control limit due to matrix interference as confirmed by re-analysis. Associated results should be considered biased low.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5D0720-01
Sampled By: Azad Khaligh
Sample Description: MW-6S (monitoring) // AB28822

Sample Date - Time: 04/05/15 - 08:20
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A504110	04/14/15	04/15/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A504110	04/14/15	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	105 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A503970	04/09/15	04/11/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A503970	04/09/15	04/11/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A503970	04/09/15	04/11/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A503970	04/09/15	04/11/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A503970	04/09/15	04/11/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A503970	04/09/15	04/11/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
Surrogate: DCPAA	EPA 515.3	98 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	

Certificate of Analysis

Sample ID: A5D0720-01
Sampled By: Azad Khaligh
Sample Description: MW-6S (monitoring) // AB28822

Sample Date - Time: 04/05/15 - 08:20
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	A503993	04/10/15	04/10/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A503993	04/10/15	04/10/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	BS1.0, CV0.0
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A503993	04/10/15	04/10/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A503993	04/10/15	04/10/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Toluene	EPA 524.2	**1.0**	0.50	ug/L	1	A503993	04/10/15	04/10/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	87 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	93 %	*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: A5D0720-01
Sampled By: Azad Khaligh
Sample Description: MW-6S (monitoring) // AB28822

Sample Date - Time: 04/05/15 - 08:20
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					
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503868	04/08/15	04/10/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503868	04/08/15	04/10/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503868	04/08/15	04/10/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503868	04/08/15	04/10/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503868	04/08/15	04/10/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503868	04/08/15	04/10/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503868	04/08/15	04/10/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503868	04/08/15	04/10/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503868	04/08/15	04/10/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	102 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A503998	04/10/15	04/10/15	
Surrogate: AMPA	EPA 547	103 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A504033	04/10/15	04/12/15	MS1.2
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A503930	04/09/15	04/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A504110										Prepared: 04/14/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A504110-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							04/15/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.52*			*0.46*		*115*	*70-130*			04/15/15	
Blank Spike (A504110-BS1)											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20		104	70-130			04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		98	70-130			04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.49*			*0.46*		*107*	*70-130*			04/15/15	
Blank Spike Dup (A504110-BSD1)											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20		108	70-130	4	20	04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		101	70-130	3	20	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*105*	*70-130*			04/15/15	
Matrix Spike (A504110-MS1), Source: A5D0983-02											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20	ND	108	65-135			04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	101	65-135			04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.50*			*0.46*		*107*	*70-130*			04/15/15	
Matrix Spike Dup (A504110-MSD1), Source: A5D0983-02											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20	ND	104	65-135	5	20	04/15/15	
Ethylene Dibromide (EDB)	0.21	0.020	ug/L	0.20	ND	104	65-135	1	20	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*102*	*70-130*			04/15/15	
EPA 515.3 - Quality Control											
Batch: A503970										Prepared: 04/09/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A503970-BLK1)											
2,4,5-T	ND	1.0	ug/L							04/10/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							04/10/15	
2,4-D	ND	10	ug/L							04/10/15	
Bentazon	ND	2.0	ug/L							04/10/15	
Dalapon	ND	10	ug/L							04/10/15	
Dicamba	ND	1.5	ug/L							04/10/15	
Dinoseb	ND	2.0	ug/L							04/10/15	
Pentachlorophenol	ND	0.20	ug/L							04/10/15	
Picloram	ND	1.0	ug/L							04/10/15	
Surrogate: DCPAA	*57*			*58*		*99*	*70-130*			04/10/15	
Blank Spike (A503970-BS1)											
2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130			04/10/15	
2,4,5-TP (Silvex)	0.82	1.0	ug/L	0.80		103	70-130			04/10/15	
2,4-D	0.42	10	ug/L	0.40		105	70-130			04/10/15	
Bentazon	7.7	2.0	ug/L	8.0		97	70-130			04/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A503970										Prepared: 04/09/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A503970-BS1)											
Dalapon	3.9	10	ug/L	4.0		96	70-130			04/10/15	
Dicamba	6.0	1.5	ug/L	6.0		101	70-130			04/10/15	
Dinoseb	0.75	2.0	ug/L	0.80		94	70-130			04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		95	70-130			04/10/15	
Picloram	0.39	1.0	ug/L	0.40		97	70-130			04/10/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			04/10/15	
Blank Spike Dup (A503970-BSD1)											
2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130	0	20	04/11/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80		103	70-130	1	20	04/11/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130	3	20	04/11/15	
Bentazon	7.7	2.0	ug/L	8.0		97	70-130	0	20	04/11/15	
Dalapon	3.8	10	ug/L	4.0		95	70-130	1	20	04/11/15	
Dicamba	5.8	1.5	ug/L	6.0		97	70-130	3	20	04/11/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130	4	20	04/11/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		93	70-130	2	20	04/11/15	
Picloram	0.40	1.0	ug/L	0.40		99	70-130	2	20	04/11/15	
Surrogate: DCPAA	*55*			*58*		*95*	*70-130*			04/11/15	
Matrix Spike (A503970-MS1), Source: A5D0701-01											
2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			04/10/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80	ND	100	70-130			04/10/15	
2,4-D	0.42	10	ug/L	0.40	ND	104	70-130			04/10/15	
Bentazon	7.8	2.0	ug/L	8.0	ND	97	70-130			04/10/15	
Dalapon	4.2	10	ug/L	4.0	ND	105	70-130			04/10/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	99	70-130			04/10/15	
Dinoseb	0.75	2.0	ug/L	0.80	ND	94	70-130			04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130			04/10/15	
Picloram	0.39	1.0	ug/L	0.40	ND	98	70-130			04/10/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			04/10/15	
Matrix Spike Dup (A503970-MSD1), Source: A5D0701-01											
2,4,5-T	3.9	1.0	ug/L	4.0	ND	99	70-130	4	20	04/10/15	
2,4,5-TP (Silvex)	0.79	1.0	ug/L	0.80	ND	98	70-130	2	20	04/10/15	
2,4-D	0.39	10	ug/L	0.40	ND	98	70-130	5	20	04/10/15	
Bentazon	7.5	2.0	ug/L	8.0	ND	93	70-130	4	20	04/10/15	
Dalapon	4.0	10	ug/L	4.0	ND	100	70-130	5	20	04/10/15	
Dicamba	5.9	1.5	ug/L	6.0	ND	98	70-130	1	20	04/10/15	
Dinoseb	0.73	2.0	ug/L	0.80	ND	91	70-130	3	20	04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	92	70-130	4	20	04/10/15	
Picloram	0.37	1.0	ug/L	0.40	ND	91	70-130	7	20	04/10/15	
Surrogate: DCPAA	*56*			*58*		*97*	*70-130*			04/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503993-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							04/10/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							04/10/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							04/10/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							04/10/15	
1,1-Dichloroethane	ND	0.50	ug/L							04/10/15	
1,1-Dichloroethene	ND	0.50	ug/L							04/10/15	
1,1-Dichloropropene	ND	0.50	ug/L							04/10/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							04/10/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2-Dichloroethane	ND	0.50	ug/L							04/10/15	
1,2-Dichloropropane	ND	0.50	ug/L							04/10/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							04/10/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
1,3-Dichloropropane	ND	0.50	ug/L							04/10/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
2,2-Dichloropropane	ND	0.50	ug/L							04/10/15	
2-Butanone	ND	5.0	ug/L							04/10/15	
2-Chlorotoluene	ND	0.50	ug/L							04/10/15	
2-Hexanone	ND	10	ug/L							04/10/15	
4-Chlorotoluene	ND	0.50	ug/L							04/10/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							04/10/15	
Acetone	ND	10	ug/L							04/10/15	
Benzene	ND	0.50	ug/L							04/10/15	
Bromobenzene	ND	0.50	ug/L							04/10/15	
Bromochloromethane	ND	0.50	ug/L							04/10/15	
Bromodichloromethane	ND	0.50	ug/L							04/10/15	
Bromoform	ND	0.50	ug/L							04/10/15	
Bromomethane	ND	0.50	ug/L							04/10/15	
Carbon Tetrachloride	ND	0.50	ug/L							04/10/15	
Chlorobenzene	ND	0.50	ug/L							04/10/15	
Chloroethane	ND	0.50	ug/L							04/10/15	
Chloroform	ND	0.50	ug/L							04/10/15	
Chloromethane	ND	0.50	ug/L							04/10/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							04/10/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							04/10/15	
Dibromochloromethane	ND	0.50	ug/L							04/10/15	
Dibromomethane	ND	0.50	ug/L							04/10/15	
Dichlorodifluoromethane	ND	0.50	ug/L							04/10/15	
Dichloromethane	ND	0.50	ug/L							04/10/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							04/10/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							04/10/15	
Ethylbenzene	ND	0.50	ug/L							04/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503993-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							04/10/15	
Isopropylbenzene	ND	0.50	ug/L							04/10/15	
m,p-Xylenes	ND	0.50	ug/L							04/10/15	
Methyl-t-butyl ether	ND	0.50	ug/L							04/10/15	
Naphthalene	ND	0.50	ug/L							04/10/15	
n-Butylbenzene	ND	0.50	ug/L							04/10/15	
n-Propylbenzene	ND	0.50	ug/L							04/10/15	
o-Xylene	ND	0.50	ug/L							04/10/15	
p-Isopropyltoluene	ND	0.50	ug/L							04/10/15	
sec-Butylbenzene	ND	0.50	ug/L							04/10/15	
Styrene	ND	0.50	ug/L							04/10/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							04/10/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							04/10/15	
tert-Butylbenzene	ND	0.50	ug/L							04/10/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							04/10/15	
Toluene	ND	0.50	ug/L							04/10/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							04/10/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							04/10/15	
Trichloroethene (TCE)	ND	0.50	ug/L							04/10/15	
Trichlorofluoromethane	ND	5.0	ug/L							04/10/15	
Vinyl Chloride	ND	0.50	ug/L							04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.4*			*5.0*		*87*	*70-130*			04/10/15	
Surrogate: Bromofluorobenzene	*47*			*50*		*93*	*70-130*			04/10/15	
Blank Spike (A503993-BS1)											
1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			04/10/15	
1,1,2,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		100	70-130			04/10/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		101	70-130			04/10/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			04/10/15	
1,1-Dichloroethene	9.8	0.50	ug/L	10		98	70-130			04/10/15	
1,1-Dichloropropene	10	0.50	ug/L	10		101	70-130			04/10/15	
1,2,3-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			04/10/15	
1,2,4-Trimethylbenzene	9.2	0.50	ug/L	10		92	70-130			04/10/15	
1,2-Dichlorobenzene	9.5	0.50	ug/L	10		95	70-130			04/10/15	
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130			04/10/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		102	70-130			04/10/15	
1,3-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15	
1,3-Dichloropropane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,4-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15	
2,2-Dichloropropane	10	0.50	ug/L	10		102	70-130			04/10/15	
2-Butanone	11	5.0	ug/L	10		113	70-130			04/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503993										Prepared: 04/10/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A503993-BS1)												
2-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
2-Hexanone	10	10	ug/L	10		104	70-130			04/10/15		
4-Chlorotoluene	9.4	0.50	ug/L	10		94	70-130			04/10/15		
4-Methyl-2-pentanone	10	5.0	ug/L	10		105	70-130			04/10/15		
Acetone	11	10	ug/L	10		114	70-130			04/10/15		
Benzene	10	0.50	ug/L	10		102	70-130			04/10/15		
Bromobenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			04/10/15		
Bromoform	11	0.50	ug/L	10		108	70-130			04/10/15		
Bromomethane	11	0.50	ug/L	10		114	70-130			04/10/15		
Carbon Tetrachloride	10	0.50	ug/L	10		104	70-130			04/10/15		
Chlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/10/15		
Chloroethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Chloroform	10	0.50	ug/L	10		101	70-130			04/10/15		
Chloromethane	9.9	0.50	ug/L	10		99	70-130			04/10/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			04/10/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			04/10/15		
Dibromochloromethane	10	0.50	ug/L	10		104	70-130			04/10/15		
Dibromomethane	10	0.50	ug/L	10		101	70-130			04/10/15		
Dichlorodifluoromethane	8.5	0.50	ug/L	10		85	70-130			04/10/15		
Dichloromethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		101	70-130			04/10/15		
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130			04/10/15		
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Hexachlorobutadiene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
Isopropylbenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
m,p-Xylenes	19	0.50	ug/L	20		96	70-130			04/10/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		101	70-130			04/10/15		
Naphthalene	10	0.50	ug/L	10		101	70-130			04/10/15		
n-Butylbenzene	10	0.50	ug/L	10		104	70-130			04/10/15		
n-Propylbenzene	9.3	0.50	ug/L	10		93	70-130			04/10/15		
o-Xylene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
p-Isopropyltoluene	9.3	0.50	ug/L	10		93	70-130			04/10/15		
sec-Butylbenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15		
Styrene	16	0.50	ug/L	10		156	70-130			04/10/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		103	70-130			04/10/15		
tert-Butyl alcohol (TBA)	11	2.0	ug/L	10		112	70-130			04/10/15		
tert-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
Tetrachloroethene (PCE)	9.5	0.50	ug/L	10		95	70-130			04/10/15		
Toluene	10	0.50	ug/L	10		101	70-130			04/10/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			04/10/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		103	70-130			04/10/15		
Trichloroethene (TCE)	9.9	0.50	ug/L	10		99	70-130			04/10/15		
Trichlorofluoromethane	9.4	5.0	ug/L	10		94	70-130			04/10/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A503993-BS1)											
Vinyl Chloride	9.4	0.50	ug/L	10		94	70-130			04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*98*	*70-130*			04/10/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			04/10/15	
Blank Spike Dup (A503993-BSD1)											
1,1,1,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130	4	30	04/10/15	
1,1,1-Trichloroethane	9.7	0.50	ug/L	10		97	70-130	6	30	04/10/15	
1,1,2,2-Tetrachloroethane	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.2	10	ug/L	10		92	70-130	8	30	04/10/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
1,1-Dichloroethane	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
1,1-Dichloroethene	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
1,1-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	6	30	04/10/15	
1,2,3-Trichlorobenzene	9.3	0.50	ug/L	10		93	70-130	3	30	04/10/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	04/10/15	
1,2,4-Trimethylbenzene	8.8	0.50	ug/L	10		88	70-130	4	30	04/10/15	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	2	30	04/10/15	
1,2-Dichloropropane	9.7	0.50	ug/L	10		97	70-130	3	30	04/10/15	
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15	
1,3-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
1,3-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
1,4-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15	
2-Butanone	10	5.0	ug/L	10		100	70-130	12	30	04/10/15	
2-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	5	30	04/10/15	
2-Hexanone	9.7	10	ug/L	10		97	70-130	7	30	04/10/15	
4-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	6	30	04/10/15	
Acetone	10	10	ug/L	10		103	70-130	10	30	04/10/15	
Benzene	9.7	0.50	ug/L	10		97	70-130	4	30	04/10/15	
Bromobenzene	9.2	0.50	ug/L	10		92	70-130	4	30	04/10/15	
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130	0	30	04/10/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
Bromoform	10	0.50	ug/L	10		104	70-130	5	30	04/10/15	
Bromomethane	11	0.50	ug/L	10		113	70-130	1	30	04/10/15	
Carbon Tetrachloride	9.9	0.50	ug/L	10		99	70-130	5	30	04/10/15	
Chlorobenzene	9.5	0.50	ug/L	10		95	70-130	4	30	04/10/15	
Chloroethane	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
Chloromethane	9.5	0.50	ug/L	10		95	70-130	5	30	04/10/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
cis-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130	4	30	04/10/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503993										Prepared: 04/10/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike Dup (A503993-BSD1)												
Dichlorodifluoromethane	8.2	0.50	ug/L	10		82	70-130	4	30	04/10/15		
Dichloromethane	9.6	0.50	ug/L	10		96	70-130	1	30	04/10/15		
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130	3	30	04/10/15		
Ethyl tert-Butyl Ether (ETBE)	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15		
Ethylbenzene	9.4	0.50	ug/L	10		94	70-130	5	30	04/10/15		
Hexachlorobutadiene	8.9	0.50	ug/L	10		89	70-130	7	30	04/10/15		
Isopropylbenzene	9.2	0.50	ug/L	10		92	70-130	4	30	04/10/15		
m,p-Xylenes	18	0.50	ug/L	20		92	70-130	4	30	04/10/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	2	30	04/10/15		
Naphthalene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15		
n-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	5	30	04/10/15		
n-Propylbenzene	9.0	0.50	ug/L	10		90	70-130	3	30	04/10/15		
o-Xylene	9.2	0.50	ug/L	10		92	70-130	3	30	04/10/15		
p-Isopropyltoluene	8.9	0.50	ug/L	10		89	70-130	5	30	04/10/15		
sec-Butylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	04/10/15		
Styrene	15	0.50	ug/L	10		153	70-130	2	30	04/10/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130	4	30	04/10/15		
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		102	70-130	10	30	04/10/15		
tert-Butylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	04/10/15		
Tetrachloroethene (PCE)	9.1	0.50	ug/L	10		91	70-130	5	30	04/10/15		
Toluene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15		
trans-1,2-Dichloroethene	9.7	0.50	ug/L	10		97	70-130	5	30	04/10/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	3	30	04/10/15		
Trichloroethene (TCE)	9.4	0.50	ug/L	10		94	70-130	5	30	04/10/15		
Trichlorofluoromethane	9.1	5.0	ug/L	10		91	70-130	3	30	04/10/15		
Vinyl Chloride	8.9	0.50	ug/L	10		89	70-130	5	30	04/10/15		
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*99*	*70-130*			04/10/15		
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			04/10/15		
EPA 525.2 - Quality Control												
Batch: A503868										Prepared: 04/08/2015		
Prep Method: EPA 525.2										Analyst: KHH		
Blank (A503868-BLK1)												
Alachlor	ND	1.0	ug/L							04/10/15		
Atrazine	ND	0.50	ug/L							04/10/15		
Benzo(a)pyrene	ND	0.10	ug/L							04/10/15		
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							04/10/15		
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							04/10/15		
Bromacil	ND	10	ug/L							04/10/15		
Butachlor	ND	0.38	ug/L							04/10/15		
Diazinon	ND	0.25	ug/L							04/10/15		
Dimethoate	ND	10	ug/L							04/10/15		
Metolachlor	ND	0.50	ug/L							04/10/15		
Metribuzin	ND	0.50	ug/L							04/10/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A503868										Prepared: 04/08/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A503868-BLK1)											
Molinate	ND	2.0	ug/L							04/10/15	
Prometryn	ND	2.0	ug/L							04/10/15	
Propachlor	ND	0.50	ug/L							04/10/15	
Simazine	ND	1.0	ug/L							04/10/15	
Thiobencarb	ND	1.0	ug/L							04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.5*			*5.0*		*110*	*70-130*			04/10/15	
Blank Spike (A503868-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		105	70-130			04/10/15	
Atrazine	0.54	0.50	ug/L	0.50		108	70-130			04/10/15	
Benzo(a)pyrene	0.076	0.10	ug/L	0.10		76	70-130			04/10/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		106	70-130			04/10/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		112	70-130			04/10/15	
Bromacil	1.1	10	ug/L	1.0		110	70-130			04/10/15	
Butachlor	1.1	0.38	ug/L	1.0		105	70-130			04/10/15	
Diazinon	0.19	0.25	ug/L	0.20		93	70-130			04/10/15	
Dimethoate	0.78	10	ug/L	1.0		78	70-130			04/10/15	
Metolachlor	2.2	0.50	ug/L	2.0		110	70-130			04/10/15	
Metribuzin	1.1	0.50	ug/L	1.0		109	70-130			04/10/15	
Molinate	1.0	2.0	ug/L	1.0		104	70-130			04/10/15	
Prometryn	2.2	2.0	ug/L	2.0		109	70-130			04/10/15	
Propachlor	0.51	0.50	ug/L	0.50		103	70-130			04/10/15	
Simazine	0.36	1.0	ug/L	0.35		103	70-130			04/10/15	
Thiobencarb	0.52	1.0	ug/L	0.50		104	70-130			04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*109*	*70-130*			04/10/15	
Blank Spike Dup (A503868-BSD1)											
Alachlor	1.0	1.0	ug/L	1.0		102	70-130	4	30	04/10/15	
Atrazine	0.46	0.50	ug/L	0.50		92	70-130	16	30	04/10/15	
Benzo(a)pyrene	0.092	0.10	ug/L	0.10		92	70-130	19	30	04/10/15	
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		109	70-130	3	30	04/10/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		109	70-130	3	30	04/10/15	
Bromacil	1.1	10	ug/L	1.0		107	70-130	3	30	04/10/15	
Butachlor	1.0	0.38	ug/L	1.0		102	70-130	4	30	04/10/15	
Diazinon	0.18	0.25	ug/L	0.20		88	70-130	5	30	04/10/15	
Dimethoate	0.78	10	ug/L	1.0		78	70-130	0	30	04/10/15	
Metolachlor	2.0	0.50	ug/L	2.0		102	70-130	7	30	04/10/15	
Metribuzin	1.1	0.50	ug/L	1.0		106	70-130	3	30	04/10/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	2	30	04/10/15	
Prometryn	2.0	2.0	ug/L	2.0		101	70-130	8	30	04/10/15	
Propachlor	0.52	0.50	ug/L	0.50		105	70-130	2	30	04/10/15	
Simazine	0.33	1.0	ug/L	0.35		95	70-130	8	30	04/10/15	
Thiobencarb	0.50	1.0	ug/L	0.50		101	70-130	3	30	04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*103*	*70-130*			04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A503868										Prepared: 04/08/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Matrix Spike (A503868-MS1), Source: A5D0483-01											
Alachlor	1.0	1.0	ug/L	1.0	ND	101	70-130			04/10/15	
Atrazine	0.48	0.50	ug/L	0.50	ND	95	70-130			04/10/15	
Benzo(a)pyrene	0.084	0.10	ug/L	0.10	ND	84	70-130			04/10/15	
Bis(2-ethylhexyl) adipate	2.0	3.0	ug/L	2.0	ND	98	70-130			04/10/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	112	70-130			04/10/15	
Bromacil	1.1	10	ug/L	1.0	ND	111	70-130			04/10/15	
Butachlor	1.0	0.38	ug/L	1.0	ND	101	70-130			04/10/15	
Diazinon	0.20	0.25	ug/L	0.20	ND	98	70-130			04/10/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			04/10/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	105	70-130			04/10/15	
Metribuzin	1.0	0.50	ug/L	1.0	ND	104	70-130			04/10/15	
Molinate	0.96	2.0	ug/L	1.0	ND	96	70-130			04/10/15	
Prometryn	2.2	2.0	ug/L	2.0	ND	108	70-130			04/10/15	
Propachlor	0.52	0.50	ug/L	0.50	ND	104	70-130			04/10/15	
Simazine	0.39	1.0	ug/L	0.35	ND	101	70-130			04/10/15	
Thiobencarb	0.51	1.0	ug/L	0.50	ND	102	70-130			04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*102*	*70-130*			04/10/15	
EPA 531.1 - Quality Control											
Batch: A503881										Prepared: 04/09/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A503881-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							04/09/15	
Aldicarb	ND	3.0	ug/L							04/09/15	
Aldicarb Sulfone	ND	2.0	ug/L							04/09/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							04/09/15	
Carbaryl	ND	5.0	ug/L							04/09/15	
Carbofuran	ND	5.0	ug/L							04/09/15	
Methiocarb	ND	2.0	ug/L							04/09/15	
Methomyl	ND	2.0	ug/L							04/09/15	
Oxamyl	ND	20	ug/L							04/09/15	
Propoxur	ND	2.0	ug/L							04/09/15	
Blank Spike (A503881-BS1)											
3-Hydroxycarbofuran	4.9	3.0	ug/L	4.0		122	80-120			04/09/15	BS ***High***
Aldicarb	4.7	3.0	ug/L	4.0		116	80-120			04/09/15	
Aldicarb Sulfone	5.0	2.0	ug/L	4.0		124	80-120			04/09/15	BS ***High***
Aldicarb Sulfoxide	5.0	3.0	ug/L	4.0		126	80-120			04/09/15	BS ***High***
Carbaryl	4.8	5.0	ug/L	4.0		121	80-120			04/09/15	BS ***High***
Carbofuran	4.8	5.0	ug/L	4.0		121	80-120			04/09/15	BS ***High***
Methiocarb	4.7	2.0	ug/L	4.0		119	80-120			04/09/15	
Methomyl	5.1	2.0	ug/L	4.0		129	80-120			04/09/15	BS ***High***
Oxamyl	5.0	20	ug/L	4.0		124	80-120			04/09/15	BS ***High***
Propoxur	4.7	2.0	ug/L	4.0		117	80-120			04/09/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A503881										Prepared: 04/09/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank Spike Dup (A503881-BSD1)											
3-Hydroxycarbofuran	4.4	3.0	ug/L	4.0		109	80-120	11	20	04/09/15	
Aldicarb	4.5	3.0	ug/L	4.0		113	80-120	3	20	04/09/15	
Aldicarb Sulfone	4.5	2.0	ug/L	4.0		112	80-120	10	20	04/09/15	
Aldicarb Sulfoxide	4.5	3.0	ug/L	4.0		113	80-120	11	20	04/09/15	
Carbaryl	4.5	5.0	ug/L	4.0		113	80-120	7	20	04/09/15	
Carbofuran	4.4	5.0	ug/L	4.0		111	80-120	9	20	04/09/15	
Methiocarb	4.3	2.0	ug/L	4.0		108	80-120	9	20	04/09/15	
Methomyl	4.4	2.0	ug/L	4.0		111	80-120	15	20	04/09/15	
Oxamyl	4.5	20	ug/L	4.0		112	80-120	10	20	04/09/15	
Propoxur	4.4	2.0	ug/L	4.0		110	80-120	6	20	04/09/15	
EPA 547 - Quality Control											
Batch: A503998										Prepared: 04/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A503998-BLK1)											
Glyphosate	ND	25	ug/L							04/10/15	
Surrogate: AMPA	*110*			*100*		*114*	*70-130*			04/10/15	
Blank Spike (A503998-BS1)											
Glyphosate	130	25	ug/L	100		130	70-130			04/10/15	
Surrogate: AMPA	*120*			*100*		*116*	*70-130*			04/10/15	
Blank Spike Dup (A503998-BSD1)											
Glyphosate	130	25	ug/L	100		130	70-130	0	30	04/10/15	
Surrogate: AMPA	*120*			*100*		*116*	*70-130*			04/10/15	
Matrix Spike (A503998-MS1), Source: A5D0924-01											
Glyphosate	180	25	ug/L	100	ND	161	70-130			04/10/15	MS1.0 ***High***
Surrogate: AMPA	*21*			*100*		*21*	*70-130*			04/10/15	*SR2.0*
Matrix Spike Dup (A503998-MSD1), Source: A5D0924-01											
Glyphosate	120	25	ug/L	100	ND	101	70-130	41	30	04/10/15	MS2.1
Surrogate: AMPA	*86*			*100*		*84*	*70-130*			04/10/15	
EPA 548.1 - Quality Control											
Batch: A504033										Prepared: 04/10/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank (A504033-BLK1)											
Endothall	ND	45	ug/L							04/12/15	
Blank Spike (A504033-BS1)											
Endothall	18	45	ug/L	20		91	54-105			04/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A504033										Prepared: 04/10/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank Spike Dup (A504033-BSD1)											
Endothall	17	45	ug/L	20		86	54-105	6	46	04/12/15	
Matrix Spike (A504033-MS1), Source: A5D0720-01											
Endothall	ND	45	ug/L	20	ND	0	54-105			04/12/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A503930										Prepared: 04/09/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A503930-BLK1)											
Diquat	ND	4.0	ug/L							04/10/15	
Blank Spike (A503930-BS1)											
Diquat	3.5	4.0	ug/L	4.0		87	70-130			04/10/15	
Blank Spike Dup (A503930-BSD1)											
Diquat	3.5	4.0	ug/L	4.0		86	70-130	0	30	04/10/15	
Matrix Spike (A503930-MS1), Source: A5D0320-01											
Diquat	3.4	4.0	ug/L	4.0	ND	85	70-130			04/10/15	
Matrix Spike Dup (A503930-MSD1), Source: A5D0320-01											
Diquat	3.5	4.0	ug/L	4.0	ND	88	70-130	3	30	04/10/15	

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

A5D0720

04082015

Monte6227

Turnaround: Standard

Due Date: 4/22/2015

Monterey Bay Analytical

Printed: 4/8/

BSK Associates Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

0.3

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

A5D0720 04/08/2015
Monte6227 10

*Required Fields

Temp:

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am

Project #:

How would you like to receive your completed results?*
- [X] E-Mail
- [ ] Fax
- [ ] Mail

Reporting Options:
- [ ] Trace (J-Flag)
- [ ] Swamp
- [ ] EDD Type: _____

Sampler Name (Printed/Signature)*: Azad Khalighi

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
1	MW-6S (monitoring)	4/5/15	0820	GW	AB28822	X	X	X	X	X	X	X	X

Please include excell report.

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	4/7/15	1600		
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 Whet — Date: 4/8/15 — Time: 9:30

Payment Received at Delivery: Date: Amount: PIA#: Check / Cash Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____

Cooling Method: Wet Blue None

Custody Seal Y N

Chilling Process Begun Y N

BU

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

BSK Associates SR-FL-0002-12

A5D0720 04/08/2015
Monte6227 10

Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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 $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label $NH_4OH(NH_4)_2SO_4$ **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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	4V					
$Na_2S_2O_3$ + 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	—	—						

DW 4/8/15

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JH @ 12:56 Labels checked by: JW @ 13:24 RUSH Paged by:

Monterey Bay Analytical Services Chain Of Custody / Analysis Request

4 Justin Ct. Suite D • Monterey, Ca 93940 • (831) 375-MBAS (6227) • (831) 641-0734 (Fax)

MBAS
Monterey Bay Analytical Services

Client/Company Name: CALIFORNIA AMERICAN WATER - MONTEREY PENINSULA WATER SUPPLY PROJECT

Attention: TRAVIS.PETERSON@AMWATER.COM SUSAN.JACOBSON@AMWATER.COM NREYNOLDS@GEOSCIENCE-WATER.COM BVILLALOBOS@GEOSCIENCE-WATER.COM

Billing Address: P.O. BOX 951 MONTEREY, CA 93942-0951

Project/System Information:

E-Mail Address(es): ATTN: TRAVIS PETERSON (CAW Am)

Contract/P.O. #:

For Regulatory Compliance? YES ☐ NO ☐
For State or Local Health Department reporting:
Electronic Data Transfer (EDT)? YES ☐ NO ☐
System ID Number: _____

Turn Around Time:
STD (7-14 Days) ☒ 48-Hour ☐
5-Day ☐ 24-Hour ☐

Phone # (831) 646-3295
Fax # (831) 373-1343

Drinking water ☐ Wastewater ☐ Monitoring Well ☒ Soil ☐ Sludge ☐ Other ☐

Analysis Requested

(SEE ATTACHED GEOSCIENCE PANEL)

MBAS Lab #	Project ID or Source Code #	Sample Site / Description (Well Name, APN#, Address, Stormdrain #)	Sampling Date	Sampling Time	Receiving Temp.	CL2 Residual	Coliform Analysis Routine	Coliform Analysis Other	Coliform Analysis Repeat	Coliform Analysis Special	# Cont.	Container Type	Container Size
28822	MPWSP	MW-6S	4/5/2015	8:20	3.0						23		

	Printed Name	Signature	Date	Time
Sampled by:	AZAD KHALIGH		4/6/15	9:18
Relinquished by:				
Received by:				
Relinquished by:				
Received by:	Monterey Bay Analytical Services		4/6/15	0921

Comments or Special Instructions:

☐ Payment received Check # Amount: Receipt # Date:

SEE ATTACHED LIST.

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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

1 L vacuum filtered 0.45μ + divided 500mL + $Na_2S_2O_3$ + H_2SO_4 for diss. TKN

250mL + H_2SO_4 for diss. TP

250mL NP for diss. color PO_4^{3-}

2mL 1:1 HNO_3 to pH < 2 LJ 4/6/15

LJ 4/6/15

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_2B
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_3H / 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

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.

Lisa Jacobs

From: Azad Khalighi <AKhalighi@geoscience-water.com>
Sent: Monday, April 06, 2015 4:17 PM
To: Lisa Jacobs
Cc: David Holland
Subject: Today's MW-6S samples (COC Notes)

Hi Lisa,

Sorry for this being sent late in the day (just got back from fieldwork).

The field parameters for the MW-6S groundwater samples (sampled on 4/5/2015 at 8:20AM, and delivered this morning) are:

pH: 7.07

Specific Conductance: 1,011 uS/cm

Conductivity: 869 uS/com

Turbidity: .62 NTU

Thanks!

Azad

Total Control Panel Login

To: ljacobs@mbasinc.com
From: akhalighi@geoscience-water.com

Message Score: 70
My Spam Blocking Level: Medium

Block this sender
Block geoscience-water.com

High (60): Fail
Medium (75): Pass
Low (90): Pass

This message was delivered because the content filter score did not exceed your filter level.

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

 Wednesday, April 29, 2015

Lab Number: AB28815

Collection Date/Time: 4/4/2015 8:55 Sample Collector: KHALIGIH A

Submittal Date/Time: 4/4/2015 10:53 Sample ID

Sample Description: MW-6M

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**397**		2	4/14/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	4/13/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**0.17**		0.05	4/8/2015	TC
Arsenic, Total	EPA200.8	µg/L	**5**		1	4/13/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**155**		10	4/13/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**484**		10	4/14/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	**Not Detected**		0.5	4/10/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**0.5**		0.1	4/4/2015	MW
Calcium	EPA200.7	mg/L	**139**		5	4/24/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**140**		5	4/24/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		4/9/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	4/14/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	**167**		1	4/4/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Attached**	E		4/15/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**16**		3	4/6/2015	LRH
Copper, Total	EPA200.8	µg/L	**Not Detected**		4	4/13/2015	SM
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		4/15/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		4/10/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		4/10/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		4/12/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**Not Detected**		0.1	4/4/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		4/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**565**		10	4/27/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	4/14/2015	LRH
Iodide	EPA9056M	µg/L	**35**	E	10	4/10/2015	WECK
Iron	EPA200.7	µg/L	**184**		100	4/10/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

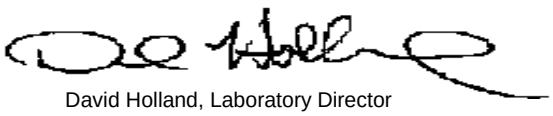
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Iron, Dissolved	EPA200.7	µg/L	**182**		100	4/10/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**0.7**		0.5	4/14/2015	TC
Lithium	EPA200.8	µg/L	**17**		1	4/13/2015	SM
Magnesium	EPA200.7	mg/L	**53**		5	4/10/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**49**		5	4/24/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**821**		100	4/10/2015	MW
Manganese, Total	EPA200.7	µg/L	**810**		100	4/10/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**	H	0.05	4/7/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**Not Detected**		1	4/4/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**0.5**		0.1	4/4/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.1**		0.1	4/4/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**1**		1	4/4/2015	TC
o-Phosphate-P	Hach 8048	mg/L	**0.32**		0.03	4/6/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.43**			4/4/2015	AK
pH (Laboratory)	SM4500-H+B	pH (H)	**7.4**		0.1	4/4/2015	TC
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		4/11/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.31**		0.03	4/13/2015	LRH
Potassium	EPA200.7	mg/L	**6.4**		5	4/10/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**7.0**		5	4/24/2015	MW
QC Ratio TDS/SEC	Calculation		**0.63**			4/9/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		4/10/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**44**		5	4/10/2015	MW
Sodium	EPA200.7	mg/L	**140**		5	4/24/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**141**		5	4/24/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**1545**		1	4/7/2015	TC
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**1531**		1	4/4/2015	AK
Strontium, Dissolved	EPA200.8	µg/L	**761**		5	4/13/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**175**		1	4/4/2015	MW
Temperature (Field)	SM2550	° C	**16.8**			4/4/2015	TC
Total Diss. Solids	SM2540C	mg/L	**966**		10	4/7/2015	HM
Turbidity	EPA180.1	NTU	**0.70**		0.05	4/4/2015	TC
Turbidity (Field)	EPA180.1	NTU	**0.70**		0.05	4/4/2015	TC
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		4/10/2015	BSK
Zinc, Total	EPA200.8	µg/L	**Not Detected**		20	4/13/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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 **28815 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	140	0.04350	6.09
Potassium	6.4	0.02558	0.16
Calcium	139	0.04990	6.94
Magnesium	53	0.08229	4.36
NH3-N	0.17	0.07143	0.01
		SUM	17.56

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	397	0.02000	7.94
Sulfate	175	0.02082	3.64
Chloride	167	0.02821	4.71
Nitrate-Nitrogen	0.4	0.07138	0.03
Phosphate-P	0.31	0.01031	0.00
Bromide	0.5	0.01252	0.01
		SUM	16.33

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	1545	
Cation Sum X 100	1756	**114%**
Anion Sum X 100	1633	**106%**

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 **28815 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	141	0.04350	6.13
Potassium	7	0.02558	0.18
Calcium	140	0.04990	6.99
Magnesium	49	0.08229	4.03
NH3-N	0.17	0.07143	0.01
		SUM	17.34

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	397	0.02000	7.94
Sulfate	175	0.02082	3.64
Chloride	167	0.02821	4.71
Nitrate-Nitrogen	0.4	0.07138	0.03
Phosphate-P	0.31	0.01031	0.00
Bromide	0.5	0.01252	0.01
		SUM	16.33

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	1545	
Cation Sum X 100	1734	**112%**
Anion Sum X 100	1633	**106%**

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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pH QC Summary (SM 4500 H+)

Date Analyzed: 4/4/2015
Time Analyzed: 1100

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.82	99.4	95-105	

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB28815	7.4	7.4	0.0	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: 4/4/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	0.380	---	<0.05	1100
ICV	1.00	1.02	102.0%	95-105	1100

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB28815	0.700	0.700	0.00%	10	1100

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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TDS QC Summary (SM 2540C)

Date Analyzed: 4/7/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<10	1410
ICVL	100	94	94	80-120	1410
ICV	500	503	100.6	90-110	1410

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28970	768	751	2.2	10	1520

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: **20150404**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.00	0.00	0.01	0.04	0.00	0.00
	ICV	1.93	19.34	2.01	20.19	1.75	1.83
	Rec 90-110%	96.41	96.70	100.74	100.93	87.50	91.59
	ICVL	0.15	1.72	0.17	1.73	0.15	0.14
	Rec 50-150%	77.35	85.81	85.87	86.60	76.13	71.11
Sample ID	**AB28814**	0.05	87.34	0.30	23.94	4.20	5.82
	MS	2.35	106.17	2.16	43.34	6.22	7.57
	Rec 80-120%	115.25	94.15	92.96	96.99	101.00	87.47
	MSD	2.35	103.30	2.25	42.77	6.07	7.33
	Rec 80-120%	115.02	79.79	97.47	94.12	93.26	75.68
	Diff 10%	0.19	2.74	4.10	1.33	2.52	3.16
	CCV	1.88	19.34	2.02	20.36	1.76	1.84
	Rec 90-110%	93.95	96.70	100.97	101.82	88.04	91.84
	Diff 10%	2.58	0.00	0.23	0.88	0.61	0.27
	CCVB	0.01	0.02	0.01	0.04	0.00	0.00

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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 4/7/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1413	1414	100.1%	95-105	1100

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB28815	1545	1556	0.7%	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: 4/14/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	9:49
CCV	40	40	100	95-105	11:27

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28840	41	40	2.5	5	9:49

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 4/7/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.011	---	<0.05	913
ICVL	0.050	0.046	92	80-120	915
ICV	0.250	0.286	114.4	80-120	1011

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	
AB28815	0.035	0.250	0.268	0.27	93.2	94	0.7	80/120	10	932

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
AB28938

Date Analyzed
Monday, April 13, 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	105.8	0.10	119.3	124.2	4.03	21.8	50	91.2	98.4	7.6	102.4	107.8	5.12	0.04
Aluminum	0.0	95.8	1.68	107.2	110.9	3.39	4.4	50	84.5	89.4	5.6	102.1	96.6	5.53	-0.08
Copper	0.0	101.4	0.13	105.7	110.8	4.73	33.7	50	84.1	91.3	8.2	101.7	102.1	0.39	0.11
Zinc	0.1	106.7	1.24	113.5	120.1	5.65	71.7	50	85.4	95.3	11.0	101.5	106.2	4.50	0.29
Arsenic	0.1	100.0	-0.04	100.9	107.2	6.10	4.7	50	99.1	105.1	5.9	100.7	102.5	1.73	0.05
Strontium	0.0	101.8	0.01	106.8	110.7	3.51	783.0	50	-8.1	73.3	249.7	102.7	104.6	1.86	0.09
Barium	0.0	99.7	0.02	102.9	107.8	4.65	289.7	50	55.6	78.1	33.7	100.8	98.6	2.19	0.07

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: 4/8/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.043	86.00%	50-150	1100
ICV	0.500	0.450	90.00%	90-110	1100
CCVB1	---	0.01	---	<0.05	1130
CCV1	0.500	0.530	106.00%	90-110	1130
CCVB2	---	0.02	---	<0.05	1130
CCV2	0.500	0.550	110.00%	90-110	1130

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	
AB28829	0.000	0.500	0.460	0.460	92	92	0.0	85-120	10	1100

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: 4/6/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	15:31
LCSL	0.03	0.03	100	50-150	15:31
ICV	0.10	0.09	90	90-110	15:31
QCS	0.10	0.10	100	80-120	15:31
CCV	0.10	0.10	100	80-120	15:31

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		
AB28815	0.32	0.10	0.48	0.40	160	80	18	70-130	10	15:31	15:31

Note: MS was over the acceptance criteria. Data was accepted due recovery percents of LCSL, QCS, ICV and CCV.

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: 4/13/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:06
LCSL	0.03	0.03	100	50-150	14:06
ICV	1.00	0.97	97	90-110	14:06
QCS	1.00	0.96	96	80-120	14:06
CCV	1.00	0.98	98	80-120	14:06

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		
AB29146	0.09	1.00	0.80	0.77	71	68	3.8	70-130	10	14:06	14:06

Note: MSD was lower than the acceptance criteria. Data was accepted due LCSL, ICV, QCS, CCV and MS recovery percents.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

ICV= Initial Calibration Verification, CCV= Continuing Calibration Verification, RPD = Relative Percent Difference; Rec = Recovery

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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 4/14/2015
Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.050	---	<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
AB28806	ND	5.0	5.6	5.4	112	108	3.6	85-120	10

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150410

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	1.10	110.2%	1.10	110.1%	0.1%	1	1.04	103.9%	1	1.0	103.7%
B 249.772	0.05-5ppm	0.00	0.00	1.09	109.5%	1.09	109.1%	0.3%	1	1.04	104.2%	1	1.0	103.8%
Fe 238.204	10ppb-100ppm	1.35	1.67	1008	100.8%	1006	100.6%	0.2%	1000	996	99.6%	1000	982.1	98.2%
Fe 259.940	10ppb-100ppm	2.08	-0.68	1018	101.8%	1017	101.7%	0.1%	1000	1003	100.3%	1000	995.8	99.6%
K 766.491	0.5-750ppm	-0.10	-0.11	10.8	108.0%	10.8	108.3%	0.2%	10	10.6	105.6%	10	10.2	102.2%
Mn 257.610	10ppb-11ppm	-0.93	-1.34	1031	103.1%	1029	102.9%	0.2%	1000	1002	100.2%	1000	994.1	99.4%
Mn 260.568	10ppb-11ppm	-1.90	-1.74	1032	103.2%	1040	104.0%	0.8%	1000	1008	100.8%	1000	994.0	99.4%
Si 251.611	0.5-200ppm	-0.01	-0.09	52.2	104.4%	51.9	103.9%	0.5%	50	49.9	99.9%	50	50.5	101.0%
Si 252.411	0.5-200ppm	-0.02	-0.01	52.0	104.1%	51.9	103.9%	0.2%	50	49.8	99.6%	50	50.4	100.7%

Sample ID AB28818

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	2.25	3.26	100.9%	3.24	98.1%	0.9%	1	1.10	109.7%	5.4%	0.01
B 249.772	2.28	3.29	100.7%	3.28	99.6%	0.3%	1	1.12	111.9%	7.2%	0.01
Fe 238.204	12	1046	103.4%	1035	102.3%	1.1%	1000	1069	106.9%	7.0%	1.56
Fe 259.940	10	1064	105.3%	1063	105.3%	0.0%	1000	1077	107.7%	7.1%	3.04
K 766.491	2.8	14.0	111.8%	13.6	108.4%	2.4%	10	11.3	112.6%	6.4%	-0.13
Mn 257.610	36	1087	105.1%	1079	104.4%	0.7%	1000	1078	107.8%	7.2%	-0.53
Mn 260.568	37	1094	105.7%	1088	105.1%	0.5%	1000	1088	108.8%	7.6%	-0.75
Si 251.611	17.4	69.7	104.7%	69.3	103.8%	0.6%	50	53.7	107.4%	7.3%	-0.01
Si 252.411	17.2	69.1	103.7%	68.5	102.6%	0.8%	50	53.1	106.2%	6.4%	0.07

Batch # 201500424

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
Ca 317.933	50-300ppm	-4.60	-4.59	48.3	96.6%	49.0	98.1%	1.6%	50	48.8	97.5%	50	46.7	93.3%
Ca 396.847	0.5-50ppm	-0.30	-0.29	49.1	98.1%	50.2	100.4%	2.3%	50	49.5	99.0%	50	48.3	96.5%
K 766.491	0.5-750ppm	0.10	0.08	9.8	98.0%	10.0	99.6%	1.6%	10	9.9	99.1%	10	9.5	94.9%
Mg 202.582	50-1000ppm	-1.48	-1.42	49.3	98.7%	51.0	102.0%	3.3%	50	50.2	100.5%	50	49.0	98.1%
Mg 279.078	0.5-50ppm	-0.05	-0.10	48.7	97.3%	49.7	99.4%	2.1%	50	49.4	98.8%	50	47.5	95.0%
Na 568.821	50-1000ppm	10.90	10.62	53.9	107.7%	53.1	106.2%	1.4%	50	53.0	106.1%	50	53.7	107.4%
Na 589.592	0.5-50ppm	0.02	0.04	49.8	99.6%	50.7	101.3%	1.7%	50	50.2	100.4%	50	48.8	97.6%

Sample ID AB29364

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
Ca 317.933	42.4	89.8	94.8%	90.8	96.7%	1.1%	50	48.4	96.7%	0.8%	-4.56
Ca 396.847	43.3	83.1	79.5%	84.8	82.8%	2.0%	50	48.5	97.0%	2.0%	-0.27
K 766.491	2.2	11.4	91.6%	11.6	93.9%	2.0%	10	9.7	96.9%	2.3%	0.09
Mg 202.582	25.5	72.6	94.2%	74.4	97.9%	2.5%	50	50.6	101.2%	0.7%	-1.45
Mg 279.078	24.8	69.7	89.9%	71.0	92.3%	1.7%	50	48.9	97.8%	1.0%	-0.04
Na 568.821	102.7	148.3	91.1%	149.5	93.7%	0.9%	50	54.2	108.4%	2.2%	10.33
Na 589.592	96.7	139.6	85.7%	142.5	91.5%	2.1%	50	49.5	99.0%	1.4%	0.02

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

April 13, 2015 Ceres ID: 10633

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 April 8, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

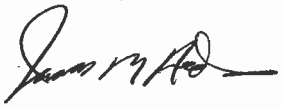
This work was authorized under M.B.A.'s Project # AB28815.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10633-001	MW-6M (monitoring)	4/8/2015	4/4/2015	8:55

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB28815

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1310
ZB-5 MS Analysis Date: 10-Apr-15
Date Received: NA
Date Extracted: 9-Apr-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.10		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	97.8	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	94.4	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB28815	Sample Size:	1.000 L	QC Batch #:	1310	Date Extracted:	9-Apr-15
				ZB-5 MS Analysis Date:	10-Apr-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	10.3	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	104	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	10.0	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-6M (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10633-001	Date Received:	8-Apr-15
Project:	AB28815	Sample Size:	0.997 L	QC Batch #:	1310	Date Extracted:	9-Apr-15
Date Collected:	4-Apr-15			ZB-5 MS Analysis Date:	10-Apr-15		
Time Collected:	8:55						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.62		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	103	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	100	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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: 10633

Temperature: 2.6 °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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-6M (monitoring)	4/4/2015 855	0:00	Aq	2	X							AB28815
2													(2,3,7,8 TCDD only)
3													Please include excel
4													report
5													
6													
7													
8													
9													
10													
11													
12													

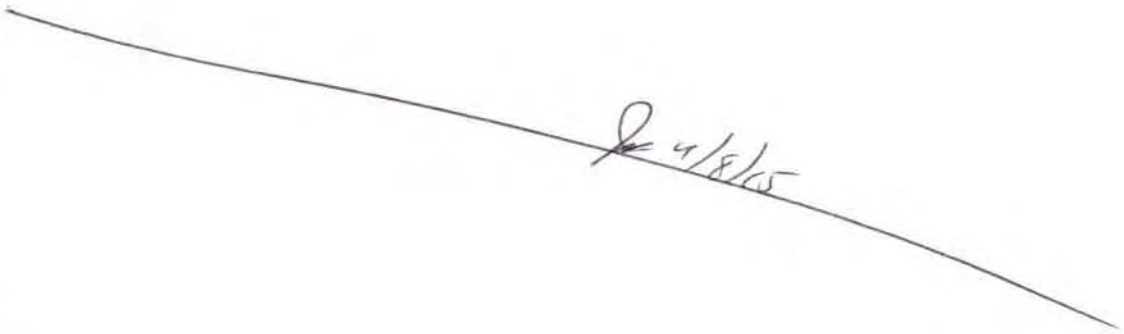
Samples will be disposed of 45 days after submission of report, unless other provisions have been made and agreed upon in writing.

Relinquished by: *(Signature and Printed Name)*	Date	Time	Received by: *(signature and Printed Name)*	Date	Time
D. Holland	4/6/2015	16:00	J M Hedin	4/8/15	10:38

Client understands that all terms desribed 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: 10633	Date/Time: 4/8/15 10:38
Client Project ID: AB28815	Received Temperature: 2.6°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / N
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies: 	
List Damaged Samples: 	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10633 PB: 1310 Sample #s: 1 Due Date: 4/22/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle 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 Cl_4-Cl_8 ☐ 8290 Cl_4-Cl_8

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:

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt.

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10633-1	1517.13g	520.40g	0.997L

Chemist J Date 4/4/15

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1310-MB001	Method Blank		1.000L	[illegible] 4/9/15 MA	[illegible] 4/10/15 MA	NA	[illegible] 4/10/15	NA	[illegible] 4/10/15 MA
0-1310-OPR001	OPR		1.000L	(A)					
10633-1310-001	MW-6M (monitoring)	✓	0.997L						

Comments : (A) OPR spiked with NSS.

Soxhlet Start: 15:00 4/9/15

Soxhlet Stop: 07:25 4/10/15

Samples Logged out by: [illegible] 10:15 4/9/15

Samples Returned by: NA

Note samples Depleted: 1A

Sample Extracts Storage Location: Box 15

Extracts to Instrument: 11:00 4/10/15 [illegible]

Extracts returned to Storage Location: _____

Chemist: [illegible]

Method: 1613B/8270A
SOP #: 301.1/302.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10µl	
NSS	B	↓	
CSS	C	↓	
RSS	D	20µl	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143656	2/5/16
Hexanes	30,30,100,20ml	145782	2/5/16
Si Gel	4g	P031615A	9/16/15
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% Dcm:Hex	30ml	L040115A	10/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5D08011

Report Date: 04/24/15 08:10

Received Date: 04/08/15 09:05

Turn Around: Normal

Client Project: Cal Am

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 04/08/15 09:05 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: 04/08/15 09:05
Date Reported: 04/24/15 08:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-6M(Monitoring) (AB28815)	Azad Khaligh	5D08011-01	Water	04/04/15 08:55

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

5D08011-01 MW-6M(Monitoring)

Sampled: 04/04/15 08:55 **Sampled By:** Azad Khaligh **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5D0594 Prepared: 04/10/15 11:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	**35**	10	ug/l	1	04/10/15 12:24	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5D0533 Prepared: 04/10/15 08:18 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	04/15/15 03:10	
4,4´-DDE	ND		0.010	ug/l	1	04/15/15 03:10	
4,4´-DDT	ND		0.010	ug/l	1	04/15/15 03:10	
Aldrin	ND		0.010	ug/l	1	04/15/15 03:10	
alpha-BHC	ND		0.010	ug/l	1	04/15/15 03:10	
Aroclor 1016	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1221	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1232	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1242	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1248	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1254	ND		0.10	ug/l	1	04/15/15 03:10	
Aroclor 1260	ND		0.10	ug/l	1	04/15/15 03:10	
beta-BHC	ND		0.010	ug/l	1	04/15/15 03:10	
Chlordane (tech)	ND		0.10	ug/l	1	04/15/15 03:10	
Chlorothalonil	ND		0.050	ug/l	1	04/15/15 03:10	
delta-BHC	ND		0.010	ug/l	1	04/15/15 03:10	
Dieldrin	ND		0.010	ug/l	1	04/15/15 03:10	
Endosulfan I	ND		0.010	ug/l	1	04/15/15 03:10	
Endosulfan II	ND		0.010	ug/l	1	04/15/15 03:10	
Endosulfan sulfate	ND		0.010	ug/l	1	04/15/15 03:10	
Endrin	ND		0.010	ug/l	1	04/15/15 03:10	
Endrin aldehyde	ND		0.010	ug/l	1	04/15/15 03:10	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	04/15/15 03:10	
Heptachlor	ND		0.010	ug/l	1	04/15/15 03:10	
Heptachlor epoxide	ND		0.010	ug/l	1	04/15/15 03:10	
Hexachlorobenzene	ND		0.050	ug/l	1	04/15/15 03:10	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	04/15/15 03:10	
Methoxychlor	ND		0.010	ug/l	1	04/15/15 03:10	
PCBs, Total	ND		0.50	ug/l	1	04/15/15 03:10	
Propachlor	ND		0.050	ug/l	1	04/15/15 03:10	
Toxaphene	ND		1.0	ug/l	1	04/15/15 03:10	
Trifluralin	ND		0.010	ug/l	1	04/15/15 03:10	
Surr: Decachlorobiphenyl	*112 %*	Conc:*0.112*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*89 %*	Conc:*0.0891*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

QUALITY CONTROL SECTION

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

Anions by IC, EPA Method 9056 - Quality Control

Batch W5D0594 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0594-BLK1)				Analyzed: 04/10/15 13:38						
Iodide	ND	10	ug/l							
LCS (W5D0594-BS1)				Analyzed: 04/10/15 11:51						
Iodide	39.6	10	ug/l	40.0		99	85-115			
Matrix Spike (W5D0594-MS1)	**Source: 5D08010-01**			Analyzed: 04/10/15 13:08						
Iodide	70.8	10	ug/l	40.0	35.5	88	80-120			
Matrix Spike Dup (W5D0594-MSD1)	**Source: 5D08010-01**			Analyzed: 04/10/15 13:23						
Iodide	70.1	10	ug/l	40.0	35.5	86	80-120	1	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0533-BLK1)				Analyzed: 04/14/15 13:22						
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							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0533-BLK1)				Analyzed: 04/14/15 13:22						
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	*0.118*		*ug/l*	*0.100*		*118*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0695*		*ug/l*	*0.100*		*70*	*70-130*			
LCS (W5D0533-BS1)				Analyzed: 04/14/15 13:52						
4,4´-DDD	0.136	0.010	ug/l	0.100		136	55-142			
4,4´-DDE	0.118	0.010	ug/l	0.100		118	49-129			
4,4´-DDT	0.133	0.010	ug/l	0.100		133	54-160			
Aldrin	0.0738	0.010	ug/l	0.100		74	29-115			
alpha-BHC	0.110	0.010	ug/l	0.100		110	59-131			
beta-BHC	0.131	0.010	ug/l	0.100		131	63-136			
delta-BHC	0.138	0.010	ug/l	0.100		138	59-137			Q-08
Dieldrin	0.113	0.010	ug/l	0.100		113	59-135			
Endosulfan I	0.107	0.010	ug/l	0.100		107	28-138			
Endosulfan II	0.109	0.010	ug/l	0.100		109	53-133			
Endosulfan sulfate	0.115	0.010	ug/l	0.100		115	58-155			
Endrin	0.115	0.010	ug/l	0.100		115	57-148			
Endrin aldehyde	0.109	0.010	ug/l	0.100		109	45-139			
gamma-BHC (Lindane)	0.115	0.010	ug/l	0.100		115	59-129			
Heptachlor	0.0963	0.010	ug/l	0.100		96	42-136			
Heptachlor epoxide	0.111	0.010	ug/l	0.100		111	59-134			
Methoxychlor	0.0847	0.010	ug/l	0.100		85	56-167			
Surr: Decachlorobiphenyl	*0.116*		*ug/l*	*0.100*		*116*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0704*		*ug/l*	*0.100*		*70*	*70-130*			
LCS (W5D0533-BS2)				Analyzed: 04/14/15 17:27						
Aroclor 1016	1.23	0.10	ug/l	1.00		123	49-152			
Aroclor 1260	1.24	0.10	ug/l	1.00		124	52-146			
Surr: Decachlorobiphenyl	*0.133*		*ug/l*	*0.100*		*133*	*70-130*			*S-11*
Surr: Tetrachloro-meta-xylene	*0.0753*		*ug/l*	*0.100*		*75*	*70-130*			
LCS Dup (W5D0533-BSD1)				Analyzed: 04/14/15 14:23						
4,4´-DDD	0.147	0.010	ug/l	0.100		147	55-142	8	25	Q-08
4,4´-DDE	0.128	0.010	ug/l	0.100		128	49-129	8	25	
4,4´-DDT	0.148	0.010	ug/l	0.100		148	54-160	10	25	
Aldrin	0.0843	0.010	ug/l	0.100		84	29-115	13	25	
alpha-BHC	0.118	0.010	ug/l	0.100		118	59-131	7	25	
beta-BHC	0.138	0.010	ug/l	0.100		138	63-136	5	25	Q-08

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0533 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5D0533-BSD1)				Analyzed: 04/14/15 14:23						
delta-BHC	0.142	0.010	ug/l	0.100		142	59-137	3	25	Q-08
Dieldrin	0.123	0.010	ug/l	0.100		123	59-135	8	25	
Endosulfan I	0.115	0.010	ug/l	0.100		115	28-138	7	25	
Endosulfan II	0.117	0.010	ug/l	0.100		117	53-133	8	25	
Endosulfan sulfate	0.124	0.010	ug/l	0.100		124	58-155	8	25	
Endrin	0.125	0.010	ug/l	0.100		125	57-148	8	25	
Endrin aldehyde	0.125	0.010	ug/l	0.100		125	45-139	13	25	
gamma-BHC (Lindane)	0.122	0.010	ug/l	0.100		122	59-129	7	25	
Heptachlor	0.105	0.010	ug/l	0.100		105	42-136	8	25	
Heptachlor epoxide	0.119	0.010	ug/l	0.100		119	59-134	7	25	
Methoxychlor	0.109	0.010	ug/l	0.100		109	56-167	25	25	
Surr: Decachlorobiphenyl	*0.124*		*ug/l*	*0.100*		*124*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0716*		*ug/l*	*0.100*		*72*	*70-130*			
LCS Dup (W5D0533-BSD2)				Analyzed: 04/14/15 17:58						
Aroclor 1016	1.17	0.10	ug/l	1.00		117	49-152	5	25	
Aroclor 1260	1.20	0.10	ug/l	1.00		120	52-146	3	25	
Surr: Decachlorobiphenyl	*0.122*		*ug/l*	*0.100*		*122*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0730*		*ug/l*	*0.100*		*73*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/08/15 09:05
Date Reported: 04/24/15 08:10

Notes and Definitions

S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
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.

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5D0721
4/21/2015
Invoice: A508082

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5D0721 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 4/8/2015. 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 Montierth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montierth , 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	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	4/08/2015 - 09:30		
Report Due:	4/22/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 0.3

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue 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.
MS2.1	MS/MSD RPD exceeds control limit. Reportable results in parent sample may have some degree of variability, higher than that inherent in the method.
SR2.0	Surrogate recovery exceeds lower control limit due to matrix interference as confirmed by re-analysis. Associated results should be considered biased low.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5D0721-01
Sampled By: Azad Khaligh
Sample Description: MW-6M (monitoring) // AB28815

Sample Date - Time: 04/04/15 - 08:55
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A504110	04/14/15	04/15/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A504110	04/14/15	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	104 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A503970	04/09/15	04/11/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A503970	04/09/15	04/11/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A503970	04/09/15	04/11/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A503970	04/09/15	04/11/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A503970	04/09/15	04/11/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A503970	04/09/15	04/11/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A503970	04/09/15	04/11/15	
Surrogate: DCPAA	EPA 515.3	97 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A503993	04/10/15	04/10/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	

Certificate of Analysis

Sample ID: A5D0721-01
Sampled By: Azad Khaligh
Sample Description: MW-6M (monitoring) // AB28815

Sample Date - Time: 04/04/15 - 08:55
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	A503993	04/10/15	04/10/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A503993	04/10/15	04/10/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	BS1.0, CV0.0
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A503993	04/10/15	04/10/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A503993	04/10/15	04/10/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A503993	04/10/15	04/10/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A503993	04/10/15	04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	91 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	97 %	*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: A5D0721-01
Sampled By: Azad Khaligh
Sample Description: MW-6M (monitoring) // AB28815

Sample Date - Time: 04/04/15 - 08:55
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					
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503868	04/08/15	04/10/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503868	04/08/15	04/10/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503868	04/08/15	04/10/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503868	04/08/15	04/10/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503868	04/08/15	04/10/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503868	04/08/15	04/10/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503868	04/08/15	04/10/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503868	04/08/15	04/10/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503868	04/08/15	04/10/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503868	04/08/15	04/10/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503868	04/08/15	04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	102 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503881	04/09/15	04/09/15	BS1.0
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503881	04/09/15	04/09/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A503998	04/10/15	04/10/15	
Surrogate: AMPA	EPA 547	90 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A504033	04/10/15	04/12/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A503930	04/09/15	04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A504110										Prepared: 04/14/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A504110-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							04/15/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.52*			*0.46*		*115*	*70-130*			04/15/15	
Blank Spike (A504110-BS1)											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20		104	70-130			04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		98	70-130			04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.49*			*0.46*		*107*	*70-130*			04/15/15	
Blank Spike Dup (A504110-BSD1)											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20		108	70-130	4	20	04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		101	70-130	3	20	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*105*	*70-130*			04/15/15	
Matrix Spike (A504110-MS1), Source: A5D0983-02											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20	ND	108	65-135			04/15/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	101	65-135			04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.50*			*0.46*		*107*	*70-130*			04/15/15	
Matrix Spike Dup (A504110-MSD1), Source: A5D0983-02											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20	ND	104	65-135	5	20	04/15/15	
Ethylene Dibromide (EDB)	0.21	0.020	ug/L	0.20	ND	104	65-135	1	20	04/15/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*102*	*70-130*			04/15/15	
EPA 515.3 - Quality Control											
Batch: A503970										Prepared: 04/09/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A503970-BLK1)											
2,4,5-T	ND	1.0	ug/L							04/10/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							04/10/15	
2,4-D	ND	10	ug/L							04/10/15	
Bentazon	ND	2.0	ug/L							04/10/15	
Dalapon	ND	10	ug/L							04/10/15	
Dicamba	ND	1.5	ug/L							04/10/15	
Dinoseb	ND	2.0	ug/L							04/10/15	
Pentachlorophenol	ND	0.20	ug/L							04/10/15	
Picloram	ND	1.0	ug/L							04/10/15	
Surrogate: DCPAA	*57*			*58*		*99*	*70-130*			04/10/15	
Blank Spike (A503970-BS1)											
2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130			04/10/15	
2,4,5-TP (Silvex)	0.82	1.0	ug/L	0.80		103	70-130			04/10/15	
2,4-D	0.42	10	ug/L	0.40		105	70-130			04/10/15	
Bentazon	7.7	2.0	ug/L	8.0		97	70-130			04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A503970										Prepared: 04/09/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A503970-BS1)											
Dalapon	3.9	10	ug/L	4.0		96	70-130			04/10/15	
Dicamba	6.0	1.5	ug/L	6.0		101	70-130			04/10/15	
Dinoseb	0.75	2.0	ug/L	0.80		94	70-130			04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		95	70-130			04/10/15	
Picloram	0.39	1.0	ug/L	0.40		97	70-130			04/10/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			04/10/15	
Blank Spike Dup (A503970-BSD1)											
2,4,5-T	4.1	1.0	ug/L	4.0		102	70-130	0	20	04/11/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80		103	70-130	1	20	04/11/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130	3	20	04/11/15	
Bentazon	7.7	2.0	ug/L	8.0		97	70-130	0	20	04/11/15	
Dalapon	3.8	10	ug/L	4.0		95	70-130	1	20	04/11/15	
Dicamba	5.8	1.5	ug/L	6.0		97	70-130	3	20	04/11/15	
Dinoseb	0.78	2.0	ug/L	0.80		98	70-130	4	20	04/11/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		93	70-130	2	20	04/11/15	
Picloram	0.40	1.0	ug/L	0.40		99	70-130	2	20	04/11/15	
Surrogate: DCPAA	*55*			*58*		*95*	*70-130*			04/11/15	
Matrix Spike (A503970-MS1), Source: A5D0701-01											
2,4,5-T	4.1	1.0	ug/L	4.0	ND	102	70-130			04/10/15	
2,4,5-TP (Silvex)	0.80	1.0	ug/L	0.80	ND	100	70-130			04/10/15	
2,4-D	0.42	10	ug/L	0.40	ND	104	70-130			04/10/15	
Bentazon	7.8	2.0	ug/L	8.0	ND	97	70-130			04/10/15	
Dalapon	4.2	10	ug/L	4.0	ND	105	70-130			04/10/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	99	70-130			04/10/15	
Dinoseb	0.75	2.0	ug/L	0.80	ND	94	70-130			04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130			04/10/15	
Picloram	0.39	1.0	ug/L	0.40	ND	98	70-130			04/10/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			04/10/15	
Matrix Spike Dup (A503970-MSD1), Source: A5D0701-01											
2,4,5-T	3.9	1.0	ug/L	4.0	ND	99	70-130	4	20	04/10/15	
2,4,5-TP (Silvex)	0.79	1.0	ug/L	0.80	ND	98	70-130	2	20	04/10/15	
2,4-D	0.39	10	ug/L	0.40	ND	98	70-130	5	20	04/10/15	
Bentazon	7.5	2.0	ug/L	8.0	ND	93	70-130	4	20	04/10/15	
Dalapon	4.0	10	ug/L	4.0	ND	100	70-130	5	20	04/10/15	
Dicamba	5.9	1.5	ug/L	6.0	ND	98	70-130	1	20	04/10/15	
Dinoseb	0.73	2.0	ug/L	0.80	ND	91	70-130	3	20	04/10/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	92	70-130	4	20	04/10/15	
Picloram	0.37	1.0	ug/L	0.40	ND	91	70-130	7	20	04/10/15	
Surrogate: DCPAA	*56*			*58*		*97*	*70-130*			04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503993-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							04/10/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							04/10/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							04/10/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							04/10/15	
1,1-Dichloroethane	ND	0.50	ug/L							04/10/15	
1,1-Dichloroethene	ND	0.50	ug/L							04/10/15	
1,1-Dichloropropene	ND	0.50	ug/L							04/10/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							04/10/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
1,2-Dichloroethane	ND	0.50	ug/L							04/10/15	
1,2-Dichloropropane	ND	0.50	ug/L							04/10/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							04/10/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
1,3-Dichloropropane	ND	0.50	ug/L							04/10/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							04/10/15	
2,2-Dichloropropane	ND	0.50	ug/L							04/10/15	
2-Butanone	ND	5.0	ug/L							04/10/15	
2-Chlorotoluene	ND	0.50	ug/L							04/10/15	
2-Hexanone	ND	10	ug/L							04/10/15	
4-Chlorotoluene	ND	0.50	ug/L							04/10/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							04/10/15	
Acetone	ND	10	ug/L							04/10/15	
Benzene	ND	0.50	ug/L							04/10/15	
Bromobenzene	ND	0.50	ug/L							04/10/15	
Bromochloromethane	ND	0.50	ug/L							04/10/15	
Bromodichloromethane	ND	0.50	ug/L							04/10/15	
Bromoform	ND	0.50	ug/L							04/10/15	
Bromomethane	ND	0.50	ug/L							04/10/15	
Carbon Tetrachloride	ND	0.50	ug/L							04/10/15	
Chlorobenzene	ND	0.50	ug/L							04/10/15	
Chloroethane	ND	0.50	ug/L							04/10/15	
Chloroform	ND	0.50	ug/L							04/10/15	
Chloromethane	ND	0.50	ug/L							04/10/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							04/10/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							04/10/15	
Dibromochloromethane	ND	0.50	ug/L							04/10/15	
Dibromomethane	ND	0.50	ug/L							04/10/15	
Dichlorodifluoromethane	ND	0.50	ug/L							04/10/15	
Dichloromethane	ND	0.50	ug/L							04/10/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							04/10/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							04/10/15	
Ethylbenzene	ND	0.50	ug/L							04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503993-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							04/10/15	
Isopropylbenzene	ND	0.50	ug/L							04/10/15	
m,p-Xylenes	ND	0.50	ug/L							04/10/15	
Methyl-t-butyl ether	ND	0.50	ug/L							04/10/15	
Naphthalene	ND	0.50	ug/L							04/10/15	
n-Butylbenzene	ND	0.50	ug/L							04/10/15	
n-Propylbenzene	ND	0.50	ug/L							04/10/15	
o-Xylene	ND	0.50	ug/L							04/10/15	
p-Isopropyltoluene	ND	0.50	ug/L							04/10/15	
sec-Butylbenzene	ND	0.50	ug/L							04/10/15	
Styrene	ND	0.50	ug/L							04/10/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							04/10/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							04/10/15	
tert-Butylbenzene	ND	0.50	ug/L							04/10/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							04/10/15	
Toluene	ND	0.50	ug/L							04/10/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							04/10/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							04/10/15	
Trichloroethene (TCE)	ND	0.50	ug/L							04/10/15	
Trichlorofluoromethane	ND	5.0	ug/L							04/10/15	
Vinyl Chloride	ND	0.50	ug/L							04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.4*			*5.0*		*87*	*70-130*			04/10/15	
Surrogate: Bromofluorobenzene	*47*			*50*		*93*	*70-130*			04/10/15	
Blank Spike (A503993-BS1)											
1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130			04/10/15	
1,1,2,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		100	70-130			04/10/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		101	70-130			04/10/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			04/10/15	
1,1-Dichloroethene	9.8	0.50	ug/L	10		98	70-130			04/10/15	
1,1-Dichloropropene	10	0.50	ug/L	10		101	70-130			04/10/15	
1,2,3-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			04/10/15	
1,2,4-Trimethylbenzene	9.2	0.50	ug/L	10		92	70-130			04/10/15	
1,2-Dichlorobenzene	9.5	0.50	ug/L	10		95	70-130			04/10/15	
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130			04/10/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		102	70-130			04/10/15	
1,3-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15	
1,3-Dichloropropane	10	0.50	ug/L	10		100	70-130			04/10/15	
1,4-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15	
2,2-Dichloropropane	10	0.50	ug/L	10		102	70-130			04/10/15	
2-Butanone	11	5.0	ug/L	10		113	70-130			04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503993										Prepared: 04/10/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A503993-BS1)												
2-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
2-Hexanone	10	10	ug/L	10		104	70-130			04/10/15		
4-Chlorotoluene	9.4	0.50	ug/L	10		94	70-130			04/10/15		
4-Methyl-2-pentanone	10	5.0	ug/L	10		105	70-130			04/10/15		
Acetone	11	10	ug/L	10		114	70-130			04/10/15		
Benzene	10	0.50	ug/L	10		102	70-130			04/10/15		
Bromobenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			04/10/15		
Bromoform	11	0.50	ug/L	10		108	70-130			04/10/15		
Bromomethane	11	0.50	ug/L	10		114	70-130			04/10/15		
Carbon Tetrachloride	10	0.50	ug/L	10		104	70-130			04/10/15		
Chlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/10/15		
Chloroethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Chloroform	10	0.50	ug/L	10		101	70-130			04/10/15		
Chloromethane	9.9	0.50	ug/L	10		99	70-130			04/10/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			04/10/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			04/10/15		
Dibromochloromethane	10	0.50	ug/L	10		104	70-130			04/10/15		
Dibromomethane	10	0.50	ug/L	10		101	70-130			04/10/15		
Dichlorodifluoromethane	8.5	0.50	ug/L	10		85	70-130			04/10/15		
Dichloromethane	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		101	70-130			04/10/15		
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130			04/10/15		
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130			04/10/15		
Hexachlorobutadiene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
Isopropylbenzene	9.6	0.50	ug/L	10		96	70-130			04/10/15		
m,p-Xylenes	19	0.50	ug/L	20		96	70-130			04/10/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		101	70-130			04/10/15		
Naphthalene	10	0.50	ug/L	10		101	70-130			04/10/15		
n-Butylbenzene	10	0.50	ug/L	10		104	70-130			04/10/15		
n-Propylbenzene	9.3	0.50	ug/L	10		93	70-130			04/10/15		
o-Xylene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
p-Isopropyltoluene	9.3	0.50	ug/L	10		93	70-130			04/10/15		
sec-Butylbenzene	9.4	0.50	ug/L	10		94	70-130			04/10/15		
Styrene	16	0.50	ug/L	10		156	70-130			04/10/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		103	70-130			04/10/15		
tert-Butyl alcohol (TBA)	11	2.0	ug/L	10		112	70-130			04/10/15		
tert-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			04/10/15		
Tetrachloroethene (PCE)	9.5	0.50	ug/L	10		95	70-130			04/10/15		
Toluene	10	0.50	ug/L	10		101	70-130			04/10/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			04/10/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		103	70-130			04/10/15		
Trichloroethene (TCE)	9.9	0.50	ug/L	10		99	70-130			04/10/15		
Trichlorofluoromethane	9.4	5.0	ug/L	10		94	70-130			04/10/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503993										Prepared: 04/10/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A503993-BS1)											
Vinyl Chloride	9.4	0.50	ug/L	10		94	70-130			04/10/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*98*	*70-130*			04/10/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			04/10/15	
Blank Spike Dup (A503993-BSD1)											
1,1,1,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130	4	30	04/10/15	
1,1,1-Trichloroethane	9.7	0.50	ug/L	10		97	70-130	6	30	04/10/15	
1,1,2,2-Tetrachloroethane	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.2	10	ug/L	10		92	70-130	8	30	04/10/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
1,1-Dichloroethane	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
1,1-Dichloroethene	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
1,1-Dichloropropene	9.6	0.50	ug/L	10		96	70-130	6	30	04/10/15	
1,2,3-Trichlorobenzene	9.3	0.50	ug/L	10		93	70-130	3	30	04/10/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	4	30	04/10/15	
1,2,4-Trimethylbenzene	8.8	0.50	ug/L	10		88	70-130	4	30	04/10/15	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	2	30	04/10/15	
1,2-Dichloropropane	9.7	0.50	ug/L	10		97	70-130	3	30	04/10/15	
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15	
1,3-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
1,3-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
1,4-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15	
2-Butanone	10	5.0	ug/L	10		100	70-130	12	30	04/10/15	
2-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	5	30	04/10/15	
2-Hexanone	9.7	10	ug/L	10		97	70-130	7	30	04/10/15	
4-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	3	30	04/10/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	6	30	04/10/15	
Acetone	10	10	ug/L	10		103	70-130	10	30	04/10/15	
Benzene	9.7	0.50	ug/L	10		97	70-130	4	30	04/10/15	
Bromobenzene	9.2	0.50	ug/L	10		92	70-130	4	30	04/10/15	
Bromochloromethane	9.8	0.50	ug/L	10		98	70-130	0	30	04/10/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
Bromoform	10	0.50	ug/L	10		104	70-130	5	30	04/10/15	
Bromomethane	11	0.50	ug/L	10		113	70-130	1	30	04/10/15	
Carbon Tetrachloride	9.9	0.50	ug/L	10		99	70-130	5	30	04/10/15	
Chlorobenzene	9.5	0.50	ug/L	10		95	70-130	4	30	04/10/15	
Chloroethane	9.3	0.50	ug/L	10		93	70-130	5	30	04/10/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
Chloromethane	9.5	0.50	ug/L	10		95	70-130	5	30	04/10/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	4	30	04/10/15	
cis-1,3-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130	4	30	04/10/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503993										Prepared: 04/10/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike Dup (A503993-BSD1)												
Dichlorodifluoromethane	8.2	0.50	ug/L	10		82	70-130	4	30	04/10/15		
Dichloromethane	9.6	0.50	ug/L	10		96	70-130	1	30	04/10/15		
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130	3	30	04/10/15		
Ethyl tert-Butyl Ether (ETBE)	9.8	0.50	ug/L	10		98	70-130	3	30	04/10/15		
Ethylbenzene	9.4	0.50	ug/L	10		94	70-130	5	30	04/10/15		
Hexachlorobutadiene	8.9	0.50	ug/L	10		89	70-130	7	30	04/10/15		
Isopropylbenzene	9.2	0.50	ug/L	10		92	70-130	4	30	04/10/15		
m,p-Xylenes	18	0.50	ug/L	20		92	70-130	4	30	04/10/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	2	30	04/10/15		
Naphthalene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15		
n-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	5	30	04/10/15		
n-Propylbenzene	9.0	0.50	ug/L	10		90	70-130	3	30	04/10/15		
o-Xylene	9.2	0.50	ug/L	10		92	70-130	3	30	04/10/15		
p-Isopropyltoluene	8.9	0.50	ug/L	10		89	70-130	5	30	04/10/15		
sec-Butylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	04/10/15		
Styrene	15	0.50	ug/L	10		153	70-130	2	30	04/10/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130	4	30	04/10/15		
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		102	70-130	10	30	04/10/15		
tert-Butylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	04/10/15		
Tetrachloroethene (PCE)	9.1	0.50	ug/L	10		91	70-130	5	30	04/10/15		
Toluene	9.6	0.50	ug/L	10		96	70-130	5	30	04/10/15		
trans-1,2-Dichloroethene	9.7	0.50	ug/L	10		97	70-130	5	30	04/10/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	3	30	04/10/15		
Trichloroethene (TCE)	9.4	0.50	ug/L	10		94	70-130	5	30	04/10/15		
Trichlorofluoromethane	9.1	5.0	ug/L	10		91	70-130	3	30	04/10/15		
Vinyl Chloride	8.9	0.50	ug/L	10		89	70-130	5	30	04/10/15		
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*99*	*70-130*			04/10/15		
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			04/10/15		
EPA 525.2 - Quality Control												
Batch: A503868										Prepared: 04/08/2015		
Prep Method: EPA 525.2										Analyst: KHH		
Blank (A503868-BLK1)												
Alachlor	ND	1.0	ug/L							04/10/15		
Atrazine	ND	0.50	ug/L							04/10/15		
Benzo(a)pyrene	ND	0.10	ug/L							04/10/15		
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							04/10/15		
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							04/10/15		
Bromacil	ND	10	ug/L							04/10/15		
Butachlor	ND	0.38	ug/L							04/10/15		
Diazinon	ND	0.25	ug/L							04/10/15		
Dimethoate	ND	10	ug/L							04/10/15		
Metolachlor	ND	0.50	ug/L							04/10/15		
Metribuzin	ND	0.50	ug/L							04/10/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A503868										Prepared: 04/08/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A503868-BLK1)											
Molinate	ND	2.0	ug/L							04/10/15	
Prometryn	ND	2.0	ug/L							04/10/15	
Propachlor	ND	0.50	ug/L							04/10/15	
Simazine	ND	1.0	ug/L							04/10/15	
Thiobencarb	ND	1.0	ug/L							04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.5*			*5.0*		*110*	*70-130*			04/10/15	
Blank Spike (A503868-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		105	70-130			04/10/15	
Atrazine	0.54	0.50	ug/L	0.50		108	70-130			04/10/15	
Benzo(a)pyrene	0.076	0.10	ug/L	0.10		76	70-130			04/10/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		106	70-130			04/10/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		112	70-130			04/10/15	
Bromacil	1.1	10	ug/L	1.0		110	70-130			04/10/15	
Butachlor	1.1	0.38	ug/L	1.0		105	70-130			04/10/15	
Diazinon	0.19	0.25	ug/L	0.20		93	70-130			04/10/15	
Dimethoate	0.78	10	ug/L	1.0		78	70-130			04/10/15	
Metolachlor	2.2	0.50	ug/L	2.0		110	70-130			04/10/15	
Metribuzin	1.1	0.50	ug/L	1.0		109	70-130			04/10/15	
Molinate	1.0	2.0	ug/L	1.0		104	70-130			04/10/15	
Prometryn	2.2	2.0	ug/L	2.0		109	70-130			04/10/15	
Propachlor	0.51	0.50	ug/L	0.50		103	70-130			04/10/15	
Simazine	0.36	1.0	ug/L	0.35		103	70-130			04/10/15	
Thiobencarb	0.52	1.0	ug/L	0.50		104	70-130			04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*109*	*70-130*			04/10/15	
Blank Spike Dup (A503868-BSD1)											
Alachlor	1.0	1.0	ug/L	1.0		102	70-130	4	30	04/10/15	
Atrazine	0.46	0.50	ug/L	0.50		92	70-130	16	30	04/10/15	
Benzo(a)pyrene	0.092	0.10	ug/L	0.10		92	70-130	19	30	04/10/15	
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		109	70-130	3	30	04/10/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		109	70-130	3	30	04/10/15	
Bromacil	1.1	10	ug/L	1.0		107	70-130	3	30	04/10/15	
Butachlor	1.0	0.38	ug/L	1.0		102	70-130	4	30	04/10/15	
Diazinon	0.18	0.25	ug/L	0.20		88	70-130	5	30	04/10/15	
Dimethoate	0.78	10	ug/L	1.0		78	70-130	0	30	04/10/15	
Metolachlor	2.0	0.50	ug/L	2.0		102	70-130	7	30	04/10/15	
Metribuzin	1.1	0.50	ug/L	1.0		106	70-130	3	30	04/10/15	
Molinate	1.0	2.0	ug/L	1.0		102	70-130	2	30	04/10/15	
Prometryn	2.0	2.0	ug/L	2.0		101	70-130	8	30	04/10/15	
Propachlor	0.52	0.50	ug/L	0.50		105	70-130	2	30	04/10/15	
Simazine	0.33	1.0	ug/L	0.35		95	70-130	8	30	04/10/15	
Thiobencarb	0.50	1.0	ug/L	0.50		101	70-130	3	30	04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*103*	*70-130*			04/10/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A503868										Prepared: 04/08/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Matrix Spike (A503868-MS1), Source: A5D0483-01											
Alachlor	1.0	1.0	ug/L	1.0	ND	101	70-130			04/10/15	
Atrazine	0.48	0.50	ug/L	0.50	ND	95	70-130			04/10/15	
Benzo(a)pyrene	0.084	0.10	ug/L	0.10	ND	84	70-130			04/10/15	
Bis(2-ethylhexyl) adipate	2.0	3.0	ug/L	2.0	ND	98	70-130			04/10/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	112	70-130			04/10/15	
Bromacil	1.1	10	ug/L	1.0	ND	111	70-130			04/10/15	
Butachlor	1.0	0.38	ug/L	1.0	ND	101	70-130			04/10/15	
Diazinon	0.20	0.25	ug/L	0.20	ND	98	70-130			04/10/15	
Dimethoate	0.93	10	ug/L	1.0	ND	93	70-130			04/10/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	105	70-130			04/10/15	
Metribuzin	1.0	0.50	ug/L	1.0	ND	104	70-130			04/10/15	
Molinate	0.96	2.0	ug/L	1.0	ND	96	70-130			04/10/15	
Prometryn	2.2	2.0	ug/L	2.0	ND	108	70-130			04/10/15	
Propachlor	0.52	0.50	ug/L	0.50	ND	104	70-130			04/10/15	
Simazine	0.39	1.0	ug/L	0.35	ND	101	70-130			04/10/15	
Thiobencarb	0.51	1.0	ug/L	0.50	ND	102	70-130			04/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*102*	*70-130*			04/10/15	
EPA 531.1 - Quality Control											
Batch: A503881										Prepared: 04/09/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A503881-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							04/09/15	
Aldicarb	ND	3.0	ug/L							04/09/15	
Aldicarb Sulfone	ND	2.0	ug/L							04/09/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							04/09/15	
Carbaryl	ND	5.0	ug/L							04/09/15	
Carbofuran	ND	5.0	ug/L							04/09/15	
Methiocarb	ND	2.0	ug/L							04/09/15	
Methomyl	ND	2.0	ug/L							04/09/15	
Oxamyl	ND	20	ug/L							04/09/15	
Propoxur	ND	2.0	ug/L							04/09/15	
Blank Spike (A503881-BS1)											
3-Hydroxycarbofuran	4.9	3.0	ug/L	4.0		122	80-120			04/09/15	BS ***High***
Aldicarb	4.7	3.0	ug/L	4.0		116	80-120			04/09/15	
Aldicarb Sulfone	5.0	2.0	ug/L	4.0		124	80-120			04/09/15	BS ***High***
Aldicarb Sulfoxide	5.0	3.0	ug/L	4.0		126	80-120			04/09/15	BS ***High***
Carbaryl	4.8	5.0	ug/L	4.0		121	80-120			04/09/15	BS ***High***
Carbofuran	4.8	5.0	ug/L	4.0		121	80-120			04/09/15	BS ***High***
Methiocarb	4.7	2.0	ug/L	4.0		119	80-120			04/09/15	
Methomyl	5.1	2.0	ug/L	4.0		129	80-120			04/09/15	BS ***High***
Oxamyl	5.0	20	ug/L	4.0		124	80-120			04/09/15	BS ***High***
Propoxur	4.7	2.0	ug/L	4.0		117	80-120			04/09/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A503881										Prepared: 04/09/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank Spike Dup (A503881-BSD1)											
3-Hydroxycarbofuran	4.4	3.0	ug/L	4.0		109	80-120	11	20	04/09/15	
Aldicarb	4.5	3.0	ug/L	4.0		113	80-120	3	20	04/09/15	
Aldicarb Sulfone	4.5	2.0	ug/L	4.0		112	80-120	10	20	04/09/15	
Aldicarb Sulfoxide	4.5	3.0	ug/L	4.0		113	80-120	11	20	04/09/15	
Carbaryl	4.5	5.0	ug/L	4.0		113	80-120	7	20	04/09/15	
Carbofuran	4.4	5.0	ug/L	4.0		111	80-120	9	20	04/09/15	
Methiocarb	4.3	2.0	ug/L	4.0		108	80-120	9	20	04/09/15	
Methomyl	4.4	2.0	ug/L	4.0		111	80-120	15	20	04/09/15	
Oxamyl	4.5	20	ug/L	4.0		112	80-120	10	20	04/09/15	
Propoxur	4.4	2.0	ug/L	4.0		110	80-120	6	20	04/09/15	
EPA 547 - Quality Control											
Batch: A503998										Prepared: 04/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A503998-BLK1)											
Glyphosate	ND	25	ug/L							04/10/15	
Surrogate: AMPA	*110*			*100*		*114*	*70-130*			04/10/15	
Blank Spike (A503998-BS1)											
Glyphosate	130	25	ug/L	100		130	70-130			04/10/15	
Surrogate: AMPA	*120*			*100*		*116*	*70-130*			04/10/15	
Blank Spike Dup (A503998-BSD1)											
Glyphosate	130	25	ug/L	100		130	70-130	0	30	04/10/15	
Surrogate: AMPA	*120*			*100*		*116*	*70-130*			04/10/15	
Matrix Spike (A503998-MS1), Source: A5D0924-01											
Glyphosate	180	25	ug/L	100	ND	161	70-130			04/10/15	MS1.0 ***High***
Surrogate: AMPA	*21*			*100*		*21*	*70-130*			04/10/15	*SR2.0*
Matrix Spike Dup (A503998-MSD1), Source: A5D0924-01											
Glyphosate	120	25	ug/L	100	ND	101	70-130	41	30	04/10/15	MS2.1
Surrogate: AMPA	*86*			*100*		*84*	*70-130*			04/10/15	
EPA 548.1 - Quality Control											
Batch: A504033										Prepared: 04/10/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank (A504033-BLK1)											
Endothall	ND	45	ug/L							04/12/15	
Blank Spike (A504033-BS1)											
Endothall	18	45	ug/L	20		91	54-105			04/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A504033										Prepared: 04/10/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank Spike Dup (A504033-BSD1)											
Endothall	17	45	ug/L	20		86	54-105	6	46	04/12/15	
Matrix Spike (A504033-MS1), Source: A5D0720-01											
Endothall	ND	45	ug/L	20	ND	0	54-105			04/12/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A503930										Prepared: 04/09/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A503930-BLK1)											
Diquat	ND	4.0	ug/L							04/10/15	
Blank Spike (A503930-BS1)											
Diquat	3.5	4.0	ug/L	4.0		87	70-130			04/10/15	
Blank Spike Dup (A503930-BSD1)											
Diquat	3.5	4.0	ug/L	4.0		86	70-130	0	30	04/10/15	
Matrix Spike (A503930-MS1), Source: A5D0320-01											
Diquat	3.4	4.0	ug/L	4.0	ND	85	70-130			04/10/15	
Matrix Spike Dup (A503930-MSD1), Source: A5D0320-01											
Diquat	3.5	4.0	ug/L	4.0	ND	88	70-130	3	30	04/10/15	

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

A5D0721

04082015

Monte6227

Turnaround: Standard

Due Date: 4/22/2015

Monterey Bay Analytical

Printed: 4/8/

BSK Associates Engineers & Laboratories
1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

0.3

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

A5D0721
Monte6227
04/08/2015
10

*Required Fields

Temp:

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project:	Project #:	How would you like to receive your completed results?*
Cal Am		[X] 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)*:
Azad Khaligih

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
1	MW-6M (monitoring)	4/4/15	0855	GW	AB28815	X	X	X	X	X	X	X	X	

Please include excell report

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	4/7/15	1600		
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 White		Date 4/8/15	Time 9:32	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC 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 hereon 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

BSK Associates SR-FL-0002-12

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Monte6227 10

Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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 $Na_2S_2O_3$	—	—								
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								
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	—	—								
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C							
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C							
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	4V,2A							
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—								
$Na_2S_2O_3$ + 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	—	—								

CEO 4/8/15

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JH @ 12:55 Labels checked by: MW @ 13:24 RUSH Paged by:

Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size	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
28815	MPWSP	MW-6M	4/4/15	3:55	16.8°									Field Parameters:					
																Temp:			
																pH:			
																Sp Cond:			
																Turb:			

	Printed Name	Signature	Date	Time	Comment
Sampled by:	AZAD KHALIGHI		4/4/15		Is sample for regulatory purposes? (Yes) / No
Relinquished by:					S.C. = 1,531 µS/cm C. = 1,307 µS/cm TDS = 1,074 mg/L PH = 7.43 Turbidity = 0.70 NTU
Received by:					
Relinquished by:					
Received by:	TERREN CHANG		4/4/15	1053	

[ ] Payment received | Check # | Amount: | Receipt # | Date:

SEE ATTACHED LIST OF ANALYSIS.

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_2B
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_3H / 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

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.

CalAm Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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	

Discrepency 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

2mL 1:1 HNO_3 to each 125mL LJ 4/6/15

TC 4/4/15
1L vacuum filtered +divided
0.45µ membrane

500mL + H_2SO_4 + $Na_2S_2O_3$ for diss. TKN
250mL + H_2SO_4 for diss. TP
250mL NP for diss. color orthophosphate

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Tuesday, April 28, 2015

Lab Number: AB28762

Collection Date/Time: 4/2/2015 11:44 Sample Collector: KHALIGHI A

Submittal Date/Time: 4/2/2015 11:44 Sample ID

Sample Description: MW-6D

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**117**		2	4/3/2015	LJ
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	4/3/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	4/3/2015	TC
Arsenic, Total	EPA200.8	µg/L	**3**		1	4/3/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**255**		10	4/3/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**143**		10	4/3/2015	LJ
Boron, Dissolved	EPA200.7	mg/L	**Not Detected**		0.5	4/10/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**2**		0.2	4/2/2015	TC
Calcium	EPA200.7	mg/L	**341**		5	4/24/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**347**		5	4/24/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		4/9/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	4/3/2015	LJ
Chloride, Dissolved	EPA300.0	mg/L	**814**		2	4/2/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	**Not Detected**	E		4/9/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**5**		3	4/2/2015	LJ
Copper, Total	EPA200.8	µg/L	**8**		4	4/3/2015	SM
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		4/10/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		4/9/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		4/10/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		4/11/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.1**		0.2	4/2/2015	TC
Glyphosate	EPA547	µg/L	**Not Detected**	E		4/6/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**1222**		10	4/27/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	4/3/2015	LJ
Iodide	EPA9056M	µg/L	**Not Detected**	E	10	4/3/2015	WECK
Iron	EPA200.7	µg/L	**Not Detected**		100	4/10/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**Not Detected**		100	4/10/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	4/3/2015	TC
Lithium	EPA200.8	µg/L	**25**		1	4/3/2015	SM
Magnesium	EPA200.7	mg/L	**90**		5	4/10/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**83**		5	4/24/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

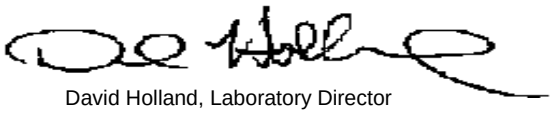
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Manganese, Dissolved	EPA200.7	µg/L	**714**		100	4/10/2015	MW
Manganese, Total	EPA200.7	µg/L	**750**		100	4/10/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	4/2/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**2**		2	4/2/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	**0.7**		0.2	4/2/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.2**		0.2	4/2/2015	TC
Odor Threshold at 60 C	SM2150B	TON	**2**		1	4/3/2015	MW
o-Phosphate-P	Hach 8048	mg/L	**0.05**		0.03	4/3/2015	DH
pH (Field Test)	SM4500-H+B	pH	**7.24**			4/2/2015	AK
pH (Laboratory)	SM4500-H+B	pH (H)	**7.4**		0.1	4/2/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		4/4/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.05**		0.03	4/2/2015	SM
Potassium	EPA200.7	mg/L	**7.1**		5	4/10/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**8.0**		5	4/24/2015	MW
QC Ratio TDS/SEC	Calculation		**0.67**			4/5/2015	TC
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		4/9/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**44**		5	4/10/2015	MW
Sodium	EPA200.7	mg/L	**77**		5	4/24/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**78**		5	4/24/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**2758**		1	4/2/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	**2859**		1	4/2/2015	AK
Strontium, Dissolved	EPA200.8	µg/L	**1826**		5	4/3/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**85**		2	4/2/2015	TC
Temperature (Field)	SM2550	° C	**10.6**			4/2/2015	LJ
Total Diss. Solids	SM2540C	mg/L	**1840**		10	4/4/2015	TC
Turbidity	EPA180.1	NTU	**0.20**		0.05	4/2/2015	LJ
Turbidity (Field)	EPA180.1	NTU	**0.59**		0.05	4/2/2015	AK
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		4/7/2015	BSK
Zinc, Total	EPA200.8	µg/L	**24**		20	4/3/2015	SM

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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 **28762 Total Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	77	0.04350	3.35
Potassium	7.1	0.02558	0.18
Calcium	341	0.04990	17.02
Magnesium	90	0.08229	7.41
NH3-N	0	0.07143	0.00
		SUM	27.95

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	117	0.02000	2.34
Sulfate	85	0.02082	1.77
Chloride	814	0.02821	22.96
Nitrate-Nitrogen	0.5	0.07138	0.04
Phosphate-P	0.05	0.01031	0.00
Bromide	2.0	0.01252	0.03
		SUM	27.13

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	2758	
Cation Sum X 100	2795	**101%**
Anion Sum X 100	2713	**98%**

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 **28762 Dissolved Ions**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	78	0.04350	3.39
Potassium	8	0.02558	0.20
Calcium	347	0.04990	17.32
Magnesium	83	0.08229	6.83
NH3-N	0	0.07143	0.00
		SUM	27.74

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	117	0.02000	2.34
Sulfate	85	0.02082	1.77
Chloride	814	0.02821	22.96
Nitrate-Nitrogen	0.5	0.07138	0.04
Phosphate-P	0.05	0.01031	0.00
Bromide	2.0	0.01252	0.03
		SUM	27.13

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	2758	
Cation Sum X 100	2774	**101%**
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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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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 4/3/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	39	97.5	95-105	9:00

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28762	117	117	0.0	5	9:00

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 4/2/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	-0.002	---	<0.05	1027
ICVL	0.050	0.046	92	80-120	1032
ICV	0.250	0.256	102.4	80-120	1126

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	
AB28761	0.016	0.250	0.28	0.274	105.6	103.2	2.2	80/120	10	1056

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
AB28773 D

Date Analyzed
Friday, April 03, 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	103.9	0.08	106.6	109.1	2.34	54.1	50	96.0	82.5	15.1	98.1	93.3	5.05	0.08
Aluminum	0.0	96.4	2.04	105.1	109.0	3.64	-1.0	50	91.2	88.2	3.3	99.7	104.6	4.86	0.07
Copper	0.0	99.8	0.11	99.9	106.4	6.30	2.2	50	89.3	86.6	3.1	101.2	97.4	3.79	0.11
Zinc	0.0	119.2	0.58	90.6	95.8	5.60	1.4	50	82.7	81.5	1.5	87.8	87.3	0.55	0.03
Arsenic	0.0	98.2	0.31	101.1	107.2	5.89	2.6	50	105.5	109.4	3.6	100.0	100.2	0.23	0.13
Strontium	0.0	100.0	0.03	101.2	106.5	5.17	2833.9	50	-114.6	-196.5	52.7	98.8	98.8	0.03	0.02
Barium	0.0	100.1	0.03	102.3	106.8	4.27	466.2	50	75.5	66.7	12.4	99.9	101.6	1.65	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: 4/3/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	1300
ICVL	0.050	0.05	100.00%	90-110	1300
ICV	0.500	0.490	98.00%	90-110	1300

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	
AB28775	ND	0.500	0.490	0.460	98	92	6.3	85-120	10	1300

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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Orthophosphate QC Summary

Date: 4/3/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.000	---	< 0.03	17:16
ICVL	0.030	0.026	86.7	50-150	17:16
ICV	0.30	0.31	105	90-110	17:16
QCS	0.30	0.33	110	80-120	17:16
CCV	0.30	0.33	108	80-120	17:16
CCVB	0.00	0.00		< 0.03	17:16

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		
AB28775	0.12	0.30	0.44	0.45	105	111	3.6	70-130	10	17:16	17:16

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: 4/2/2015
Time Analyzed: 1700

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.81	99.3	95-105	1700

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB28774	7.46	7.48	0.3	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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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 4/2/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1500
ICV	24800	24840	100.2%	95-105	1600

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB28764	27200	27240	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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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 4/3/2015
Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.090	---	<0.5
LCS	5.0	5.0	100	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
AB28774	ND	5.0	1.1	3.8	22	76	110.2	85-120	10

Spiked sample contained >10 mg/L nitrate which interferes with analyses, data 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

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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 4/2/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	0.039	---	<0.05	1700
ICV	1.00	1.01	101.0%	95-105	1700

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB28775	0.75	0.75	0.00%	10	1700

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;

Batch # 20150410

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.01	1.10	110.2%	1.10	110.1%	0.1%	1	1.04	103.9%	1	1.0	103.7%
B 249.772	0.05-5ppm	0.00	0.00	1.09	109.5%	1.09	109.1%	0.3%	1	1.04	104.2%	1	1.0	103.8%
Fe 238.204	10ppb-100ppm	1.35	1.67	1008	100.8%	1006	100.6%	0.2%	1000	996	99.6%	1000	982.1	98.2%
Fe 259.940	10ppb-100ppm	2.08	-0.68	1018	101.8%	1017	101.7%	0.1%	1000	1003	100.3%	1000	995.8	99.6%
Mn 257.610	10ppb-11ppm	-0.93	-1.34	1031	103.1%	1029	102.9%	0.2%	1000	1002	100.2%	1000	994.1	99.4%
Mn 260.568	10ppb-11ppm	-1.90	-1.74	1032	103.2%	1040	104.0%	0.8%	1000	1008	100.8%	1000	994.0	99.4%
Si 251.611	0.5-200ppm	-0.01	-0.09	52.2	104.4%	51.9	103.9%	0.5%	50	49.9	99.9%	50	50.5	101.0%
Si 252.411	0.5-200ppm	-0.02	-0.01	52.0	104.1%	51.9	103.9%	0.2%	50	49.8	99.6%	50	50.4	100.7%

Matrix Spikes

Sample ID AB28801

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.35	2.50	107.5%	2.46	105.3%	1.8%	1	1.09	109.2%	5.0%	0.00
B 249.772	0.34	2.53	109.2%	2.48	106.9%	1.8%	1	1.08	108.4%	4.0%	0.00
Fe 238.204	52	2132	104.0%	2093	102.1%	1.8%	1000	1049	104.9%	5.2%	1.30
Fe 259.940	52	2154	105.1%	2117	103.3%	1.7%	1000	1061	106.1%	5.7%	0.26
Mn 257.610	66	2183	105.8%	2149	104.2%	1.5%	1000	1057	105.7%	5.3%	-1.55
Mn 260.568	65	2193	106.4%	2166	105.1%	1.2%	1000	1061	106.1%	5.1%	-2.31
Si 251.611	36.5	141.7	105.2%	139.2	102.8%	1.7%	50	52.6	105.2%	5.2%	-0.05
Si 252.411	36.3	141.1	104.8%	138.5	102.2%	1.9%	50	52.4	104.9%	5.1%	0.00

Batch # 201500424

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
Ca 317.933	50-300ppm	-4.60	-4.59	48.3	96.6%	49.0	98.1%	1.6%	50	48.8	97.5%	50	46.7	93.3%
Ca 396.847	0.5-50ppm	-0.30	-0.29	49.1	98.1%	50.2	100.4%	2.3%	50	49.5	99.0%	50	48.3	96.5%
K 766.491	0.5-750ppm	0.10	0.08	9.8	98.0%	10.0	99.6%	1.6%	10	9.9	99.1%	10	9.5	94.9%
Mg 202.582	50-1000ppm	-1.48	-1.42	49.3	98.7%	51.0	102.0%	3.3%	50	50.2	100.5%	50	49.0	98.1%
Mg 279.078	0.5-50ppm	-0.05	-0.10	48.7	97.3%	49.7	99.4%	2.1%	50	49.4	98.8%	50	47.5	95.0%
Na 568.821	50-1000ppm	10.90	10.62	53.9	107.7%	53.1	106.2%	1.4%	50	53.0	106.1%	50	53.7	107.4%
Na 589.592	0.5-50ppm	0.02	0.04	49.8	99.6%	50.7	101.3%	1.7%	50	50.2	100.4%	50	48.8	97.6%

Matrix Spikes

Sample ID AB28971

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
Ca 317.933	126.0	222.9	96.9%	222.3	96.3%	0.3%	50	49.1	98.2%	0.7%	-4.50
Ca 396.847	124.9	193.5	68.6%	191.2	66.3%	1.2%	50	49.3	98.7%	0.3%	-0.20
K 766.491	2.5	22.2	98.6%	22.3	99.0%	0.4%	10	9.9	99.1%	0.1%	0.09
Mg 202.582	85.4	185.1	99.7%	182.5	97.0%	1.4%	50	51.4	102.8%	2.3%	-1.34
Mg 279.078	82.6	177.0	94.5%	175.5	92.9%	0.9%	50	49.6	99.2%	0.4%	0.04
Na 568.821	105.5	208.1	102.6%	203.5	98.0%	2.2%	50	55.2	110.3%	4.0%	10.37
Na 589.592	95.0	189.8	94.8%	190.2	95.2%	0.2%	50	50.5	100.9%	0.5%	0.12

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300.0 QC Report

All units expressed in mg/L

Batch ID: **20150402**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.01	0.03	0.01	0.01	0.00	0.00
	ICV	1.87	19.79	2.04	19.88	1.77	1.76
	Rec 90-110%	93.60	98.97	102.15	99.40	88.67	88.13
	ICVL	0.15	1.78	0.18	1.72	0.16	0.14
	Rec 50-150%	75.99	88.86	89.21	85.92	78.38	69.61
Sample ID	**AB28767**	0.17	13.38	0.33	75.68	0.01	0.20
	MS	1.89	32.62	2.28	92.90	1.61	1.76
	Rec 80-120%	85.80	96.19	97.39	86.14	79.77	78.22
	MSD	1.79	32.61	2.26	94.36	1.58	1.73
	Rec 80-120%	80.84	96.14	96.21	93.40	78.64	76.70
	Diff 10%	5.39	0.03	1.04	1.55	1.42	1.74
	CCV	1.85	19.65	2.03	19.83	1.74	1.74
	Rec 90-110%	92.57	98.23	101.73	99.16	86.93	87.17
	Diff 10%	1.11	0.75	0.42	0.25	1.98	1.09
	CCVB	0.00	0.01	0.01	0.03	0.00	0.00

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TDS QC Summary (SM 2540C)

Date Analyzed: 4/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	ND	---	<10	1200
ICVL	100	91	91	80-120	1200
ICV	500	491	98.2	90-110	1200

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB28765	29600	29100	1.7	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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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: 4/2/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	ND	---	< 0.03	1507
LCSL	0.03	0.03	100	50-150	1512
ICV	0.50	0.51	102	90-110	1518
QCS	0.50	0.51	102	80-120	1524
CCV	0.50	0.52	104	80-120	1630

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		
AB28775 D	0.08	0.50	0.58	0.60	100	104	3.4	70-130	10	1620	1625

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

ICV= Initial Calibration Verification, CCV= Continuing Calibration Verification, RPD = Relative Percent Difference; Rec = Recovery

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

April 13, 2015 Ceres ID: 10631

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 April 3, 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 # AB28762.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10631-001	MW-6D (monitoring)	4/3/2015	4/2/2015	9:50

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:	AB28762	Sample Size:	1.000 L	QC Batch #:	1308	Date Extracted:	8-Apr-15
				ZB-5 MS Analysis Date:	9-Apr-15		

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.53		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	93.7	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	98.5	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB28762	Sample Size:	1.000 L	QC Batch #:	1308	Date Extracted:	8-Apr-15
				ZB-5 MS Analysis Date:	9-Apr-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	11.0	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	101	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	10.4	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-6D (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10631-001	Date Received:	3-Apr-15
Project:	AB28762	Sample Size:	1.032 L	QC Batch #:	1308	Date Extracted:	8-Apr-15
Date Collected:	2-Apr-15			ZB-5 MS Analysis Date:	9-Apr-15		
Time Collected:	9:50						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.12		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	92.6	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	103	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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

Ceres Project ID: 10631

Temperature: 3.3 °C

Pg. ___ of ___

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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-6D (monitoring)	4/2/2015 950	0:00	Aq	2	X							AB28762
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
	4/2/2015	16:00	Jim Hedin	4/3/15	0952

Client understands that all terms desribed 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: 10631	Date/Time: 4/3/15 0952
Client Project ID: AB28762	Received Temperature: 3.3°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies:	
List Damaged Samples:	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10631 PB: 1308 Sample #s: 1 Due Date: 4/17/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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:

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt.

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10621-1	1547.36g	515.06g	1.032L

Chemist JK Date 4/8/15

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1308-MB001	Method Blank		1.000 L	4/8/15	4/9/15	NA	4/9/15	NA	4/9/15
0-1308-OPR001	OPR		1.000L	(A)					
10631-1308-001	MW-6D (monitoring)	✓	1.032 L						

Comments : A OPR spiked with NSS.

Soxhlet Start: 15:00 4/8/15

Soxhlet Stop: 07:15 4/9/15

Samples Logged out by: 07:30 4/8/15

Samples Returned by: NA

Note samples Depleted: 1

Sample Extracts Storage Location: Box 15

Extracts to Instrument: 11:00 4/9/15

Extracts returned to Storage Location: 07:15 4/10/15

Form M1.0 rev5

Chemist:

Effective Date: 8/7/14

Method: 1613B / 8270A
SOP #: 301.1 / 302.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10µl	
NSS	B	↓	
CSS	C	↓	
RSS	D	20µl	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	10,30,100,20ml	145782	2/5/16
Si Gel	4g	P031615A	9/16/15
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% Dcm:Hex	30ml	L040115A	10/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5D03024

Report Date: 04/20/15 13:38

Received Date: 04/03/15 09:00

Turn Around: Normal

Client Project: Cal Am

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 04/03/15 09:00 with the Chain of Custody document. The samples were received in good condition, at 1.2 °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: 04/03/15 09:00
Date Reported: 04/20/15 13:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-6D(Monitoring)	Azad Khaligh	5D03024-01	Water	04/02/15 09:50
Comments: AB28762				
Comments: AB28762				

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

5D03024-01 **MW-6D(Monitoring)**

Sampled: 04/02/15 09:50 **Sampled By:** Azad Khaligh **Matrix:** Water

Sample Note: AB28762

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5D0145 Prepared: 04/03/15 09:30 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	20	ug/l	2	04/03/15 17:18	M-05

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

5D03024-01RE1 **MW-6D(Monitoring)**

Sampled: 04/02/15 09:50 **Sampled By:** Azad Khaligh **Matrix:** Water

Sample Note: AB28762

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5D0314 Prepared: 04/07/15 11:01 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	04/09/15 23:22	
4,4´-DDE	ND		0.010	ug/l	1	04/09/15 23:22	
4,4´-DDT	ND		0.010	ug/l	1	04/09/15 23:22	
Aldrin	ND		0.010	ug/l	1	04/09/15 23:22	
alpha-BHC	ND		0.010	ug/l	1	04/09/15 23:22	
Aroclor 1016	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1221	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1232	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1242	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1248	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1254	ND		0.10	ug/l	1	04/09/15 23:22	
Aroclor 1260	ND		0.10	ug/l	1	04/09/15 23:22	
beta-BHC	ND		0.010	ug/l	1	04/09/15 23:22	
Chlordane (tech)	ND		0.10	ug/l	1	04/09/15 23:22	
Chlorothalonil	ND		0.050	ug/l	1	04/09/15 23:22	
delta-BHC	ND		0.010	ug/l	1	04/09/15 23:22	
Dieldrin	ND		0.010	ug/l	1	04/09/15 23:22	
Endosulfan I	ND		0.010	ug/l	1	04/09/15 23:22	
Endosulfan II	ND		0.010	ug/l	1	04/09/15 23:22	
Endosulfan sulfate	ND		0.010	ug/l	1	04/09/15 23:22	
Endrin	ND		0.010	ug/l	1	04/09/15 23:22	
Endrin aldehyde	ND		0.010	ug/l	1	04/09/15 23:22	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	04/09/15 23:22	
Heptachlor	ND		0.010	ug/l	1	04/09/15 23:22	
Heptachlor epoxide	ND		0.010	ug/l	1	04/09/15 23:22	
Hexachlorobenzene	ND		0.050	ug/l	1	04/09/15 23:22	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	04/09/15 23:22	
Methoxychlor	ND		0.010	ug/l	1	04/09/15 23:22	
PCBs, Total	ND		0.50	ug/l	1	04/09/15 23:22	
Propachlor	ND		0.050	ug/l	1	04/09/15 23:22	
Toxaphene	ND		1.0	ug/l	1	04/09/15 23:22	
Trifluralin	ND		0.010	ug/l	1	04/09/15 23:22	
Surr: Decachlorobiphenyl	*90 %*	Conc:*0.0896*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*81 %*	Conc:*0.0812*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

QUALITY CONTROL SECTION

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

Anions by IC, EPA Method 9056 - Quality Control

Batch W5D0145 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0145-BLK1)				Analyzed: 04/03/15 11:41						
Iodide	ND	10	ug/l							
LCS (W5D0145-BS1)				Analyzed: 04/03/15 11:55						
Iodide	41.3	10	ug/l	40.0		103	85-115			
Matrix Spike (W5D0145-MS1)		**Source: 5C27006-01**		Analyzed: 04/03/15 17:33						
Iodide	57.9	10	ug/l	40.0	19.6	96	80-120			
Matrix Spike (W5D0145-MS2)		**Source: 5C27006-02**		Analyzed: 04/03/15 18:02						
Iodide	48.7	10	ug/l	40.0	9.20	99	80-120			
Matrix Spike Dup (W5D0145-MSD1)		**Source: 5C27006-01**		Analyzed: 04/03/15 17:47						
Iodide	59.4	10	ug/l	40.0	19.6	99	80-120	2	20	
Matrix Spike Dup (W5D0145-MSD2)		**Source: 5C27006-02**		Analyzed: 04/03/15 18:17						
Iodide	50.0	10	ug/l	40.0	9.20	102	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0314 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0314-BLK1)				Analyzed: 04/09/15 18:47						
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							

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0314 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5D0314-BLK1)				Analyzed: 04/09/15 18:47						
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							
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	*0.125*		*ug/l*	*0.100*		*125*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0695*		*ug/l*	*0.100*		*70*	*70-130*			
Blank (W5D0314-BLK2)				Analyzed: 04/09/15 18:16						
Aroclor 1016	ND	0.10	ug/l							C-3665
Aroclor 1221	ND	0.10	ug/l							C-3665
Aroclor 1232	ND	0.10	ug/l							C-3665
Aroclor 1242	ND	0.10	ug/l							C-3665
Aroclor 1248	ND	0.10	ug/l							C-3665
Aroclor 1254	ND	0.10	ug/l							C-3665
Aroclor 1260	ND	0.10	ug/l							C-3665
PCBs, Total	ND	0.50	ug/l							C-3665
Surr: Decachlorobiphenyl	*0.104*		*ug/l*	*0.100*		*104*	*70-130*			*C-3665*
Surr: Tetrachloro-meta-xylene	*0.0962*		*ug/l*	*0.100*		*96*	*70-130*			*C-3665*
LCS (W5D0314-BS1)				Analyzed: 04/09/15 19:17						
4,4´-DDD	0.125	0.010	ug/l	0.100		125	55-142			
4,4´-DDE	0.113	0.010	ug/l	0.100		113	49-129			
4,4´-DDT	0.123	0.010	ug/l	0.100		123	54-160			
Aldrin	0.0861	0.010	ug/l	0.100		86	29-115			
alpha-BHC	0.108	0.010	ug/l	0.100		108	59-131			
beta-BHC	0.123	0.010	ug/l	0.100		123	63-136			
delta-BHC	0.126	0.010	ug/l	0.100		126	59-137			
Dieldrin	0.108	0.010	ug/l	0.100		108	59-135			
Endosulfan I	0.102	0.010	ug/l	0.100		102	28-138			
Endosulfan II	0.103	0.010	ug/l	0.100		103	53-133			
Endosulfan sulfate	0.115	0.010	ug/l	0.100		115	58-155			
Endrin	0.108	0.010	ug/l	0.100		108	57-148			
Endrin aldehyde	0.107	0.010	ug/l	0.100		107	45-139			
gamma-BHC (Lindane)	0.109	0.010	ug/l	0.100		109	59-129			
Heptachlor	0.101	0.010	ug/l	0.100		101	42-136			
Heptachlor epoxide	0.105	0.010	ug/l	0.100		105	59-134			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5D0314 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5D0314-BS1)				Analyzed: 04/09/15 19:17						
Methoxychlor	0.106	0.010	ug/l	0.100		106	56-167			
Surr: Decachlorobiphenyl	*0.113*		*ug/l*	*0.100*		*113*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0732*		*ug/l*	*0.100*		*73*	*70-130*			
LCS (W5D0314-BS2)				Analyzed: 04/09/15 20:18						
Aroclor 1016	1.28	0.10	ug/l	1.00		128	49-152			C-3665
Aroclor 1260	1.28	0.10	ug/l	1.00		128	52-146			C-3665
Surr: Decachlorobiphenyl	*0.125*		*ug/l*	*0.100*		*125*	*70-130*			*C-3665*
Surr: Tetrachloro-meta-xylene	*0.0886*		*ug/l*	*0.100*		*89*	*70-130*			*C-3665*
LCS Dup (W5D0314-BSD1)				Analyzed: 04/09/15 19:48						
4,4´-DDD	0.124	0.010	ug/l	0.100		124	55-142	0.7	25	
4,4´-DDE	0.111	0.010	ug/l	0.100		111	49-129	2	25	
4,4´-DDT	0.124	0.010	ug/l	0.100		124	54-160	1	25	
Aldrin	0.0868	0.010	ug/l	0.100		87	29-115	0.8	25	
alpha-BHC	0.107	0.010	ug/l	0.100		107	59-131	0.9	25	
beta-BHC	0.124	0.010	ug/l	0.100		124	63-136	1	25	
delta-BHC	0.125	0.010	ug/l	0.100		125	59-137	0.7	25	
Dieldrin	0.108	0.010	ug/l	0.100		108	59-135	0.4	25	
Endosulfan I	0.102	0.010	ug/l	0.100		102	28-138	0.2	25	
Endosulfan II	0.104	0.010	ug/l	0.100		104	53-133	0.7	25	
Endosulfan sulfate	0.116	0.010	ug/l	0.100		116	58-155	1	25	
Endrin	0.108	0.010	ug/l	0.100		108	57-148	0.006	25	
Endrin aldehyde	0.101	0.010	ug/l	0.100		101	45-139	6	25	
gamma-BHC (Lindane)	0.104	0.010	ug/l	0.100		104	59-129	4	25	
Heptachlor	0.101	0.010	ug/l	0.100		101	42-136	0.03	25	
Heptachlor epoxide	0.105	0.010	ug/l	0.100		105	59-134	0.06	25	
Methoxychlor	0.108	0.010	ug/l	0.100		108	56-167	2	25	
Surr: Decachlorobiphenyl	*0.109*		*ug/l*	*0.100*		*109*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0783*		*ug/l*	*0.100*		*78*	*70-130*			
LCS Dup (W5D0314-BSD2)				Analyzed: 04/09/15 20:49						
Aroclor 1016	1.20	0.10	ug/l	1.00		120	49-152	7	25	C-3665
Aroclor 1260	1.25	0.10	ug/l	1.00		125	52-146	2	25	C-3665
Surr: Decachlorobiphenyl	*0.116*		*ug/l*	*0.100*		*116*	*70-130*			*C-3665*
Surr: Tetrachloro-meta-xylene	*0.0708*		*ug/l*	*0.100*		*71*	*70-130*			*C-3665*

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www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 04/03/15 09:00
Date Reported: 04/20/15 13:38

Notes and Definitions

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.
C-3665	The "Sulfuric Acid Cleanup" was performed to the sample.
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.

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5D0320
4/17/2015
Invoice: A507772

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5D0320 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 4/3/2015. 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 Montierth, Project Manager

If additional clarification of any information is required, please contact your Project Manager, John Montierth , 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	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	4/03/2015 - 10:40		
Report Due:	4/17/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 3.6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue Ice
Packing Material - Bubble Wrap
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.
BS6.0	BS/BSD RPD exceeded method acceptance limits
HT1.3	Holding time exceeded. Sample was analyzed past the holding time.
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: A5D0320-01
Sampled By: Azad Khaligh
Sample Description: MW-6D (Monitoring) // AB28762

Sample Date - Time: 04/02/15 - 09:50
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A503851	04/08/15	04/10/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A503851	04/08/15	04/10/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	103 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A503712	04/03/15	04/04/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A503712	04/03/15	04/04/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A503712	04/03/15	04/04/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A503712	04/03/15	04/04/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A503712	04/03/15	04/04/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A503712	04/03/15	04/04/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A503712	04/03/15	04/04/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A503712	04/03/15	04/04/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A503712	04/03/15	04/04/15	
Surrogate: DCPAA	EPA 515.3	101 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A503778	04/06/15	04/07/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A503778	04/06/15	04/07/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A503778	04/06/15	04/07/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A503778	04/06/15	04/07/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A503778	04/06/15	04/07/15	BS1.0
Benzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	

Certificate of Analysis

Sample ID: A5D0320-01
Sampled By: Azad Khaligh
Sample Description: MW-6D (Monitoring) // AB28762

Sample Date - Time: 04/02/15 - 09:50
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	A503778	04/06/15	04/07/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A503778	04/06/15	04/07/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	BS1.0
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A503778	04/06/15	04/07/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A503778	04/06/15	04/07/15	BS1.0
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A503778	04/06/15	04/07/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A503778	04/06/15	04/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	85 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	92 %	*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					
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	A503722	04/06/15	04/09/15	

Certificate of Analysis

Sample ID: A5D0320-01
Sampled By: Azad Khaligh
Sample Description: MW-6D (Monitoring) // AB28762

Sample Date - Time: 04/02/15 - 09:50
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A503722	04/06/15	04/09/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A503722	04/06/15	04/09/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A503722	04/06/15	04/09/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A503722	04/06/15	04/09/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A503722	04/06/15	04/09/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A503722	04/06/15	04/09/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A503722	04/06/15	04/09/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A503722	04/06/15	04/09/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A503722	04/06/15	04/09/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A503722	04/06/15	04/09/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A503722	04/06/15	04/09/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A503722	04/06/15	04/09/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A503722	04/06/15	04/09/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A503722	04/06/15	04/09/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A503722	04/06/15	04/09/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	99 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A503832	04/07/15	04/09/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A503832	04/07/15	04/09/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A503832	04/07/15	04/09/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A503832	04/07/15	04/09/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A503832	04/07/15	04/09/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A503832	04/07/15	04/09/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A503832	04/07/15	04/09/15	BS1.0
Oxamyl	EPA 531.1	ND	20	ug/L	1	A503832	04/07/15	04/09/15	
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A503832	04/07/15	04/09/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A503832	04/07/15	04/09/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A503727	04/06/15	04/06/15	
Surrogate: AMPA	EPA 547	100 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A503775	04/06/15	04/11/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A503930	04/09/15	04/10/15	

Certificate of Analysis

Sample ID: A5D0320-01RE1
Sampled By: Azad Khaligh
Sample Description: MW-6D (Monitoring) // AB28762

Sample Date - Time: 04/02/15 - 09:50
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS								**Analysis Qualifier(s):**	**HT1.3**
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A504218	04/06/15	04/17/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A504218	04/06/15	04/17/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A504218	04/06/15	04/17/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	91 %	*Acceptable range:*		*70-130 %*				
Surrogate: Bromofluorobenzene	EPA 524.2	96 %	*Acceptable range:*		*70-130 %*				

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A503851										Prepared: 04/08/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A503851-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							04/09/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							04/09/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*104*	*70-130*			04/09/15	
Blank Spike (A503851-BS1)											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20		110	70-130			04/09/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		98	70-130			04/09/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.50*			*0.46*		*109*	*70-130*			04/09/15	
Blank Spike Dup (A503851-BSD1)											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20		105	70-130	5	20	04/10/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20		99	70-130	1	20	04/10/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*105*	*70-130*			04/10/15	
Matrix Spike (A503851-MS1), Source: A5D0150-01											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20	ND	105	65-135			04/09/15	
Ethylene Dibromide (EDB)	0.21	0.020	ug/L	0.20	ND	105	65-135			04/09/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*104*	*70-130*			04/09/15	
Matrix Spike Dup (A503851-MSD1), Source: A5D0150-01											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20	ND	106	65-135	1	20	04/09/15	
Ethylene Dibromide (EDB)	0.21	0.020	ug/L	0.20	ND	102	65-135	3	20	04/09/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*104*	*70-130*			04/09/15	
EPA 515.3 - Quality Control											
Batch: A503712										Prepared: 04/03/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A503712-BLK1)											
2,4,5-T	ND	1.0	ug/L							04/04/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							04/04/15	
2,4-D	ND	10	ug/L							04/04/15	
Bentazon	ND	2.0	ug/L							04/04/15	
Dalapon	ND	10	ug/L							04/04/15	
Dicamba	ND	1.5	ug/L							04/04/15	
Dinoseb	ND	2.0	ug/L							04/04/15	
Pentachlorophenol	ND	0.20	ug/L							04/04/15	
Picloram	ND	1.0	ug/L							04/04/15	
Surrogate: DCPAA	*61*			*58*		*106*	*70-130*			04/04/15	
Blank Spike (A503712-BS1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130			04/04/15	
2,4,5-TP (Silvex)	0.88	1.0	ug/L	0.80		110	70-130			04/04/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130			04/04/15	
Bentazon	8.7	2.0	ug/L	8.0		108	70-130			04/04/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A503712										Prepared: 04/03/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A503712-BS1)											
Dalapon	4.1	10	ug/L	4.0		103	70-130			04/04/15	
Dicamba	6.4	1.5	ug/L	6.0		106	70-130			04/04/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130			04/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		100	70-130			04/04/15	
Picloram	0.42	1.0	ug/L	0.40		104	70-130			04/04/15	
Surrogate: DCPAA	*60*			*58*		*104*	*70-130*			04/04/15	
Blank Spike Dup (A503712-BSD1)											
2,4,5-T	4.2	1.0	ug/L	4.0		106	70-130	3	20	04/04/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80		104	70-130	6	20	04/04/15	
2,4-D	0.43	10	ug/L	0.40		109	70-130	3	20	04/04/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130	4	20	04/04/15	
Dalapon	4.0	10	ug/L	4.0		101	70-130	3	20	04/04/15	
Dicamba	6.3	1.5	ug/L	6.0		104	70-130	2	20	04/04/15	
Dinoseb	0.83	2.0	ug/L	0.80		103	70-130	1	20	04/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		99	70-130	2	20	04/04/15	
Picloram	0.40	1.0	ug/L	0.40		101	70-130	3	20	04/04/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			04/04/15	
Matrix Spike (A503712-MS1), Source: A5C2201-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	108	70-130			04/04/15	
2,4,5-TP (Silvex)	0.84	1.0	ug/L	0.80	ND	104	70-130			04/04/15	
2,4-D	0.43	10	ug/L	0.40	ND	108	70-130			04/04/15	
Bentazon	8.6	2.0	ug/L	8.0	ND	107	70-130			04/04/15	
Dalapon	4.8	10	ug/L	4.0	ND	121	70-130			04/04/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	105	70-130			04/04/15	
Dinoseb	0.83	2.0	ug/L	0.80	ND	103	70-130			04/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130			04/04/15	
Picloram	0.42	1.0	ug/L	0.40	ND	105	70-130			04/04/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			04/04/15	
Matrix Spike Dup (A503712-MSD1), Source: A5C2201-01											
2,4,5-T	4.2	1.0	ug/L	4.0	ND	106	70-130	2	20	04/04/15	
2,4,5-TP (Silvex)	0.84	1.0	ug/L	0.80	ND	105	70-130	0	20	04/04/15	
2,4-D	0.44	10	ug/L	0.40	ND	109	70-130	1	20	04/04/15	
Bentazon	8.4	2.0	ug/L	8.0	ND	104	70-130	3	20	04/04/15	
Dalapon	4.7	10	ug/L	4.0	ND	118	70-130	2	20	04/04/15	
Dicamba	6.2	1.5	ug/L	6.0	ND	103	70-130	2	20	04/04/15	
Dinoseb	0.83	2.0	ug/L	0.80	ND	104	70-130	1	20	04/04/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	98	70-130	2	20	04/04/15	
Picloram	0.41	1.0	ug/L	0.40	ND	102	70-130	3	20	04/04/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			04/04/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503778										Prepared: 04/07/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503778-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							04/07/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							04/07/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							04/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							04/07/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							04/07/15	
1,1-Dichloroethane	ND	0.50	ug/L							04/07/15	
1,1-Dichloroethene	ND	0.50	ug/L							04/07/15	
1,1-Dichloropropene	ND	0.50	ug/L							04/07/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							04/07/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							04/07/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							04/07/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							04/07/15	
1,2-Dichloroethane	ND	0.50	ug/L							04/07/15	
1,2-Dichloropropane	ND	0.50	ug/L							04/07/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							04/07/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							04/07/15	
1,3-Dichloropropane	ND	0.50	ug/L							04/07/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							04/07/15	
2,2-Dichloropropane	ND	0.50	ug/L							04/07/15	
2-Butanone	ND	5.0	ug/L							04/07/15	
2-Chlorotoluene	ND	0.50	ug/L							04/07/15	
2-Hexanone	ND	10	ug/L							04/07/15	
4-Chlorotoluene	ND	0.50	ug/L							04/07/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							04/07/15	
Acetone	ND	10	ug/L							04/07/15	
Benzene	ND	0.50	ug/L							04/07/15	
Bromobenzene	ND	0.50	ug/L							04/07/15	
Bromochloromethane	ND	0.50	ug/L							04/07/15	
Bromodichloromethane	ND	0.50	ug/L							04/07/15	
Carbon Tetrachloride	ND	0.50	ug/L							04/07/15	
Chlorobenzene	ND	0.50	ug/L							04/07/15	
Chloroethane	ND	0.50	ug/L							04/07/15	
Chloroform	ND	0.50	ug/L							04/07/15	
Chloromethane	ND	0.50	ug/L							04/07/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							04/07/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							04/07/15	
Dibromochloromethane	ND	0.50	ug/L							04/07/15	
Dibromomethane	ND	0.50	ug/L							04/07/15	
Dichlorodifluoromethane	ND	0.50	ug/L							04/07/15	
Dichloromethane	ND	0.50	ug/L							04/07/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							04/07/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							04/07/15	
Ethylbenzene	ND	0.50	ug/L							04/07/15	
Hexachlorobutadiene	ND	0.50	ug/L							04/07/15	
Isopropylbenzene	ND	0.50	ug/L							04/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A503778										Prepared: 04/07/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A503778-BLK1)											
m,p-Xylenes	ND	0.50	ug/L							04/07/15	
Methyl-t-butyl ether	ND	0.50	ug/L							04/07/15	
Naphthalene	ND	0.50	ug/L							04/07/15	
n-Butylbenzene	ND	0.50	ug/L							04/07/15	
n-Propylbenzene	ND	0.50	ug/L							04/07/15	
o-Xylene	ND	0.50	ug/L							04/07/15	
p-Isopropyltoluene	ND	0.50	ug/L							04/07/15	
sec-Butylbenzene	ND	0.50	ug/L							04/07/15	
Styrene	ND	0.50	ug/L							04/07/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							04/07/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							04/07/15	
tert-Butylbenzene	ND	0.50	ug/L							04/07/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							04/07/15	
Toluene	ND	0.50	ug/L							04/07/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							04/07/15	
Trichloroethene (TCE)	ND	0.50	ug/L							04/07/15	
Trichlorofluoromethane	ND	5.0	ug/L							04/07/15	
Vinyl Chloride	ND	0.50	ug/L							04/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.4*			*5.0*		*88*	*70-130*			04/07/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*95*	*70-130*			04/07/15	
Blank Spike (A503778-BS1)											
1,1,1,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130			04/07/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		100	70-130			04/07/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130			04/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		102	70-130			04/07/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		101	70-130			04/07/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			04/07/15	
1,1-Dichloroethene	10	0.50	ug/L	10		103	70-130			04/07/15	
1,1-Dichloropropene	10	0.50	ug/L	10		100	70-130			04/07/15	
1,2,3-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			04/07/15	
1,2,4-Trichlorobenzene	9.8	0.50	ug/L	10		98	70-130			04/07/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		103	70-130			04/07/15	
1,2-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/07/15	
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130			04/07/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			04/07/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		112	70-130			04/07/15	
1,3-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/07/15	
1,3-Dichloropropane	10	0.50	ug/L	10		101	70-130			04/07/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/07/15	
2,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			04/07/15	
2-Butanone	11	5.0	ug/L	10		106	70-130			04/07/15	
2-Chlorotoluene	10	0.50	ug/L	10		102	70-130			04/07/15	
2-Hexanone	10	10	ug/L	10		102	70-130			04/07/15	
4-Chlorotoluene	10	0.50	ug/L	10		103	70-130			04/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503778										Prepared: 04/07/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A503778-BS1)												
4-Methyl-2-pentanone	9.9	5.0	ug/L	10		99	70-130			04/07/15		
Acetone	11	10	ug/L	10		110	70-130			04/07/15		
Benzene	10	0.50	ug/L	10		100	70-130			04/07/15		
Bromobenzene	10	0.50	ug/L	10		100	70-130			04/07/15		
Bromochloromethane	11	0.50	ug/L	10		108	70-130			04/07/15		
Bromodichloromethane	9.4	0.50	ug/L	10		94	70-130			04/07/15		
Carbon Tetrachloride	8.9	0.50	ug/L	10		89	70-130			04/07/15		
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130			04/07/15		
Chloroethane	10	0.50	ug/L	10		103	70-130			04/07/15		
Chloroform	10	0.50	ug/L	10		102	70-130			04/07/15		
Chloromethane	9.4	0.50	ug/L	10		94	70-130			04/07/15		
cis-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			04/07/15		
cis-1,3-Dichloropropene	8.1	0.50	ug/L	10		81	70-130			04/07/15		
Dibromochloromethane	8.4	0.50	ug/L	10		84	70-130			04/07/15		
Dibromomethane	10	0.50	ug/L	10		100	70-130			04/07/15		
Dichlorodifluoromethane	8.4	0.50	ug/L	10		84	70-130			04/07/15		
Dichloromethane	10	0.50	ug/L	10		104	70-130			04/07/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		103	70-130			04/07/15		
Ethyl tert-Butyl Ether (ETBE)	9.9	0.50	ug/L	10		99	70-130			04/07/15		
Ethylbenzene	9.9	0.50	ug/L	10		99	70-130			04/07/15		
Hexachlorobutadiene	8.5	0.50	ug/L	10		85	70-130			04/07/15		
Isopropylbenzene	10	0.50	ug/L	10		101	70-130			04/07/15		
m,p-Xylenes	20	0.50	ug/L	20		101	70-130			04/07/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		102	70-130			04/07/15		
Naphthalene	9.2	0.50	ug/L	10		92	70-130			04/07/15		
n-Butylbenzene	11	0.50	ug/L	10		108	70-130			04/07/15		
n-Propylbenzene	10	0.50	ug/L	10		101	70-130			04/07/15		
o-Xylene	10	0.50	ug/L	10		102	70-130			04/07/15		
p-Isopropyltoluene	10	0.50	ug/L	10		100	70-130			04/07/15		
sec-Butylbenzene	10	0.50	ug/L	10		101	70-130			04/07/15		
Styrene	15	0.50	ug/L	10		147	70-130			04/07/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	9.7	3.0	ug/L	10		97	70-130			04/07/15		
tert-Butyl alcohol (TBA)	11	2.0	ug/L	10		114	70-130			04/07/15		
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130			04/07/15		
Tetrachloroethene (PCE)	11	0.50	ug/L	10		106	70-130			04/07/15		
Toluene	9.9	0.50	ug/L	10		99	70-130			04/07/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			04/07/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		103	70-130			04/07/15		
Trichlorofluoromethane	11	5.0	ug/L	10		108	70-130			04/07/15		
Vinyl Chloride	10	0.50	ug/L	10		100	70-130			04/07/15		
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*103*	*70-130*			04/07/15		
Surrogate: Bromofluorobenzene	*53*			*50*		*106*	*70-130*			04/07/15		
Blank Spike Dup (A503778-BSD1)												
1,1,1,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130	1	30	04/07/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503778										Prepared: 04/07/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike Dup (A503778-BSD1)												
1,1,1-Trichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	04/07/15		
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		101	70-130	1	30	04/07/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		101	70-130	1	30	04/07/15		
1,1,2-Trichloroethane	9.9	0.50	ug/L	10		99	70-130	2	30	04/07/15		
1,1-Dichloroethane	10	0.50	ug/L	10		101	70-130	1	30	04/07/15		
1,1-Dichloroethene	10	0.50	ug/L	10		104	70-130	1	30	04/07/15		
1,1-Dichloropropene	10	0.50	ug/L	10		100	70-130	0	30	04/07/15		
1,2,3-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130	1	30	04/07/15		
1,2,4-Trichlorobenzene	9.8	0.50	ug/L	10		98	70-130	1	30	04/07/15		
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		104	70-130	1	30	04/07/15		
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130	1	30	04/07/15		
1,2-Dichloroethane	10	0.50	ug/L	10		103	70-130	0	30	04/07/15		
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130	1	30	04/07/15		
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		112	70-130	0	30	04/07/15		
1,3-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
1,3-Dichloropropane	10	0.50	ug/L	10		100	70-130	1	30	04/07/15		
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
2,2-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	04/07/15		
2-Butanone	11	5.0	ug/L	10		107	70-130	0	30	04/07/15		
2-Chlorotoluene	10	0.50	ug/L	10		101	70-130	0	30	04/07/15		
2-Hexanone	10	10	ug/L	10		102	70-130	1	30	04/07/15		
4-Chlorotoluene	10	0.50	ug/L	10		104	70-130	0	30	04/07/15		
4-Methyl-2-pentanone	12	5.0	ug/L	10		115	70-130	15	30	04/07/15		
Acetone	14	10	ug/L	10		139	70-130	23	30	04/07/15	BS	***High***
Benzene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
Bromobenzene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
Bromochloromethane	11	0.50	ug/L	10		108	70-130	1	30	04/07/15		
Bromodichloromethane	9.4	0.50	ug/L	10		94	70-130	0	30	04/07/15		
Carbon Tetrachloride	8.7	0.50	ug/L	10		87	70-130	2	30	04/07/15		
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	0	30	04/07/15		
Chloroethane	10	0.50	ug/L	10		105	70-130	2	30	04/07/15		
Chloroform	10	0.50	ug/L	10		101	70-130	1	30	04/07/15		
Chloromethane	9.2	0.50	ug/L	10		92	70-130	2	30	04/07/15		
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	1	30	04/07/15		
cis-1,3-Dichloropropene	8.5	0.50	ug/L	10		85	70-130	5	30	04/07/15		
Dibromochloromethane	8.0	0.50	ug/L	10		80	70-130	5	30	04/07/15		
Dibromomethane	10	0.50	ug/L	10		100	70-130	0	30	04/07/15		
Dichlorodifluoromethane	8.5	0.50	ug/L	10		85	70-130	1	30	04/07/15		
Dichloromethane	11	0.50	ug/L	10		106	70-130	3	30	04/07/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		103	70-130	0	30	04/07/15		
Ethyl tert-Butyl Ether (ETBE)	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
Ethylbenzene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
Hexachlorobutadiene	8.3	0.50	ug/L	10		83	70-130	2	30	04/07/15		
Isopropylbenzene	10	0.50	ug/L	10		102	70-130	0	30	04/07/15		
m,p-Xylenes	20	0.50	ug/L	20		101	70-130	0	30	04/07/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A503778										Prepared: 04/07/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike Dup (A503778-BSD1)												
Methyl-t-butyl ether	20	0.50	ug/L	20		102	70-130	0	30	04/07/15		
Naphthalene	9.2	0.50	ug/L	10		92	70-130	0	30	04/07/15		
n-Butylbenzene	11	0.50	ug/L	10		106	70-130	2	30	04/07/15		
n-Propylbenzene	10	0.50	ug/L	10		101	70-130	0	30	04/07/15		
o-Xylene	10	0.50	ug/L	10		101	70-130	1	30	04/07/15		
p-Isopropyltoluene	9.9	0.50	ug/L	10		99	70-130	0	30	04/07/15		
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130	0	30	04/07/15		
Styrene	15	0.50	ug/L	10		148	70-130	1	30	04/07/15	BS	***High***
tert-Amyl Methyl Ether (TAME)	9.8	3.0	ug/L	10		98	70-130	2	30	04/07/15		
tert-Butyl alcohol (TBA)	15	2.0	ug/L	10		148	70-130	26	30	04/07/15	BS	***High***
tert-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	1	30	04/07/15		
Tetrachloroethene (PCE)	11	0.50	ug/L	10		105	70-130	0	30	04/07/15		
Toluene	10	0.50	ug/L	10		100	70-130	1	30	04/07/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130	0	30	04/07/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		104	70-130	2	30	04/07/15		
Trichlorofluoromethane	11	5.0	ug/L	10		106	70-130	1	30	04/07/15		
Vinyl Chloride	9.9	0.50	ug/L	10		99	70-130	1	30	04/07/15		
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*102*	*70-130*			04/07/15		
Surrogate: Bromofluorobenzene	*52*			*50*		*105*	*70-130*			04/07/15		
EPA 524.2 - Quality Control												
Batch: A504218										Prepared: 04/17/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank (A504218-BLK1)												
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							04/17/15		
1,1,1-Trichloroethane	ND	0.50	ug/L							04/17/15		
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							04/17/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							04/17/15		
1,1,2-Trichloroethane	ND	0.50	ug/L							04/17/15		
1,1-Dichloroethane	ND	0.50	ug/L							04/17/15		
1,1-Dichloroethene	ND	0.50	ug/L							04/17/15		
1,1-Dichloropropene	ND	0.50	ug/L							04/17/15		
1,2,3-Trichlorobenzene	ND	0.50	ug/L							04/17/15		
1,2,4-Trichlorobenzene	ND	0.50	ug/L							04/17/15		
1,2,4-Trimethylbenzene	ND	0.50	ug/L							04/17/15		
1,2-Dichlorobenzene	ND	0.50	ug/L							04/17/15		
1,2-Dichloroethane	ND	0.50	ug/L							04/17/15		
1,2-Dichloropropane	ND	0.50	ug/L							04/17/15		
1,3,5-Trimethylbenzene	ND	0.50	ug/L							04/17/15		
1,3-Dichlorobenzene	ND	0.50	ug/L							04/17/15		
1,3-Dichloropropane	ND	0.50	ug/L							04/17/15		
1,4-Dichlorobenzene	ND	0.50	ug/L							04/17/15		
2,2-Dichloropropane	ND	0.50	ug/L							04/17/15		
2-Butanone	ND	5.0	ug/L							04/17/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A504218										Prepared: 04/17/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A504218-BLK1)											
2-Chlorotoluene	ND	0.50	ug/L							04/17/15	
2-Hexanone	ND	10	ug/L							04/17/15	
4-Chlorotoluene	ND	0.50	ug/L							04/17/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							04/17/15	
Acetone	ND	10	ug/L							04/17/15	
Benzene	ND	0.50	ug/L							04/17/15	
Bromobenzene	ND	0.50	ug/L							04/17/15	
Bromochloromethane	ND	0.50	ug/L							04/17/15	
Bromodichloromethane	ND	0.50	ug/L							04/17/15	
Bromoform	ND	0.50	ug/L							04/17/15	
Bromomethane	ND	0.50	ug/L							04/17/15	
Carbon Tetrachloride	ND	0.50	ug/L							04/17/15	
Chlorobenzene	ND	0.50	ug/L							04/17/15	
Chloroethane	ND	0.50	ug/L							04/17/15	
Chloroform	ND	0.50	ug/L							04/17/15	
Chloromethane	ND	0.50	ug/L							04/17/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							04/17/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							04/17/15	
Dibromochloromethane	ND	0.50	ug/L							04/17/15	
Dibromomethane	ND	0.50	ug/L							04/17/15	
Dichlorodifluoromethane	ND	0.50	ug/L							04/17/15	
Dichloromethane	ND	0.50	ug/L							04/17/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							04/17/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							04/17/15	
Ethylbenzene	ND	0.50	ug/L							04/17/15	
Hexachlorobutadiene	ND	0.50	ug/L							04/17/15	
Isopropylbenzene	ND	0.50	ug/L							04/17/15	
m,p-Xylenes	ND	0.50	ug/L							04/17/15	
Methyl-t-butyl ether	ND	0.50	ug/L							04/17/15	
Naphthalene	ND	0.50	ug/L							04/17/15	
n-Butylbenzene	ND	0.50	ug/L							04/17/15	
n-Propylbenzene	ND	0.50	ug/L							04/17/15	
o-Xylene	ND	0.50	ug/L							04/17/15	
p-Isopropyltoluene	ND	0.50	ug/L							04/17/15	
sec-Butylbenzene	ND	0.50	ug/L							04/17/15	
Styrene	ND	0.50	ug/L							04/17/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							04/17/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							04/17/15	
tert-Butylbenzene	ND	0.50	ug/L							04/17/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							04/17/15	
Toluene	ND	0.50	ug/L							04/17/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							04/17/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							04/17/15	
Trichloroethene (TCE)	ND	0.50	ug/L							04/17/15	
Trichlorofluoromethane	ND	5.0	ug/L							04/17/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A504218										Prepared: 04/17/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank (A504218-BLK1)												
Vinyl Chloride	ND	0.50	ug/L							04/17/15		
Surrogate: 1,2-Dichlorobenzene-d4	*4.5*			*5.0*		*90*	*70-130*			04/17/15		
Surrogate: Bromofluorobenzene	*48*			*50*		*95*	*70-130*			04/17/15		
Blank Spike (A504218-BS1)												
1,1,1,2-Tetrachloroethane	9.4	0.50	ug/L	10		94	70-130			04/17/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10		100	70-130			04/17/15		
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10		112	70-130			04/17/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		106	70-130			04/17/15		
1,1,2-Trichloroethane	11	0.50	ug/L	10		107	70-130			04/17/15		
1,1-Dichloroethane	10	0.50	ug/L	10		104	70-130			04/17/15		
1,1-Dichloroethene	11	0.50	ug/L	10		105	70-130			04/17/15		
1,1-Dichloropropene	11	0.50	ug/L	10		107	70-130			04/17/15		
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130			04/17/15		
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			04/17/15		
1,2,4-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130			04/17/15		
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			04/17/15		
1,2-Dichloroethane	10	0.50	ug/L	10		100	70-130			04/17/15		
1,2-Dichloropropane	11	0.50	ug/L	10		106	70-130			04/17/15		
1,3,5-Trimethylbenzene	9.2	0.50	ug/L	10		92	70-130			04/17/15		
1,3-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			04/17/15		
1,3-Dichloropropane	11	0.50	ug/L	10		108	70-130			04/17/15		
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			04/17/15		
2,2-Dichloropropane	9.6	0.50	ug/L	10		96	70-130			04/17/15		
2-Butanone	13	5.0	ug/L	10		134	70-130			04/17/15	BS	***High***
2-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			04/17/15		
2-Hexanone	12	10	ug/L	10		119	70-130			04/17/15		
4-Chlorotoluene	9.8	0.50	ug/L	10		98	70-130			04/17/15		
4-Methyl-2-pentanone	12	5.0	ug/L	10		116	70-130			04/17/15		
Acetone	18	10	ug/L	10		179	70-130			04/17/15	BS	***High***
Benzene	11	0.50	ug/L	10		106	70-130			04/17/15		
Bromobenzene	10	0.50	ug/L	10		105	70-130			04/17/15		
Bromochloromethane	11	0.50	ug/L	10		109	70-130			04/17/15		
Bromodichloromethane	9.7	0.50	ug/L	10		97	70-130			04/17/15		
Bromoform	9.7	0.50	ug/L	10		97	70-130			04/17/15		
Bromomethane	12	0.50	ug/L	10		121	70-130			04/17/15		
Carbon Tetrachloride	9.7	0.50	ug/L	10		97	70-130			04/17/15		
Chlorobenzene	10	0.50	ug/L	10		102	70-130			04/17/15		
Chloroethane	11	0.50	ug/L	10		105	70-130			04/17/15		
Chloroform	10	0.50	ug/L	10		100	70-130			04/17/15		
Chloromethane	10	0.50	ug/L	10		104	70-130			04/17/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130			04/17/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130			04/17/15		
Dibromochloromethane	9.7	0.50	ug/L	10		97	70-130			04/17/15		
Dibromomethane	11	0.50	ug/L	10		106	70-130			04/17/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A504218										Prepared: 04/17/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike (A504218-BS1)												
Dichlorodifluoromethane	11	0.50	ug/L	10		112	70-130			04/17/15		
Dichloromethane	11	0.50	ug/L	10		106	70-130			04/17/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		103	70-130			04/17/15		
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		100	70-130			04/17/15		
Ethylbenzene	10	0.50	ug/L	10		102	70-130			04/17/15		
Hexachlorobutadiene	8.9	0.50	ug/L	10		89	70-130			04/17/15		
Isopropylbenzene	10	0.50	ug/L	10		100	70-130			04/17/15		
m,p-Xylenes	20	0.50	ug/L	20		99	70-130			04/17/15		
Methyl-t-butyl ether	21	0.50	ug/L	20		104	70-130			04/17/15		
Naphthalene	10	0.50	ug/L	10		104	70-130			04/17/15		
n-Butylbenzene	8.9	0.50	ug/L	10		89	70-130			04/17/15		
n-Propylbenzene	10	0.50	ug/L	10		100	70-130			04/17/15		
o-Xylene	9.9	0.50	ug/L	10		99	70-130			04/17/15		
p-Isopropyltoluene	9.4	0.50	ug/L	10		94	70-130			04/17/15		
sec-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			04/17/15		
Styrene	7.6	0.50	ug/L	10		76	70-130			04/17/15		
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		108	70-130			04/17/15		
tert-Butyl alcohol (TBA)	15	2.0	ug/L	10		151	70-130			04/17/15	BS	***High***
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130			04/17/15		
Tetrachloroethene (PCE)	10	0.50	ug/L	10		101	70-130			04/17/15		
Toluene	10	0.50	ug/L	10		104	70-130			04/17/15		
trans-1,2-Dichloroethene	11	0.50	ug/L	10		106	70-130			04/17/15		
trans-1,3-Dichloropropene	9.7	0.50	ug/L	10		97	70-130			04/17/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		104	70-130			04/17/15		
Trichlorofluoromethane	11	5.0	ug/L	10		108	70-130			04/17/15		
Vinyl Chloride	11	0.50	ug/L	10		107	70-130			04/17/15		
Surrogate: 1,2-Dichlorobenzene-d4	*4.7*			*5.0*		*94*	*70-130*			04/17/15		
Surrogate: Bromofluorobenzene	*48*			*50*		*96*	*70-130*			04/17/15		
Blank Spike Dup (A504218-BSD1)												
1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	3	30	04/17/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130	3	30	04/17/15		
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10		114	70-130	2	30	04/17/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		108	70-130	2	30	04/17/15		
1,1,2-Trichloroethane	11	0.50	ug/L	10		110	70-130	2	30	04/17/15		
1,1-Dichloroethane	11	0.50	ug/L	10		107	70-130	3	30	04/17/15		
1,1-Dichloroethene	11	0.50	ug/L	10		110	70-130	4	30	04/17/15		
1,1-Dichloropropene	11	0.50	ug/L	10		110	70-130	3	30	04/17/15		
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		104	70-130	3	30	04/17/15		
1,2,4-Trichlorobenzene	9.9	0.50	ug/L	10		99	70-130	3	30	04/17/15		
1,2,4-Trimethylbenzene	9.9	0.50	ug/L	10		99	70-130	3	30	04/17/15		
1,2-Dichlorobenzene	10	0.50	ug/L	10		103	70-130	3	30	04/17/15		
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130	2	30	04/17/15		
1,2-Dichloropropane	11	0.50	ug/L	10		109	70-130	3	30	04/17/15		
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	4	30	04/17/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A504218										Prepared: 04/17/2015		
Prep Method: EPA 524.2										Analyst: JGB		
Blank Spike Dup (A504218-BSD1)												
1,3-Dichlorobenzene	10	0.50	ug/L	10		102	70-130	2	30	04/17/15		
1,3-Dichloropropane	11	0.50	ug/L	10		111	70-130	3	30	04/17/15		
1,4-Dichlorobenzene	10	0.50	ug/L	10		103	70-130	3	30	04/17/15		
2,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	04/17/15		
2-Butanone	14	5.0	ug/L	10		138	70-130	3	30	04/17/15	BS	***High***
2-Chlorotoluene	10	0.50	ug/L	10		102	70-130	3	30	04/17/15		
2-Hexanone	12	10	ug/L	10		122	70-130	3	30	04/17/15		
4-Chlorotoluene	10	0.50	ug/L	10		101	70-130	4	30	04/17/15		
4-Methyl-2-pentanone	12	5.0	ug/L	10		119	70-130	3	30	04/17/15		
Acetone	19	10	ug/L	10		189	70-130	5	30	04/17/15	BS	***High***
Benzene	11	0.50	ug/L	10		109	70-130	3	30	04/17/15		
Bromobenzene	11	0.50	ug/L	10		107	70-130	2	30	04/17/15		
Bromochloromethane	11	0.50	ug/L	10		111	70-130	2	30	04/17/15		
Bromodichloromethane	10	0.50	ug/L	10		100	70-130	3	30	04/17/15		
Bromoform	9.8	0.50	ug/L	10		98	70-130	2	30	04/17/15		
Bromomethane	13	0.50	ug/L	10		125	70-130	3	30	04/17/15		
Carbon Tetrachloride	10	0.50	ug/L	10		100	70-130	3	30	04/17/15		
Chlorobenzene	10	0.50	ug/L	10		104	70-130	3	30	04/17/15		
Chloroethane	11	0.50	ug/L	10		109	70-130	3	30	04/17/15		
Chloroform	10	0.50	ug/L	10		103	70-130	3	30	04/17/15		
Chloromethane	11	0.50	ug/L	10		110	70-130	5	30	04/17/15		
cis-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130	3	30	04/17/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		102	70-130	3	30	04/17/15		
Dibromochloromethane	10	0.50	ug/L	10		100	70-130	3	30	04/17/15		
Dibromomethane	11	0.50	ug/L	10		109	70-130	3	30	04/17/15		
Dichlorodifluoromethane	11	0.50	ug/L	10		113	70-130	2	30	04/17/15		
Dichloromethane	11	0.50	ug/L	10		107	70-130	1	30	04/17/15		
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		106	70-130	2	30	04/17/15		
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		102	70-130	2	30	04/17/15		
Ethylbenzene	10	0.50	ug/L	10		105	70-130	3	30	04/17/15		
Hexachlorobutadiene	9.2	0.50	ug/L	10		92	70-130	3	30	04/17/15		
Isopropylbenzene	10	0.50	ug/L	10		104	70-130	4	30	04/17/15		
m,p-Xylenes	21	0.50	ug/L	20		103	70-130	4	30	04/17/15		
Methyl-t-butyl ether	21	0.50	ug/L	20		106	70-130	2	30	04/17/15		
Naphthalene	11	0.50	ug/L	10		108	70-130	4	30	04/17/15		
n-Butylbenzene	9.3	0.50	ug/L	10		93	70-130	5	30	04/17/15		
n-Propylbenzene	10	0.50	ug/L	10		103	70-130	3	30	04/17/15		
o-Xylene	10	0.50	ug/L	10		102	70-130	3	30	04/17/15		
p-Isopropyltoluene	9.7	0.50	ug/L	10		97	70-130	4	30	04/17/15		
sec-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	3	30	04/17/15		
Styrene	7.9	0.50	ug/L	10		79	70-130	4	30	04/17/15		
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		110	70-130	2	30	04/17/15		
tert-Butyl alcohol (TBA)	21	2.0	ug/L	10		212	70-130	34	30	04/17/15	BS, BS6.0	***High***
tert-Butylbenzene	10	0.50	ug/L	10		100	70-130	3	30	04/17/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A504218										Prepared: 04/17/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike Dup (A504218-BSD1)											
Tetrachloroethene (PCE)	10	0.50	ug/L	10		104	70-130	3	30	04/17/15	
Toluene	11	0.50	ug/L	10		107	70-130	3	30	04/17/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		109	70-130	3	30	04/17/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	3	30	04/17/15	
Trichloroethene (TCE)	11	0.50	ug/L	10		106	70-130	2	30	04/17/15	
Trichlorofluoromethane	11	5.0	ug/L	10		111	70-130	2	30	04/17/15	
Vinyl Chloride	11	0.50	ug/L	10		111	70-130	4	30	04/17/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.7*			*5.0*		*93*	*70-130*			04/17/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*96*	*70-130*			04/17/15	
EPA 525.2 - Quality Control											
Batch: A503722										Prepared: 04/06/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A503722-BLK1)											
Alachlor	ND	1.0	ug/L							04/07/15	
Atrazine	ND	0.50	ug/L							04/07/15	
Benzo(a)pyrene	ND	0.10	ug/L							04/07/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							04/07/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							04/07/15	
Bromacil	ND	10	ug/L							04/07/15	
Butachlor	ND	0.38	ug/L							04/07/15	
Diazinon	ND	0.25	ug/L							04/07/15	
Dimethoate	ND	10	ug/L							04/07/15	
Metolachlor	ND	0.50	ug/L							04/07/15	
Metribuzin	ND	0.50	ug/L							04/07/15	
Molinate	ND	2.0	ug/L							04/07/15	
Prometryn	ND	2.0	ug/L							04/07/15	
Propachlor	ND	0.50	ug/L							04/07/15	
Simazine	ND	1.0	ug/L							04/07/15	
Thiobencarb	ND	1.0	ug/L							04/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.8*			*5.0*		*96*	*70-130*			04/07/15	
Blank Spike (A503722-BS1)											
Alachlor	1.0	1.0	ug/L	1.0		100	70-130			04/07/15	
Atrazine	0.46	0.50	ug/L	0.50		92	70-130			04/07/15	
Benzo(a)pyrene	0.086	0.10	ug/L	0.10		86	70-130			04/07/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		103	70-130			04/07/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		107	70-130			04/07/15	
Bromacil	1.1	10	ug/L	1.0		112	70-130			04/07/15	
Butachlor	1.0	0.38	ug/L	1.0		100	70-130			04/07/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130			04/07/15	
Dimethoate	0.79	10	ug/L	1.0		79	70-130			04/07/15	
Metolachlor	2.1	0.50	ug/L	2.0		103	70-130			04/07/15	
Metribuzin	0.99	0.50	ug/L	1.0		99	70-130			04/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A503722										Prepared: 04/06/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank Spike (A503722-BS1)											
Molinate	1.0	2.0	ug/L	1.0		103	70-130			04/07/15	
Prometryn	1.7	2.0	ug/L	2.0		86	70-130			04/07/15	
Propachlor	0.53	0.50	ug/L	0.50		106	70-130			04/07/15	
Simazine	0.36	1.0	ug/L	0.35		102	70-130			04/07/15	
Thiobencarb	0.50	1.0	ug/L	0.50		99	70-130			04/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*102*	*70-130*			04/07/15	
Blank Spike Dup (A503722-BSD1)											
Alachlor	0.99	1.0	ug/L	1.0		99	70-130	1	30	04/07/15	
Atrazine	0.46	0.50	ug/L	0.50		92	70-130	0	30	04/07/15	
Benzo(a)pyrene	0.091	0.10	ug/L	0.10		91	70-130	6	30	04/07/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		104	70-130	1	30	04/07/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		106	70-130	1	30	04/07/15	
Bromacil	1.0	10	ug/L	1.0		105	70-130	6	30	04/07/15	
Butachlor	0.99	0.38	ug/L	1.0		99	70-130	1	30	04/07/15	
Diazinon	0.17	0.25	ug/L	0.20		86	70-130	4	30	04/07/15	
Dimethoate	0.86	10	ug/L	1.0		86	70-130	9	30	04/07/15	
Metolachlor	2.1	0.50	ug/L	2.0		104	70-130	2	30	04/07/15	
Metribuzin	1.0	0.50	ug/L	1.0		101	70-130	2	30	04/07/15	
Molinate	1.0	2.0	ug/L	1.0		101	70-130	2	30	04/07/15	
Prometryn	1.9	2.0	ug/L	2.0		96	70-130	10	30	04/07/15	
Propachlor	0.57	0.50	ug/L	0.50		113	70-130	6	30	04/07/15	
Simazine	0.32	1.0	ug/L	0.35		90	70-130	12	30	04/07/15	
Thiobencarb	0.48	1.0	ug/L	0.50		96	70-130	3	30	04/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.9*			*5.0*		*99*	*70-130*			04/07/15	
Matrix Spike (A503722-MS1), Source: A5D0037-01											
Alachlor	0.99	1.0	ug/L	0.99	ND	99	70-130			04/07/15	
Atrazine	0.44	0.50	ug/L	0.50	ND	88	70-130			04/07/15	
Benzo(a)pyrene	0.13	0.10	ug/L	0.099	ND	120	70-130			04/07/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0	ND	100	70-130			04/07/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5	ND	105	70-130			04/07/15	
Bromacil	1.3	10	ug/L	0.99	ND	134	70-130			04/07/15	MS1.0 ***High***
Butachlor	0.99	0.38	ug/L	0.99	ND	99	70-130			04/07/15	
Diazinon	0.18	0.25	ug/L	0.20	ND	89	70-130			04/07/15	
Dimethoate	1.0	10	ug/L	0.99	ND	102	70-130			04/07/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	105	70-130			04/07/15	
Metribuzin	1.1	0.50	ug/L	0.99	ND	115	70-130			04/07/15	
Molinate	1.0	2.0	ug/L	0.99	ND	101	70-130			04/07/15	
Prometryn	2.1	2.0	ug/L	2.0	ND	106	70-130			04/07/15	
Propachlor	0.54	0.50	ug/L	0.50	ND	109	70-130			04/07/15	
Simazine	0.34	1.0	ug/L	0.35	ND	97	70-130			04/07/15	
Thiobencarb	0.50	1.0	ug/L	0.50	ND	100	70-130			04/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.9*			*5.0*		*98*	*70-130*			04/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 531.1 - Quality Control												
Batch: A503832										Prepared: 04/07/2015		
Prep Method: EPA 531.1										Analyst: AAR		
Blank (A503832-BLK1)												
3-Hydroxycarbofuran	ND	3.0	ug/L							04/08/15		
Aldicarb	ND	3.0	ug/L							04/08/15		
Aldicarb Sulfone	ND	2.0	ug/L							04/08/15		
Aldicarb Sulfoxide	ND	3.0	ug/L							04/08/15		
Carbaryl	ND	5.0	ug/L							04/08/15		
Carbofuran	ND	5.0	ug/L							04/08/15		
Methiocarb	ND	2.0	ug/L							04/08/15		
Methomyl	ND	2.0	ug/L							04/08/15		
Oxamyl	ND	20	ug/L							04/08/15		
Propoxur	ND	2.0	ug/L							04/08/15		
Blank Spike (A503832-BS1)												
3-Hydroxycarbofuran	4.5	3.0	ug/L	4.0		113	80-120			04/08/15		
Aldicarb	4.7	3.0	ug/L	4.0		117	80-120			04/08/15		
Aldicarb Sulfone	4.6	2.0	ug/L	4.0		114	80-120			04/08/15		
Aldicarb Sulfoxide	4.5	3.0	ug/L	4.0		111	80-120			04/08/15		
Carbaryl	4.6	5.0	ug/L	4.0		115	80-120			04/08/15		
Carbofuran	4.6	5.0	ug/L	4.0		115	80-120			04/08/15		
Methiocarb	4.6	2.0	ug/L	4.0		115	80-120			04/08/15		
Methomyl	4.9	2.0	ug/L	4.0		122	80-120			04/08/15	BS	***High***
Oxamyl	4.5	20	ug/L	4.0		112	80-120			04/08/15		
Propoxur	4.6	2.0	ug/L	4.0		116	80-120			04/08/15		
Blank Spike Dup (A503832-BSD1)												
3-Hydroxycarbofuran	4.3	3.0	ug/L	4.0		108	80-120	4	20	04/09/15		
Aldicarb	4.3	3.0	ug/L	4.0		107	80-120	8	20	04/09/15		
Aldicarb Sulfone	4.3	2.0	ug/L	4.0		108	80-120	5	20	04/09/15		
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		106	80-120	5	20	04/09/15		
Carbaryl	4.4	5.0	ug/L	4.0		110	80-120	5	20	04/09/15		
Carbofuran	4.4	5.0	ug/L	4.0		109	80-120	6	20	04/09/15		
Methiocarb	4.3	2.0	ug/L	4.0		107	80-120	8	20	04/09/15		
Methomyl	4.7	2.0	ug/L	4.0		117	80-120	4	20	04/09/15		
Oxamyl	4.3	20	ug/L	4.0		106	80-120	5	20	04/09/15		
Propoxur	4.3	2.0	ug/L	4.0		107	80-120	8	20	04/09/15		
EPA 547 - Quality Control												
Batch: A503727										Prepared: 04/06/2015		
Prep Method: EPA 547										Analyst: WPR		
Blank (A503727-BLK1)												
Glyphosate	ND	25	ug/L							04/06/15		
Surrogate: AMPA	*120*			*100*		*120*	*70-130*			04/06/15		
Blank Spike (A503727-BS1)												
Glyphosate	120	25	ug/L	100		120	70-130			04/06/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 547 - Quality Control											
Batch: A503727										Prepared: 04/06/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank Spike (A503727-BS1)											
Surrogate: AMPA	*91*			*100*		*91*	*70-130*			04/06/15	
Blank Spike Dup (A503727-BSD1)											
Glyphosate	130	25	ug/L	100		128	70-130	6	30	04/06/15	
Surrogate: AMPA	*120*			*100*		*124*	*70-130*			04/06/15	
Matrix Spike (A503727-MS1), Source: A5D0026-01											
Glyphosate	110	25	ug/L	100	ND	105	70-130			04/06/15	
Surrogate: AMPA	*100*			*100*		*98*	*70-130*			04/06/15	
Matrix Spike Dup (A503727-MSD1), Source: A5D0026-01											
Glyphosate	100	25	ug/L	100	ND	101	70-130	4	30	04/06/15	
Surrogate: AMPA	*100*			*100*		*99*	*70-130*			04/06/15	
EPA 548.1 - Quality Control											
Batch: A503775										Prepared: 04/06/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank (A503775-BLK1)											
Endothall	ND	45	ug/L							04/11/15	
Blank Spike (A503775-BS1)											
Endothall	17	45	ug/L	20		83	54-105			04/11/15	
Blank Spike Dup (A503775-BSD1)											
Endothall	17	45	ug/L	20		85	54-105	2	46	04/11/15	
Matrix Spike (A503775-MS1), Source: A5D0026-01											
Endothall	5.2	45	ug/L	20	ND	26	54-105			04/11/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A503930										Prepared: 04/09/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A503930-BLK1)											
Diquat	ND	4.0	ug/L							04/10/15	
Blank Spike (A503930-BS1)											
Diquat	3.5	4.0	ug/L	4.0		87	70-130			04/10/15	
Blank Spike Dup (A503930-BSD1)											
Diquat	3.5	4.0	ug/L	4.0		86	70-130	0	30	04/10/15	
Matrix Spike (A503930-MS1), Source: A5D0320-01											

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 549.2 - Quality Control											
Batch: A503930										Prepared: 04/09/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Matrix Spike (A503930-MS1), Source: A5D0320-01											
Diquat	3.4	4.0	ug/L	4.0	ND	85	70-130			04/10/15	
Matrix Spike Dup (A503930-MSD1), Source: A5D0320-01											
Diquat	3.5	4.0	ug/L	4.0	ND	88	70-130	3	30	04/10/15	

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

A5D0320

04032015

Monte6227

Turnaround: Standard

Due Date: 4/17/2015

Monterey Bay Analytical

A5D0320 04/03/2015
Monte6227 10

BSK Associates Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

Turnaround Time Request
- [x] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

*Required Fields

Temp: 3.6

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am

Project #:

How would you like to receive your completed results?* [x] 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)*: Azad Khaligh

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524 inc. MTBE	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
1	MW-6D (monitoring)	4/2/15	0950	GW	AB28762	X	X	X	X	X	X	X	X	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	4/2/15	1600		
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: 4/3/15	Time: 1040	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____ Custody Seal: Y / N

Cooling Method: Wet Blue None 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

A5D0320 04/03/2015
Monte6227 10

Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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?	1					
Bacti $Na_2S_2O_3$	—	—						
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						
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				4-3-15		
NaOH + ZnAc (P)	pH > 9	Y N						
Dissolved Oxygen 300ml (g)	—	—					NR	
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—						
HCl (AG) Lt. Blue Label O&G, Diesel	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A					
$Na_2S_2O_3$ (CG) Blue Label 504, 505 AG1	—	—	4V					
$Na_2S_2O_3$ + 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

Labeled by: JH @ 12:17 Labels checked by: MW @ 12:50 RUSH Paged by:

Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size	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
28762		MW-6D	4-2-2015	9:50	10.6						23			Field Parameters:					
																Temp:			
																pH:			
																Sp Cond:			
																Turb:			

	Printed Name	Signature	Date	Time	Comment
Sampled by:	ABAD KHALIGH (GSSI)		4/2/15	11:44	Is sample for regulatory purposes? (Yes) / No
Relinquished by:					
Received by:	MBAS		4/2/15	1144	PH = 7.24 TDS = 1944.80 mg/L SC = 2859 µS/cm C. = 2563 µS/cm Turb = 0.59 NTU
Relinquished by:					
Received by:					

[ ] Payment received Check # Amount: Receipt # Date:

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_2B
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_3H / 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

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

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Saturday, September 12, 2015

Lab Number: **AB33853**

Collection Date/Time: 8/3/2015 16:15 Sample Collector: SALMON M

Submittal Date/Time: 8/4/2015 9:20 Sample ID

Sample Description: MW-7S

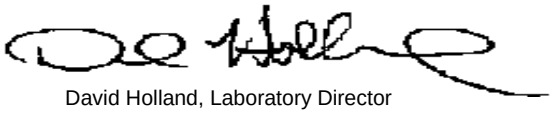
Analyte	Method	Unit	**Result**	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**29**		2	8/5/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	8/6/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**0.08**		0.05	8/10/2015	TC
Arsenic, Total	EPA200.8	µg/L	**1**		1	8/6/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**199**		10	8/6/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**35**		10	8/5/2015	TC
Boron, Dissolved	EPA200.7	mg/L	**Not Detected**		0.1	8/5/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**1.3**		0.1	9/11/2015	MW
Calcium	EPA200.7	mg/L	**120**		1	8/5/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**114**		1	8/5/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		8/12/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	8/5/2015	TC
Chloride, Dissolved	EPA300.0	mg/L	**387**		1	9/11/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		8/21/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**Not Detected**		3	8/4/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		20	8/5/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		8/8/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		8/17/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		8/12/2015	BSK
Dissolved Phosphorus	EPA 365.1	mg/L	**0.040**	E	0.01	8/13/2015	WECK
Endothall	EPA548.1	µg/L	**Not Detected**	E		8/11/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.1**		0.1	9/11/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		8/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**547**		10	8/6/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	8/5/2015	TC
Iodide	EPA9056M	µg/L	**Not Detected**	E	10	8/15/2015	WECK
Iron	EPA200.7	µg/L	**33**		20	8/5/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**26**		20	8/5/2015	MW
Kjeldahl Nitrogen, Dissolved	SM 4500 B, D	mg/L	**0.09**		0.10	8/24/2015	MW
Lithium	EPA200.8	µg/L	**5**		1	8/6/2015	SM
Magnesium	EPA200.7	mg/L	**60**		1	8/5/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**58**		1	8/5/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**476**		20	8/5/2015	MW
Manganese, Total	EPA200.7	µg/L	**500**		20	8/5/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	8/4/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**198**	H	1	9/11/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**44.8**	H	0.1	9/11/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.1**	H	0.1	9/11/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**2**		1	8/4/2015	LRH
Ortho Phosphate as P	EPA 365.1	mg/L	**0.035**	E	0.01	8/6/2015	WECK

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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 (Field Test)	SM4500-H+B	pH	**7.05**			8/3/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**7.3**		0.1	8/4/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		8/12/2015	BSK
Potassium	EPA200.7	mg/L	**5.9**		1	8/5/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**5.5**		1	8/5/2015	MW
QC Ratio TDS/SEC	Calculation		**0.68**			9/11/2015	DH
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		8/10/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**37**		1	8/5/2015	MW
Sodium	EPA200.7	mg/L	**124**		1	8/5/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**119**		1	8/5/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**1768**		1	8/4/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**1762**		1	8/3/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**1327**		5	8/6/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**61**		1	9/11/2015	MW
Temperature (Field)	SM2550	° C	**18.2**			8/3/2015	MS
Total Diss. Solids	SM2540C	mg/L	**1200**		10	8/5/2015	HM
Turbidity	EPA180.1	NTU	**0.30**		0.05	8/4/2015	ZG
Turbidity (Field)	EPA180.1	NTU	**0.70**		0.05	8/3/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		8/7/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**		20	8/5/2015	MW

Sample Comments: Sample was reanalyzed by EPA 300 after QC failure.

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**33853 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	124	0.04350	5.39
Potassium	5.9	0.02558	0.15
Calcium	120	0.04990	5.99
Magnesium	60	0.08229	4.94
NH3-N	0.08	0.07143	0.01
		SUM	16.48

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	29	0.02000	0.58
Sulfate	61	0.02082	1.27
Chloride	387	0.02821	10.92
Nitrate-Nitrogen	44.7	0.07138	3.19
Phosphate-P	0.09	0.01031	0.00
Bromide	1.3	0.01252	0.02
		SUM	15.98

ANION-CATION BALANC **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	1768	
Cation Sum X 100	1648	**93%**
Anion Sum X 100	1598	**90%**

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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	119	0.04350	5.18
Potassium	5.5	0.02558	0.14
Calcium	114	0.04990	5.69
Magnesium	58	0.08229	4.77
NH3-N	0.08	0.07143	0.01
		SUM	15.78

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	29	0.02000	0.58
Sulfate	61	0.02082	1.27
Chloride	387	0.02821	10.92
Nitrate-Nitrogen	44.7	0.07138	3.19
Phosphate-P	0.09	0.01031	0.00
Bromide	1.3	0.01252	0.02
		SUM	15.98

ANION-CATION BA **-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	1768	
Cation Sum X 100	1578	**89%**
Anion Sum X 100	1598	**90%**

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: 8/5/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria	Time
ICVB	---	<10	---	< 10	9:02
ICV	40	42	105	95-105 %	9:02

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB33853	29	29	0	5	9:02

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 8/10/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.05	100.00%	90-110	1100
ICV	0.500	0.450	90.00%	90-110	1100
CCVB1	---	0.02	---	<0.05	1100
CCV1	0.500	0.470	94.00%	90-110	1100

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	
AB33882	ND	0.500	0.480	0.470	96	94	2.1	85-120	10	1100

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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TKN by Electrode QC Summary (SM 4500-NH3)

Date: 8/24/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1300
ICVL	0.050	0.06	120.00%	90-110	1300
ICV	0.500	0.500	100.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1300
CCV1	0.500	0.480	96.00%	90-110	1300

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	
AB34494	ND	0.500	0.540	0.580	108	116	7.1	85-120	10	1300

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: **20150911**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.04	0.14	0.03	0.31	0.00	0.00
	ICV	1.93	20.15	2.08	19.86	1.83	1.94
	Rec 90-110%	96.38	100.75	103.92	99.32	91.53	97.23
	ICVL	0.19	1.91	0.20	1.95	0.22	0.22
	Rec 50-150%	95.96	95.67	100.45	97.64	111.42	110.70
Sample ID	**AB35294**	0.06	6.56	0.17	0.43	0.09	6.46
	MS	1.86	26.56	2.10	19.73	1.88	8.28
	Rec 80-120%	90.01	100.03	96.55	96.49	89.56	91.02
	MSD	1.86	26.45	2.09	19.67	1.88	8.24
	Rec 80-120%	89.82	99.47	95.96	96.20	89.25	89.36
	Diff 10%	0.21	0.43	0.57	0.29	0.33	0.40
	CCV	1.96	20.28	2.09	19.93	1.84	1.95
	Rec 90-110%	97.85	101.40	104.59	99.66	91.89	97.53
	Diff 10%	1.51	0.65	0.64	0.35	0.39	0.31
	CCVB	0.04	0.14	0.03	0.31	0.00	0.08

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Color QC Summary (SM 2120B)

Date Analyzed: 8/4/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	10:53
ICV	5	6	120.0	80-120	10:53
CCV	5	6	120.0	80-120	10:53
CCVB	---	<3	---	<3	10:53

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB33784	Not Detected	Not Detected	na	10	10:53

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 8/4/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1414	100.1%	95-105	1505
ICV	24800	24780	99.9%	95-105	1530

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB33821	1066	1066	0.0%	10	1505
AB33854	1235	1227	0.6%	10	1515

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: 8/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.003	---	<0.05	856
ICVL	0.05	0.049	98	50-150	858
ICV	0.25	0.249	99.6	80-120	945

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	
AB33750	0.025	0.25	0.253	0.267	91.2	96.8	5.4	80/120	10	914

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
AB33838

Date Analyzed
Thursday, August 06, 2015

	ICVB	QCS 50	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	97.4	27.6	50	103.2	99.3	2.5	97.2	102.7	5.50	0.03
Aluminum	0.1	100.1	-1.9	50	91.7	89.0	3.1	101.3	98.6	2.69	0.10
Arsenic	0.0	90.2	8.6	50	108.6	104.1	3.7	96.0	99.4	3.43	0.15
Strontium	0.0	99.5	888.4	50	150.0	95.6	2.9	99.4	98.1	1.32	0.00
Barium	0.0	96.7	194.7	50	107.8	92.3	3.2	97.1	95.8	1.28	0.00

The MS for Strontium was elevated, spike was less tha 6% of unspiked sample.

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 # 20150805

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	-0.01	1.02	102.2%	1.03	102.5%	0.3%	1	1.03	103.3%	1	1.0	99.3%
B 249.772	0.05-5ppm	0.01	0.00	1.05	104.6%	1.05	105.1%	0.5%	1	1.06	106.1%	1	1.0	101.7%
Ca 317.933	50-300ppm	-2.29	-2.30	52.1	104.1%	52.3	104.7%	0.5%	50	51.2	102.4%	50	47.3	94.6%
Ca 396.847	0.5-50ppm	-0.64	-0.65	51.6	103.1%	51.0	102.0%	1.1%	50	51.4	102.7%	50	49.1	98.2%
Cu 324.754	10ppb-100ppm	-14.40	-12.46	1051	105.1%	1033	103.3%	1.7%	1000	1042	104.2%	1000	988.6	98.9%
Cu 327.395	10ppb-100ppm	-10.14	-10.50	1066	106.6%	1052	105.2%	1.3%	1000	1054	105.4%	1000	1009.0	100.9%
Fe 238.204	10ppb-100ppm	-0.10	-3.07	1039	103.9%	1028	102.8%	1.1%	1000	1025	102.5%	1000	978.0	97.8%
Fe 259.940	10ppb-100ppm	-1.81	-0.41	1018	101.8%	1015	101.5%	0.3%	1000	1016	101.6%	1000	981.7	98.2%
K 766.491	0.5-750ppm	0.04	0.04	10.3	103.4%	10.2	101.7%	1.7%	10	10.3	103.3%	10	9.8	97.8%
Mg 202.582	50-1000ppm	-0.99	-1.03	53.6	107.2%	53.0	105.9%	1.2%	50	53.1	106.3%	50	49.9	99.9%
Mg 279.078	0.5-50ppm	-0.11	-0.11	51.9	103.9%	51.3	102.7%	1.2%	50	51.6	103.1%	50	48.4	96.8%
Mn 257.610	10ppb-11ppm	-12.16	-12.75	1037	103.7%	1037	103.7%	0.0%	1000	1028	102.8%	1000	996.0	99.6%
Mn 260.568	10ppb-11ppm	-11.80	-11.04	1029	102.9%	1030	103.0%	0.0%	1000	1022	102.2%	1000	998.9	99.9%
Na 568.821	50-1000ppm	2.46	2.41	54.3	108.6%	53.5	107.1%	1.5%	50	54.2	108.4%	50	56.5	113.0%
Na 589.592	0.5-50ppm	-0.11	-0.11	52.9	105.7%	51.6	103.2%	2.4%	50	53.0	106.0%	50	55.3	110.6%
Si 251.611	0.5-200ppm	-0.05	-0.20	51.8	103.6%	51.5	102.9%	0.6%	50	51.7	103.4%	50	49.4	98.7%
Si 252.411	0.5-200ppm	-0.08	-0.20	51.8	103.6%	51.5	103.1%	0.5%	50	51.7	103.3%	50	49.0	98.0%
Zn 213.857	10ppb-50ppm	-37.19	-50.32	1023	102.3%	1022	102.2%	0.1%	1000	1026	102.6%	1000	963.3	96.3%

Sample ID AB33839

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.14	1.10	96.1%	1.10	96.3%	0.2%	1	1.06	105.9%	2.4%	0.00
B 249.772	0.14	1.10	95.8%	1.10	95.9%	0.2%	1	1.05	105.3%	0.8%	0.01
Ca 317.933	56.6	107.6	101.9%	107.1	101.0%	0.4%	50	50.3	100.6%	1.7%	-3.18
Ca 396.847	55.9	92.7	73.7%	94.4	77.0%	1.8%	50	51.0	102.0%	0.7%	-0.33
Cu 324.754	-4	1018	102.2%	1012	101.6%	0.6%	1000	1037	103.7%	0.5%	-3.37
Cu 327.395	-2	1018	102.0%	1014	101.6%	0.3%	1000	1031	103.1%	2.2%	-3.84
Fe 238.204	14	1029	101.5%	1024	101.1%	0.4%	1000	1038	103.8%	1.3%	-0.96
Fe 259.940	14	1024	101.0%	1021	100.7%	0.3%	1000	1033	103.3%	1.6%	-0.79
K 766.491	2.2	12.0	98.1%	12.0	98.0%	0.1%	10	10.1	101.1%	2.2%	0.07
Mg 202.582	25.1	75.1	100.0%	74.9	99.5%	0.3%	50	51.1	102.3%	3.8%	-0.97
Mg 279.078	25.7	74.9	98.4%	74.4	97.4%	0.6%	50	51.6	103.1%	0.0%	-0.03
Mn 257.610	62	1071	100.9%	1062	100.1%	0.8%	1000	1031	103.1%	0.3%	-2.61
Mn 260.568	63	1074	101.0%	1065	100.2%	0.8%	1000	1030	103.0%	0.8%	-0.37
Na 568.821	31.2	79.7	97.1%	78.5	94.8%	1.5%	50	50.8	101.6%	6.4%	3.18
Na 589.592	31.2	80.0	97.6%	79.9	97.3%	0.1%	50	51.4	102.8%	3.1%	-0.02
Si 251.611	36.5	82.5	92.1%	82.0	91.0%	0.6%	50	52.2	104.3%	0.9%	-0.02
Si 252.411	36.5	82.7	92.3%	82.1	91.2%	0.7%	50	52.5	105.0%	1.6%	0.00
Zn 213.857	-25	973	99.8%	975	99.9%	0.1%	1000	1019	101.9%	1%	-25.06

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pH QC Summary (SM 4500 H+)

Date Analyzed: 8/4/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.85	99.9	95-105	1630

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB33882	7.97	7.98	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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TDS QC Summary (SM 2540C)

Date Analyzed: 8/5/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1410
ICVL	100	117	117	80-120	1410
ICV	500	511	102.2	90-110	1410

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB33822	720	746	3.5	10	1410
AB33880	494	520	5.1	10	1455

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: 8/4/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<0.05	900
ICV	1.00	1.03	103.0%	95-105	900
CCVB	---	ND	---	<0.05	900
CCV	1.00	1.03	103.0%	95-105	900
ICVB	---	ND	---	<0.05	900
ICV	1.00	1.04	104.0%	95-105	900
CCVB	---	ND	---	<0.05	900
CCV	1.00	1.03	103.0%	95-105	900

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB33854	5.8	6.0	3.39%	10	900

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5H0604
8/18/2015
Invoice: A517271

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5H0604 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 8/6/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	Cal Am	**Project PO#:**	-
Received:	8/06/2015 - 15:16		
Report Due:	8/20/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 5.0

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet Ice
Received On Blue Ice
Packing Material - Bubble Wrap
Packing Material - Foam
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:

MS1.0	Matrix spike recoveries exceed control limits.
SR3.0	Surrogate recovery exceeds control limits. No material impact as all associated spike recoveries are within acceptable limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5H0604-01
Sampled By: Matan Salmon
Sample Description: MW-7S (monitoring) // AB33853

Sample Date - Time: 08/03/15 - 16:15
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A508977	08/07/15	08/08/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A508977	08/07/15	08/08/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	109 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A509049	08/10/15	08/12/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A509049	08/10/15	08/12/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A509049	08/10/15	08/12/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A509049	08/10/15	08/12/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A509049	08/10/15	08/12/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A509049	08/10/15	08/12/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
Surrogate: DCPAA	EPA 515.3	103 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	

Certificate of Analysis

Sample ID: A5H0604-01
Sampled By: Matan Salmon
Sample Description: MW-7S (monitoring) // AB33853

Sample Date - Time: 08/03/15 - 16:15
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	A508944	08/07/15	08/07/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A508944	08/07/15	08/07/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A508944	08/07/15	08/07/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A508944	08/07/15	08/07/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	90 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	93 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5H0604-01
Sampled By: Matan Salmon
Sample Description: MW-7S (monitoring) // AB33853

Sample Date - Time: 08/03/15 - 16:15
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/10/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/10/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A508940	08/07/15	08/10/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A508940	08/07/15	08/10/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A508940	08/07/15	08/10/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A508940	08/07/15	08/10/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A508940	08/07/15	08/10/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A508940	08/07/15	08/10/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A508940	08/07/15	08/10/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/10/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/10/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A508940	08/07/15	08/10/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A508940	08/07/15	08/10/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/10/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/10/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	70 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A509108	08/11/15	08/12/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A509108	08/11/15	08/12/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A509108	08/11/15	08/12/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A509010	08/10/15	08/10/15	
Surrogate: AMPA	EPA 547	107 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A508990	08/08/15	08/11/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A508991	08/08/15	08/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A508977										Prepared: 08/07/2015	
Prep Method: EPA 504.1										Analyst: ANM	
Blank (A508977-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							08/07/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.56*			*0.46*		*122*	*70-130*			08/07/15	
Blank Spike (A508977-BS1)											
Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		121	70-130			08/07/15	
Ethylene Dibromide (EDB)	0.14	0.020	ug/L	0.12		112	70-130			08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.58*			*0.46*		*128*	*70-130*			08/07/15	
Blank Spike Dup (A508977-BSD1)											
Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12		113	70-130	7	20	08/08/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		104	70-130	7	20	08/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.53*			*0.46*		*115*	*70-130*			08/08/15	
Matrix Spike (A508977-MS1), Source: A5H0346-06											
Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12	ND	118	65-135			08/07/15	
Ethylene Dibromide (EDB)	0.14	0.020	ug/L	0.12	ND	108	65-135			08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.58*			*0.46*		*126*	*70-130*			08/07/15	
EPA 515.3 - Quality Control											
Batch: A509049										Prepared: 08/10/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A509049-BLK1)											
2,4,5-T	ND	1.0	ug/L							08/11/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							08/11/15	
2,4-D	ND	10	ug/L							08/11/15	
Bentazon	ND	2.0	ug/L							08/11/15	
Dalapon	ND	10	ug/L							08/11/15	
Dicamba	ND	1.5	ug/L							08/11/15	
Dinoseb	ND	2.0	ug/L							08/11/15	
Pentachlorophenol	ND	0.20	ug/L							08/11/15	
Picloram	ND	1.0	ug/L							08/11/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			08/11/15	
Blank Spike (A509049-BS1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130			08/11/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80		108	70-130			08/11/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130			08/11/15	
Bentazon	8.2	2.0	ug/L	8.0		103	70-130			08/11/15	
Dalapon	4.2	10	ug/L	4.0		104	70-130			08/11/15	
Dicamba	6.5	1.5	ug/L	6.0		108	70-130			08/11/15	
Dinoseb	0.86	2.0	ug/L	0.80		108	70-130			08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		101	70-130			08/11/15	
Picloram	0.36	1.0	ug/L	0.40		90	70-130			08/11/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A509049										Prepared: 08/10/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A509049-BS1)											
Surrogate: DCPAA	*58*			*58*		*99*	*70-130*			08/11/15	
Blank Spike Dup (A509049-BSD1)											
2,4,5-T	4.4	1.0	ug/L	4.0		109	70-130	0	20	08/11/15	
2,4,5-TP (Silvex)	0.84	1.0	ug/L	0.80		105	70-130	2	20	08/11/15	
2,4-D	0.46	10	ug/L	0.40		115	70-130	2	20	08/11/15	
Bentazon	8.7	2.0	ug/L	8.0		109	70-130	6	20	08/11/15	
Dalapon	3.8	10	ug/L	4.0		96	70-130	8	20	08/11/15	
Dicamba	6.5	1.5	ug/L	6.0		108	70-130	0	20	08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80		99	70-130	9	20	08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		102	70-130	1	20	08/11/15	
Picloram	0.38	1.0	ug/L	0.40		96	70-130	7	20	08/11/15	
Surrogate: DCPAA	*56*			*58*		*97*	*70-130*			08/11/15	
Matrix Spike (A509049-MS1), Source: A5H0189-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	108	70-130			08/11/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80	ND	108	70-130			08/11/15	
2,4-D	0.45	10	ug/L	0.40	ND	112	70-130			08/11/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	100	70-130			08/11/15	
Dalapon	4.4	10	ug/L	4.0	ND	110	70-130			08/11/15	
Dicamba	6.4	1.5	ug/L	6.0	ND	107	70-130			08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130			08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	99	70-130			08/11/15	
Picloram	0.45	1.0	ug/L	0.40	ND	113	70-130			08/11/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			08/11/15	
Matrix Spike Dup (A509049-MSD1), Source: A5H0189-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	107	70-130	0	20	08/11/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80	ND	104	70-130	4	20	08/11/15	
2,4-D	0.45	10	ug/L	0.40	ND	114	70-130	2	20	08/11/15	
Bentazon	7.9	2.0	ug/L	8.0	ND	98	70-130	2	20	08/11/15	
Dalapon	4.4	10	ug/L	4.0	ND	111	70-130	0	20	08/11/15	
Dicamba	6.5	1.5	ug/L	6.0	ND	108	70-130	1	20	08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130	0	20	08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130	2	20	08/11/15	
Picloram	0.45	1.0	ug/L	0.40	ND	113	70-130	0	20	08/11/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			08/11/15	
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A508944-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							08/07/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							08/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual

EPA 524.2 - Quality Control

Batch: A508944 Prepared: 08/07/2015

Prep Method: no prep-volatiles Analyst: JGB

Blank (A508944-BLK1)

1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							08/07/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							08/07/15	
1,1-Dichloroethane	ND	0.50	ug/L							08/07/15	
1,1-Dichloroethene	ND	0.50	ug/L							08/07/15	
1,1-Dichloropropene	ND	0.50	ug/L							08/07/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							08/07/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2-Dichloroethane	ND	0.50	ug/L							08/07/15	
1,2-Dichloropropane	ND	0.50	ug/L							08/07/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							08/07/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
1,3-Dichloropropane	ND	0.50	ug/L							08/07/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
2,2-Dichloropropane	ND	0.50	ug/L							08/07/15	
2-Butanone	ND	5.0	ug/L							08/07/15	
2-Chlorotoluene	ND	0.50	ug/L							08/07/15	
2-Hexanone	ND	10	ug/L							08/07/15	
4-Chlorotoluene	ND	0.50	ug/L							08/07/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							08/07/15	
Acetone	ND	10	ug/L							08/07/15	
Benzene	ND	0.50	ug/L							08/07/15	
Bromobenzene	ND	0.50	ug/L							08/07/15	
Bromochloromethane	ND	0.50	ug/L							08/07/15	
Bromodichloromethane	ND	0.50	ug/L							08/07/15	
Bromoform	ND	0.50	ug/L							08/07/15	
Bromomethane	ND	0.50	ug/L							08/07/15	
Carbon Tetrachloride	ND	0.50	ug/L							08/07/15	
Chlorobenzene	ND	0.50	ug/L							08/07/15	
Chloroethane	ND	0.50	ug/L							08/07/15	
Chloroform	ND	0.50	ug/L							08/07/15	
Chloromethane	ND	0.50	ug/L							08/07/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							08/07/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							08/07/15	
Dibromochloromethane	ND	0.50	ug/L							08/07/15	
Dibromomethane	ND	0.50	ug/L							08/07/15	
Dichlorodifluoromethane	ND	0.50	ug/L							08/07/15	
Dichloromethane	ND	0.50	ug/L							08/07/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							08/07/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							08/07/15	
Ethylbenzene	ND	0.50	ug/L							08/07/15	
Hexachlorobutadiene	ND	0.50	ug/L							08/07/15	
Isopropylbenzene	ND	0.50	ug/L							08/07/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A508944-BLK1)											
m,p-Xylenes	ND	0.50	ug/L							08/07/15	
Methyl-t-butyl ether	ND	0.50	ug/L							08/07/15	
Naphthalene	ND	0.50	ug/L							08/07/15	
n-Butylbenzene	ND	0.50	ug/L							08/07/15	
n-Propylbenzene	ND	0.50	ug/L							08/07/15	
o-Xylene	ND	0.50	ug/L							08/07/15	
p-Isopropyltoluene	ND	0.50	ug/L							08/07/15	
sec-Butylbenzene	ND	0.50	ug/L							08/07/15	
Styrene	ND	0.50	ug/L							08/07/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							08/07/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							08/07/15	
tert-Butylbenzene	ND	0.50	ug/L							08/07/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							08/07/15	
Toluene	ND	0.50	ug/L							08/07/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							08/07/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							08/07/15	
Trichloroethene (TCE)	ND	0.50	ug/L							08/07/15	
Trichlorofluoromethane	ND	5.0	ug/L							08/07/15	
Vinyl Chloride	ND	0.50	ug/L							08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*97*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			08/07/15	
Blank Spike (A508944-BS1)											
1,1,1,2-Tetrachloroethane	8.8	0.50	ug/L	10		88	70-130			08/07/15	
1,1,1-Trichloroethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1,2,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.4	10	ug/L	10		94	70-130			08/07/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
1,1-Dichloroethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1-Dichloroethene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1-Dichloropropene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,2,3-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
1,2,4-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
1,2-Dichloroethane	9.6	0.50	ug/L	10		96	70-130			08/07/15	
1,2-Dichloropropane	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,3,5-Trimethylbenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
1,3-Dichloropropane	9.7	0.50	ug/L	10		97	70-130			08/07/15	
1,4-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
2,2-Dichloropropane	8.3	0.50	ug/L	10		83	70-130			08/07/15	
2-Butanone	9.6	5.0	ug/L	10		96	70-130			08/07/15	
2-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
2-Hexanone	8.7	10	ug/L	10		87	70-130			08/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A508944-BS1)											
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
4-Methyl-2-pentanone	8.3	5.0	ug/L	10		83	70-130			08/07/15	
Acetone	9.2	10	ug/L	10		92	70-130			08/07/15	
Benzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Bromobenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Bromochloromethane	10	0.50	ug/L	10		101	70-130			08/07/15	
Bromodichloromethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Bromoform	8.8	0.50	ug/L	10		88	70-130			08/07/15	
Bromomethane	7.7	0.50	ug/L	10		77	70-130			08/07/15	
Carbon disulfide	11	10	ug/L	10		106	70-130			08/07/15	
Carbon Tetrachloride	9.2	0.50	ug/L	10		92	70-130			08/07/15	
Chlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
Chloroethane	9.5	0.50	ug/L	10		95	70-130			08/07/15	
Chloroform	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Chloromethane	8.5	0.50	ug/L	10		85	70-130			08/07/15	
cis-1,2-Dichloroethene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
cis-1,3-Dichloropropene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
Dibromochloromethane	9.1	0.50	ug/L	10		91	70-130			08/07/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
Dichlorodifluoromethane	8.6	0.50	ug/L	10		86	70-130			08/07/15	
Dichloromethane	10	0.50	ug/L	10		102	70-130			08/07/15	
Di-isopropyl ether (DIPE)	8.8	3.0	ug/L	10		88	70-130			08/07/15	
Ethyl tert-Butyl Ether (ETBE)	8.4	0.50	ug/L	10		84	70-130			08/07/15	
Ethylbenzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Hexachlorobutadiene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
m,p-Xylenes	19	0.50	ug/L	20		97	70-130			08/07/15	
Methyl-t-butyl ether	18	0.50	ug/L	20		89	70-130			08/07/15	
Naphthalene	8.6	0.50	ug/L	10		86	70-130			08/07/15	
n-Butylbenzene	9.1	0.50	ug/L	10		91	70-130			08/07/15	
n-Propylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
o-Xylene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
p-Isopropyltoluene	9.3	0.50	ug/L	10		93	70-130			08/07/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			08/07/15	
Styrene	9.1	0.50	ug/L	10		91	70-130			08/07/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		106	70-130			08/07/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		101	70-130			08/07/15	
tert-Butylbenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Tetrachloroethene (PCE)	9.2	0.50	ug/L	10		92	70-130			08/07/15	
Toluene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
trans-1,2-Dichloroethene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
trans-1,3-Dichloropropene	8.6	0.50	ug/L	10		86	70-130			08/07/15	
Trichloroethene (TCE)	9.5	0.50	ug/L	10		95	70-130			08/07/15	
Trichlorofluoromethane	10	5.0	ug/L	10		100	70-130			08/07/15	
Vinyl Chloride	9.4	0.50	ug/L	10		94	70-130			08/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A508944-BS1)											
Surrogate: 1,2-Dichlorobenzene-d4	*51*			*50*		*103*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*102*	*70-130*			08/07/15	
Blank Spike Dup (A508944-BSD1)											
1,1,1,2-Tetrachloroethane	8.8	0.50	ug/L	10		88	70-130	1	30	08/07/15	
1,1,1-Trichloroethane	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,1,2,2-Tetrachloroethane	9.5	0.50	ug/L	10		95	70-130	4	30	08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.0	10	ug/L	10		90	70-130	5	30	08/07/15	
1,1,2-Trichloroethane	9.5	0.50	ug/L	10		95	70-130	4	30	08/07/15	
1,1-Dichloroethane	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,1-Dichloroethene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,1-Dichloropropene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2,3-Trichlorobenzene	8.8	0.50	ug/L	10		88	70-130	3	30	08/07/15	
1,2,4-Trichlorobenzene	8.7	0.50	ug/L	10		87	70-130	3	30	08/07/15	
1,2,4-Trimethylbenzene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2-Dichlorobenzene	9.2	0.50	ug/L	10		92	70-130	5	30	08/07/15	
1,2-Dichloroethane	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2-Dichloropropane	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,3,5-Trimethylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,3-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
1,3-Dichloropropane	9.3	0.50	ug/L	10		93	70-130	4	30	08/07/15	
1,4-Dichlorobenzene	9.2	0.50	ug/L	10		92	70-130	5	30	08/07/15	
2,2-Dichloropropane	7.9	0.50	ug/L	10		79	70-130	5	30	08/07/15	
2-Butanone	8.6	5.0	ug/L	10		86	70-130	11	30	08/07/15	
2-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
2-Hexanone	8.3	10	ug/L	10		83	70-130	4	30	08/07/15	
4-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
4-Methyl-2-pentanone	8.1	5.0	ug/L	10		81	70-130	2	30	08/07/15	
Acetone	8.7	10	ug/L	10		87	70-130	5	30	08/07/15	
Benzene	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
Bromobenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
Bromochloromethane	9.2	0.50	ug/L	10		92	70-130	9	30	08/07/15	
Bromodichloromethane	9.0	0.50	ug/L	10		90	70-130	4	30	08/07/15	
Bromoform	8.5	0.50	ug/L	10		85	70-130	4	30	08/07/15	
Bromomethane	7.7	0.50	ug/L	10		77	70-130	0	30	08/07/15	
Carbon disulfide	10	10	ug/L	10		100	70-130	6	30	08/07/15	
Carbon Tetrachloride	8.8	0.50	ug/L	10		88	70-130	5	30	08/07/15	
Chlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	08/07/15	
Chloroethane	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Chloroform	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
Chloromethane	8.3	0.50	ug/L	10		83	70-130	2	30	08/07/15	
cis-1,2-Dichloroethene	9.3	0.50	ug/L	10		93	70-130	4	30	08/07/15	
cis-1,3-Dichloropropene	8.5	0.50	ug/L	10		85	70-130	5	30	08/07/15	
Dibromochloromethane	8.6	0.50	ug/L	10		86	70-130	5	30	08/07/15	
Dibromomethane	9.3	0.50	ug/L	10		93	70-130	5	30	08/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A508944-BSD1)											
Dichlorodifluoromethane	8.4	0.50	ug/L	10		84	70-130	2	30	08/07/15	
Dichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	08/07/15	
Di-isopropyl ether (DIPE)	8.7	3.0	ug/L	10		87	70-130	1	30	08/07/15	
Ethyl tert-Butyl Ether (ETBE)	8.2	0.50	ug/L	10		82	70-130	2	30	08/07/15	
Ethylbenzene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Hexachlorobutadiene	8.5	0.50	ug/L	10		85	70-130	5	30	08/07/15	
Isopropylbenzene	9.0	0.50	ug/L	10		90	70-130	6	30	08/07/15	
m,p-Xylenes	18	0.50	ug/L	20		92	70-130	5	30	08/07/15	
Methyl-t-butyl ether	17	0.50	ug/L	20		85	70-130	4	30	08/07/15	
Naphthalene	8.8	0.50	ug/L	10		88	70-130	3	30	08/07/15	
n-Butylbenzene	8.8	0.50	ug/L	10		88	70-130	4	30	08/07/15	
n-Propylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
o-Xylene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
p-Isopropyltoluene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
sec-Butylbenzene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
Styrene	8.7	0.50	ug/L	10		87	70-130	5	30	08/07/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		106	70-130	0	30	08/07/15	
tert-Butyl alcohol (TBA)	9.8	2.0	ug/L	10		98	70-130	3	30	08/07/15	
tert-Butylbenzene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
Tetrachloroethene (PCE)	9.1	0.50	ug/L	10		91	70-130	1	30	08/07/15	
Toluene	9.4	0.50	ug/L	10		94	70-130	2	30	08/07/15	
trans-1,2-Dichloroethene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
trans-1,3-Dichloropropene	8.2	0.50	ug/L	10		82	70-130	5	30	08/07/15	
Trichloroethene (TCE)	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Trichlorofluoromethane	9.3	5.0	ug/L	10		93	70-130	7	30	08/07/15	
Vinyl Chloride	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*50*			*50*		*100*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*99*	*70-130*			08/07/15	
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A508940-BLK1)											
Alachlor	ND	1.0	ug/L							08/11/15	
Atrazine	ND	0.50	ug/L							08/11/15	
Benzo(a)pyrene	ND	0.10	ug/L							08/11/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							08/11/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							08/11/15	
Bromacil	ND	10	ug/L							08/11/15	
Butachlor	ND	0.38	ug/L							08/11/15	
Diazinon	ND	0.25	ug/L							08/11/15	
Dimethoate	ND	10	ug/L							08/11/15	
Metolachlor	ND	0.50	ug/L							08/11/15	
Metribuzin	ND	0.50	ug/L							08/11/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A508940-BLK1)											
Molinate	ND	2.0	ug/L							08/11/15	
Prometryn	ND	2.0	ug/L							08/11/15	
Propachlor	ND	0.50	ug/L							08/11/15	
Simazine	ND	1.0	ug/L							08/11/15	
Thiobencarb	ND	1.0	ug/L							08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.8*			*5.0*		*96*	*70-130*			08/11/15	
Blank Spike (A508940-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		109	70-130			08/11/15	
Atrazine	0.50	0.50	ug/L	0.50		100	70-130			08/11/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		116	70-130			08/11/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		104	70-130			08/11/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		109	70-130			08/11/15	
Bromacil	1.2	10	ug/L	1.0		120	70-130			08/11/15	
Butachlor	1.1	0.38	ug/L	1.0		108	70-130			08/11/15	
Diazinon	0.20	0.25	ug/L	0.20		100	70-130			08/11/15	
Dimethoate	0.83	10	ug/L	1.0		83	70-130			08/11/15	
Metolachlor	2.2	0.50	ug/L	2.0		108	70-130			08/11/15	
Metribuzin	0.97	0.50	ug/L	1.0		97	70-130			08/11/15	
Molinate	0.94	2.0	ug/L	1.0		94	70-130			08/11/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			08/11/15	
Propachlor	0.51	0.50	ug/L	0.50		102	70-130			08/11/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130			08/11/15	
Thiobencarb	0.49	1.0	ug/L	0.50		99	70-130			08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.6*			*5.0*		*92*	*70-130*			08/11/15	
Blank Spike Dup (A508940-BSD1)											
Alachlor	1.1	1.0	ug/L	1.0		106	70-130	3	30	08/11/15	
Atrazine	0.53	0.50	ug/L	0.50		106	70-130	5	30	08/11/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		117	70-130	1	30	08/11/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		105	70-130	1	30	08/11/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		106	70-130	3	30	08/11/15	
Bromacil	1.2	10	ug/L	1.0		121	70-130	1	30	08/11/15	
Butachlor	1.0	0.38	ug/L	1.0		104	70-130	4	30	08/11/15	
Diazinon	0.19	0.25	ug/L	0.20		94	70-130	7	30	08/11/15	
Dimethoate	0.84	10	ug/L	1.0		84	70-130	1	30	08/11/15	
Metolachlor	2.1	0.50	ug/L	2.0		104	70-130	3	30	08/11/15	
Metribuzin	0.95	0.50	ug/L	1.0		95	70-130	2	30	08/11/15	
Molinate	0.88	2.0	ug/L	1.0		88	70-130	7	30	08/11/15	
Prometryn	1.4	2.0	ug/L	2.0		71	70-130	10	30	08/11/15	
Propachlor	0.49	0.50	ug/L	0.50		98	70-130	4	30	08/11/15	
Simazine	0.36	1.0	ug/L	0.35		104	70-130	7	30	08/11/15	
Thiobencarb	0.52	1.0	ug/L	0.50		103	70-130	5	30	08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.3*			*5.0*		*85*	*70-130*			08/11/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A508940-MS1), Source: A5H0423-01											
Alachlor	1.1	1.0	ug/L	1.0	ND	110	70-130			08/11/15	
Atrazine	0.57	0.50	ug/L	0.50	ND	112	70-130			08/11/15	
Benzo(a)pyrene	0.15	0.10	ug/L	0.10	ND	152	70-130			08/11/15	MS1.0 ***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0	ND	110	70-130			08/11/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	110	70-130			08/11/15	
Bromacil	1.2	10	ug/L	1.0	ND	116	70-130			08/11/15	
Butachlor	1.1	0.38	ug/L	1.0	ND	111	70-130			08/11/15	
Diazinon	0.21	0.25	ug/L	0.20	ND	104	70-130			08/11/15	
Dimethoate	1.0	10	ug/L	1.0	ND	101	70-130			08/11/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	106	70-130			08/11/15	
Metribuzin	1.1	0.50	ug/L	1.0	ND	109	70-130			08/11/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			08/11/15	
Prometryn	2.1	2.0	ug/L	2.0	ND	102	70-130			08/11/15	
Propachlor	0.53	0.50	ug/L	0.50	ND	106	70-130			08/11/15	
Simazine	0.36	1.0	ug/L	0.35	ND	103	70-130			08/11/15	
Thiobencarb	0.53	1.0	ug/L	0.50	ND	106	70-130			08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.6*			*5.0*		*91*	*70-130*			08/11/15	
EPA 531.1 - Quality Control											
Batch: A509108										Prepared: 08/11/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A509108-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							08/12/15	
Aldicarb	ND	3.0	ug/L							08/12/15	
Aldicarb Sulfone	ND	2.0	ug/L							08/12/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							08/12/15	
Carbaryl	ND	5.0	ug/L							08/12/15	
Carbofuran	ND	5.0	ug/L							08/12/15	
Methiocarb	ND	2.0	ug/L							08/12/15	
Methomyl	ND	2.0	ug/L							08/12/15	
Oxamyl	ND	20	ug/L							08/12/15	
Propoxur	ND	2.0	ug/L							08/12/15	
Blank Spike (A509108-BS1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		99	80-120			08/12/15	
Aldicarb	3.7	3.0	ug/L	4.0		94	80-120			08/12/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		100	80-120			08/12/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0		98	80-120			08/12/15	
Carbaryl	3.9	5.0	ug/L	4.0		98	80-120			08/12/15	
Carbofuran	4.1	5.0	ug/L	4.0		101	80-120			08/12/15	
Methiocarb	3.9	2.0	ug/L	4.0		97	80-120			08/12/15	
Methomyl	4.2	2.0	ug/L	4.0		104	80-120			08/12/15	
Oxamyl	4.0	20	ug/L	4.0		100	80-120			08/12/15	
Propoxur	4.0	2.0	ug/L	4.0		100	80-120			08/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A509108										Prepared: 08/11/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank Spike Dup (A509108-BSD1)											
3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0		95	80-120	5	20	08/13/15	
Aldicarb	3.4	3.0	ug/L	4.0		85	80-120	10	20	08/13/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120	1	20	08/13/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		100	80-120	2	20	08/13/15	
Carbaryl	4.2	5.0	ug/L	4.0		105	80-120	7	20	08/13/15	
Carbofuran	3.9	5.0	ug/L	4.0		97	80-120	4	20	08/13/15	
Methiocarb	4.1	2.0	ug/L	4.0		103	80-120	5	20	08/13/15	
Methomyl	4.2	2.0	ug/L	4.0		104	80-120	0	20	08/13/15	
Oxamyl	4.1	20	ug/L	4.0		101	80-120	1	20	08/13/15	
Propoxur	3.8	2.0	ug/L	4.0		95	80-120	5	20	08/13/15	
Matrix Spike (A509108-MS1), Source: A5H0575-01											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0	ND	98	65-135			08/12/15	
Aldicarb	3.4	3.0	ug/L	4.0	ND	85	65-135			08/12/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			08/12/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0	ND	99	65-135			08/12/15	
Carbaryl	4.0	5.0	ug/L	4.0	ND	100	65-135			08/12/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	98	65-135			08/12/15	
Methiocarb	4.0	2.0	ug/L	4.0	ND	100	65-135			08/12/15	
Methomyl	4.0	2.0	ug/L	4.0	ND	100	65-135			08/12/15	
Oxamyl	4.1	20	ug/L	4.0	ND	102	65-135			08/12/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	97	65-135			08/12/15	
EPA 547 - Quality Control											
Batch: A509010										Prepared: 08/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A509010-BLK1)											
Glyphosate	ND	25	ug/L							08/10/15	
Surrogate: AMPA	*100*			*100*		*101*	*70-130*			08/10/15	
Blank Spike (A509010-BS1)											
Glyphosate	89	25	ug/L	100		89	70-130			08/10/15	
Surrogate: AMPA	*85*			*100*		*85*	*70-130*			08/10/15	
Blank Spike Dup (A509010-BSD1)											
Glyphosate	100	25	ug/L	100		103	70-130	15	30	08/10/15	
Surrogate: AMPA	*100*			*100*		*105*	*70-130*			08/10/15	
Matrix Spike (A509010-MS1), Source: A5H0189-01											
Glyphosate	110	25	ug/L	100	ND	109	70-130			08/10/15	
Surrogate: AMPA	*88*			*100*		*87*	*70-130*			08/10/15	
Matrix Spike Dup (A509010-MSD1), Source: A5H0189-01											

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 547 - Quality Control											
Batch: A509010										Prepared: 08/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Matrix Spike Dup (A509010-MSD1), Source: A5H0189-01											
Glyphosate	100	25	ug/L	100	ND	102	70-130	7	30	08/10/15	
Surrogate: AMPA	*130*			*100*		*134*	*70-130*			08/10/15	*SR3.0*
EPA 548.1 - Quality Control											
Batch: A508990										Prepared: 08/08/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A508990-BLK1)											
Endothall	ND	45	ug/L							08/11/15	
Blank Spike (A508990-BS1)											
Endothall	17	45	ug/L	20		85	46-116			08/11/15	
Blank Spike Dup (A508990-BSD1)											
Endothall	15	45	ug/L	20		77	46-116	10	30	08/11/15	
Matrix Spike (A508990-MS1), Source: A5H0189-01											
Endothall	ND	45	ug/L	20	ND	0	46-116			08/11/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A508991										Prepared: 08/08/2015	
Prep Method: EPA 549.2										Analyst: MTM	
Blank (A508991-BLK1)											
Diquat	ND	4.0	ug/L							08/12/15	
Blank Spike (A508991-BS1)											
Diquat	3.6	4.0	ug/L	4.0		89	70-130			08/12/15	
Blank Spike Dup (A508991-BSD1)											
Diquat	3.6	4.0	ug/L	4.0		90	70-130	1	30	08/12/15	
Matrix Spike (A508991-MS1), Source: A5H0189-01											
Diquat	3.7	4.0	ug/L	4.0	ND	93	70-130			08/12/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	CA000792016-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5H0604

08062015

Monte6227

Turnaround: Standard

Due Date: 8/20/2015

Monterey Bay Analytical

Printed: 8/6/2015 6:19:24PM

BSK Associates
Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
  Date needed:

A5H0604 08/06/2015
Monte6227 10
Y

*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 **E-mail*:** mweidner@mbasinc.com, dholland@mbasin
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?* [X] 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)*: 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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
1	MW-7S (monitoring)	8/3/15	1615	GW	AB33853	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Holland	MBAS	8/4/15	1600		

Received for Lab by: (Signature and Printed Name)	Date	Time	Payment Received at Delivery:
Caroline Schut	8/6/15	15:1[illegible]	Date: Amount: PIA#: Check / Cash Init.

Shipping Method: (ONTRAC) 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

A5H0604 08/06/2015
Monte6227 10

BSK Associates SR-FL-0002-14

Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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 $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	4V					
$Na_2S_2O_3$ + 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	—	—						

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

TH @ 1812 Labels checked by: SD @ 1821 RUSH Paged by: @

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

August 18, 2015

Ceres ID: 10752

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 August 12, 2015. This sample was analyzed 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

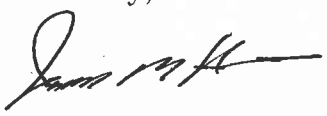
This work was authorized under M.B.A.'s Project # AB33853.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10752-001	MW-7S (monitoring)	8/12/2015	8/3/2015	16:15

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB33853

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1350
ZB-5 MS Analysis Date: 17-Aug-15
Date Received: NA
Date Extracted: 13-Aug-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.37		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	99.9	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	110	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB33853	Sample Size:	1.000 L	QC Batch #:	1350	Date Extracted:	13-Aug-15
				ZB-5 MS Analysis Date:	17-Aug-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	11.0	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	97.3	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	11.2	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

EPA Method 1613B *Ceres Analytical Laboratory*

Sample ID:	**MW-7S (monitoring)**				
Client Data		**Sample Data**		**Laboratory Data**	
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10752-001
Project:	AB33853	Sample Size:	1.021 L	QC Batch #:	1350
Date Collected:	3-Aug-15			ZB-5 MS Analysis Date:	17-Aug-15
Time Collected:	16:15				

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	2.53		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	82.8	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	101	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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
Ceres Project ID:_____
Temperature: _____ °C

Pg. ___ of ___

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	Company Name:_____ Same	Ceres Quote #:_____
Contact Name:_____ David Holland	Contact Name:_____	P.O. # _____
Address: 4 Justin Court Ste D Monterey CA 93940	Address:_____	Project ID: _____
Ph:_ 831-375-6227	Ph:_____ Fx:_____	**TAT** (business days)_____
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other — Comments
1	MW-7S (monitoring)	8/3/2015	1615	Aq	1	X						AB33853
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**
D. Holland	8/11/2015	16:00		8/12/15	10:07

Client understands that all terms desribed 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: 10752	Date/Time: 8/12/15 10:06
Client Project ID: AB33853	Received Temp: 0.3 °C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / N
Proper Containers:	Y / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Aqueous sample pH: 7	
List COC discrepancies:	
List Damaged Samples:	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10752 PB: 1350 Sample #s: 1 Due Date: 8/26/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle 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 Cl_4-Cl_8

□ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10752-1	1532.46g	511.31g	1.021L

Chemist: _____ Date: 8/13/15

Method: 1653B
SOP #: 3011

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1350-MB001	Method Blank		1.000L	8/13/15 YDH	8/14/15 YDH	NA	8/14/15	NA	8/14/15 YDH
0-1350-OPR001	OPR		1.000L (A)	↓	↓	↓	↓	↓	↓
10752-1350-001	MW-7S (monitoring)	✓	1.021L	↓	↓	↓	↓	↓	↓

Comments : (A) OPR spiked with NSS.

Soxhlet Start: 15:00 8/13/15

Soxhlet Stop: 07:25 8/14/15

Samples Logged out by: 09:00 8/13/15

Samples Returned by: NA

Note samples Depleted: I

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 11:00 8/14/15

Extracts returned to Storage Location: 8/17/15 16:04

Form M1.0 rev5

Chemist:

Effective Date: 8/7/14

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	20	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450 mL	C15B12BLK	7/30/16
Hexanes	30, 30, 100, 20 mL	C15C13BLK	7/30/16
S. Gel	4 g	P071615A	1/16/16
Basic Gel	4 g	P061915A	12/19/15
Acid Gel	8 g	P071615B	1/16/16
Acid Al	6 g	P072915A	1/29/16
Na_2SO_4	1.5 g	P041515A	10/15/15
20% DCM/Hex	30 mL	L070515A	1/5/16

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5H05116

Report Date: 08/26/15 13:56

Received Date: 08/05/15 11:40

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 08/05/ 15 11:40 with the Chain of Custody document. The samples were received in good condition, at 4.0 °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: 08/05/15 11:40
Date Reported: 08/26/15 13:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-7S (AB33853)	Matan Salmon	5H05116-01	Water	08/03/15 16:15

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

5H05116-01 MW-7S

Sampled: 08/03/15 16:15 **Sampled By:** Matan Salmon **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5H0730 Prepared: 08/15/15 09:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	10	ug/l	1	08/15/15 10:36	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5H0358 Prepared: 08/07/15 14:10 Analyst: Paolo Lorenzo A. Ramirez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND	0.010	ug/l	1	08/21/15 00:25	
4,4´-DDE	ND	0.010	ug/l	1	08/21/15 00:25	
4,4´-DDT	ND	0.010	ug/l	1	08/21/15 00:25	
Aldrin	ND	0.010	ug/l	1	08/21/15 00:25	
alpha-BHC	ND	0.010	ug/l	1	08/21/15 00:25	
Aroclor 1016	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1221	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1232	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1242	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1248	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1254	ND	0.10	ug/l	1	08/21/15 00:25	
Aroclor 1260	ND	0.10	ug/l	1	08/21/15 00:25	
beta-BHC	ND	0.010	ug/l	1	08/21/15 00:25	
Chlordane (tech)	ND	0.10	ug/l	1	08/21/15 00:25	
Chlorothalonil	ND	0.050	ug/l	1	08/21/15 00:25	
delta-BHC	ND	0.010	ug/l	1	08/21/15 00:25	
Dieldrin	ND	0.010	ug/l	1	08/21/15 00:25	
Endosulfan I	ND	0.010	ug/l	1	08/21/15 00:25	
Endosulfan II	ND	0.010	ug/l	1	08/21/15 00:25	
Endosulfan sulfate	ND	0.010	ug/l	1	08/21/15 00:25	
Endrin	ND	0.010	ug/l	1	08/21/15 00:25	
Endrin aldehyde	ND	0.010	ug/l	1	08/21/15 00:25	
gamma-BHC (Lindane)	ND	0.010	ug/l	1	08/21/15 00:25	
Heptachlor	ND	0.010	ug/l	1	08/21/15 00:25	
Heptachlor epoxide	ND	0.010	ug/l	1	08/21/15 00:25	
Hexachlorobenzene	ND	0.050	ug/l	1	08/21/15 00:25	
Hexachlorocyclopentadiene	ND	0.050	ug/l	1	08/21/15 00:25	
Methoxychlor	ND	0.010	ug/l	1	08/21/15 00:25	
PCBs, Total	ND	0.50	ug/l	1	08/21/15 00:25	
Propachlor	ND	0.050	ug/l	1	08/21/15 00:25	
Toxaphene	ND	1.0	ug/l	1	08/21/15 00:25	
Trifluralin	ND	0.010	ug/l	1	08/21/15 00:25	
Surr: Decachlorobiphenyl	*83 %*	Conc:*0.0827*	*70-130*	%		
Surr: Tetrachloro-meta-xylene	*77 %*	Conc:*0.0767*	*70-130*	%		

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Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

5H05116-01 MW-7S

Sampled: 08/03/15 16:15 **Sampled By:** Matan Salmon **Matrix:** Water

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 365.3 Batch: W5H0269 Prepared: 08/06/15 10:58 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**0.035**	0.010	mg/l	1	08/06/15 13:02	

Method: EPA 365.3 Batch: W5H0551 Prepared: 08/11/15 16:08 Analyst: Nhat Duy M Nguyen

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**0.040**	0.010	mg/l	1	08/13/15 17:35	

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Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

QUALITY CONTROL SECTION

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Anions by IC, EPA Method 9056 - Quality Control

Batch W5H0730 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0730-BLK1)				Analyzed: 08/15/15 09:49						
Iodide	ND	10	ug/l							
LCS (W5H0730-BS1)				Analyzed: 08/15/15 10:04						
Iodide	40.2	10	ug/l	40.0		101	85-115			
Matrix Spike (W5H0730-MS1)	**Source: 5H13010-01**			Analyzed: 08/15/15 11:45						
Iodide	7160	1000	ug/l	4000	3250	98	80-120			
Matrix Spike Dup (W5H0730-MSD1)	**Source: 5H13010-01**			Analyzed: 08/15/15 12:05						
Iodide	7440	1000	ug/l	4000	3250	105	80-120	4	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0358-BLK1)				Analyzed: 08/20/15 19:48						
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							

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Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0358-BLK1)				Analyzed: 08/20/15 19:48						
Hexachlorobenzene	ND	0.050	ug/l							
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	*0.0840*		*ug/l*	*0.100*		*84*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0452*		*ug/l*	*0.100*		*45*	*70-130*			*S-11*
LCS (W5H0358-BS1)				Analyzed: 08/20/15 20:19						
4,4´-DDD	0.119	0.010	ug/l	0.100		119	55-142			
4,4´-DDE	0.111	0.010	ug/l	0.100		111	49-129			
4,4´-DDT	0.127	0.010	ug/l	0.100		127	54-160			
Aldrin	0.0835	0.010	ug/l	0.100		84	29-115			
alpha-BHC	0.104	0.010	ug/l	0.100		104	59-131			
beta-BHC	0.114	0.010	ug/l	0.100		114	63-136			
delta-BHC	0.120	0.010	ug/l	0.100		120	59-137			
Dieldrin	0.106	0.010	ug/l	0.100		106	59-135			
Endosulfan I	0.0719	0.010	ug/l	0.100		72	28-138			
Endosulfan II	0.0842	0.010	ug/l	0.100		84	53-133			
Endosulfan sulfate	0.104	0.010	ug/l	0.100		104	58-155			
Endrin	0.111	0.010	ug/l	0.100		111	57-148			
Endrin aldehyde	0.0996	0.010	ug/l	0.100		100	45-139			
gamma-BHC (Lindane)	0.105	0.010	ug/l	0.100		105	59-129			
Heptachlor	0.0978	0.010	ug/l	0.100		98	42-136			
Heptachlor epoxide	0.0991	0.010	ug/l	0.100		99	59-134			
Methoxychlor	0.101	0.010	ug/l	0.100		101	56-167			
Surr: Decachlorobiphenyl	*0.106*		*ug/l*	*0.100*		*106*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0547*		*ug/l*	*0.100*		*55*	*70-130*			*S-11*
Matrix Spike (W5H0358-MS1)	**Source: 5H06096-03**			Analyzed: 08/20/15 20:50						
4,4´-DDD	0.0771	0.020	ug/l	0.100	ND	77	62-144			M-04
4,4´-DDE	0.0730	0.020	ug/l	0.100	ND	73	53-134			M-04
4,4´-DDT	0.0583	0.020	ug/l	0.100	ND	58	48-170			M-04
Aldrin	0.0429	0.020	ug/l	0.100	ND	43	49-107			M-04, MS-05
alpha-BHC	0.0625	0.020	ug/l	0.100	ND	62	47-125			M-04
beta-BHC	0.0597	0.020	ug/l	0.100	ND	60	62-123			M-04, MS-05
delta-BHC	0.0653	0.020	ug/l	0.100	ND	65	56-140			M-04
Dieldrin	0.0823	0.020	ug/l	0.100	ND	82	65-135			M-04

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5H0358-MS1)	**Source: 5H06096-03**			Analyzed: 08/20/15 20:50						
Endosulfan I	0.0417	0.020	ug/l	0.100	ND	42	28-119			M-04
Endosulfan II	0.0471	0.020	ug/l	0.100	ND	47	56-127			M-04, MS-05
Endosulfan sulfate	0.0606	0.020	ug/l	0.100	ND	61	72-171			M-04, MS-05
Endrin	0.0814	0.020	ug/l	0.100	ND	81	53-123			M-04
Endrin aldehyde	0.0326	0.020	ug/l	0.100	ND	33	34-158			M-04, MS-05
gamma-BHC (Lindane)	0.0628	0.020	ug/l	0.100	ND	63	49-126			M-04
Heptachlor	0.0542	0.020	ug/l	0.100	ND	54	56-155			M-04, MS-05
Heptachlor epoxide	0.0552	0.020	ug/l	0.100	ND	55	55-137			M-04
Methoxychlor	0.0550	0.020	ug/l	0.100	ND	55	44-192			M-04
Surr: Decachlorobiphenyl	*0.0705*		*ug/l*	*0.100*		*70*	*70-130*			*M-04*
Surr: Tetrachloro-meta-xylene	*0.0308*		*ug/l*	*0.100*		*31*	*70-130*			*M-04, S-11*
Matrix Spike (W5H0358-MS2)	**Source: 5H06094-03**			Analyzed: 08/20/15 21:51						
4,4´-DDD	0.0819	0.010	ug/l	0.100	ND	82	62-144			
4,4´-DDE	0.0834	0.010	ug/l	0.100	ND	83	53-134			
4,4´-DDT	0.0880	0.010	ug/l	0.100	ND	88	48-170			
Aldrin	0.0723	0.010	ug/l	0.100	ND	72	49-107			
alpha-BHC	0.0669	0.010	ug/l	0.100	ND	67	47-125			
beta-BHC	0.0713	0.010	ug/l	0.100	ND	71	62-123			
delta-BHC	0.0884	0.010	ug/l	0.100	ND	88	56-140			
Dieldrin	0.0698	0.010	ug/l	0.100	ND	70	65-135			
Endosulfan I	0.0523	0.010	ug/l	0.100	ND	52	28-119			
Endosulfan II	0.0554	0.010	ug/l	0.100	ND	55	56-127			MS-05
Endosulfan sulfate	0.0796	0.010	ug/l	0.100	ND	80	72-171			
Endrin	0.102	0.010	ug/l	0.100	ND	102	53-123			
Endrin aldehyde	0.0828	0.010	ug/l	0.100	ND	83	34-158			
gamma-BHC (Lindane)	0.0712	0.010	ug/l	0.100	ND	71	49-126			
Heptachlor	0.0736	0.010	ug/l	0.100	ND	74	56-155			
Heptachlor epoxide	0.0753	0.010	ug/l	0.100	ND	75	55-137			
Methoxychlor	0.0782	0.010	ug/l	0.100	ND	78	44-192			
Surr: Decachlorobiphenyl	*0.0757*		*ug/l*	*0.100*		*76*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0522*		*ug/l*	*0.100*		*52*	*70-130*			*S-11*
Matrix Spike (W5H0358-MS3)	**Source: 5H06090-01**			Analyzed: 08/20/15 22:53						
4,4´-DDD	0.103	0.010	ug/l	0.100	ND	103	62-144			
4,4´-DDE	0.101	0.010	ug/l	0.100	ND	101	53-134			
4,4´-DDT	0.113	0.010	ug/l	0.100	ND	113	48-170			
Aldrin	0.0789	0.010	ug/l	0.100	ND	79	49-107			
alpha-BHC	0.0899	0.010	ug/l	0.100	ND	90	47-125			

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5H0358-MS3)	**Source: 5H06090-01**			Analyzed: 08/20/15 22:53						
beta-BHC	0.101	0.010	ug/l	0.100	ND	101	62-123			
delta-BHC	0.106	0.010	ug/l	0.100	ND	106	56-140			
Dieldrin	0.0984	0.010	ug/l	0.100	ND	98	65-135			
Endosulfan I	0.0639	0.010	ug/l	0.100	ND	64	28-119			
Endosulfan II	0.0739	0.010	ug/l	0.100	ND	74	56-127			
Endosulfan sulfate	0.116	0.010	ug/l	0.100	ND	116	72-171			
Endrin	0.0997	0.010	ug/l	0.100	ND	100	53-123			
Endrin aldehyde	0.0867	0.010	ug/l	0.100	ND	87	34-158			
gamma-BHC (Lindane)	0.0938	0.010	ug/l	0.100	ND	94	49-126			
Heptachlor	0.0932	0.010	ug/l	0.100	ND	93	56-155			
Heptachlor epoxide	0.0926	0.010	ug/l	0.100	ND	93	55-137			
Methoxychlor	0.121	0.010	ug/l	0.100	ND	121	44-192			
Surr: Decachlorobiphenyl	*0.0863*		*ug/l*	*0.100*		*86*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0541*		*ug/l*	*0.100*		*54*	*70-130*			*S-11*
Matrix Spike Dup (W5H0358-MSD1)	**Source: 5H06096-03**			Analyzed: 08/20/15 21:20						
4,4´-DDD	0.0865	0.020	ug/l	0.100	ND	87	62-144	11	25	M-04
4,4´-DDE	0.0817	0.020	ug/l	0.100	ND	82	53-134	11	25	M-04
4,4´-DDT	0.0620	0.020	ug/l	0.100	ND	62	48-170	6	25	M-04
Aldrin	0.0553	0.020	ug/l	0.100	ND	55	49-107	25	25	M-04
alpha-BHC	0.0696	0.020	ug/l	0.100	ND	70	47-125	11	25	M-04
beta-BHC	0.0621	0.020	ug/l	0.100	ND	62	62-123	4	25	M-04
delta-BHC	0.0688	0.020	ug/l	0.100	ND	69	56-140	5	25	M-04
Dieldrin	0.0917	0.020	ug/l	0.100	ND	92	65-135	11	25	M-04
Endosulfan I	0.0440	0.020	ug/l	0.100	ND	44	28-119	5	25	M-04
Endosulfan II	0.0506	0.020	ug/l	0.100	ND	51	56-127	7	25	M-04, MS-05
Endosulfan sulfate	0.0640	0.020	ug/l	0.100	ND	64	72-171	6	25	M-04, MS-05
Endrin	0.0852	0.020	ug/l	0.100	ND	85	53-123	5	25	M-04
Endrin aldehyde	0.0358	0.020	ug/l	0.100	ND	36	34-158	9	25	M-04
gamma-BHC (Lindane)	0.0676	0.020	ug/l	0.100	ND	68	49-126	7	25	M-04
Heptachlor	0.0615	0.020	ug/l	0.100	ND	62	56-155	13	25	M-04
Heptachlor epoxide	0.0620	0.020	ug/l	0.100	ND	62	55-137	11	25	M-04
Methoxychlor	0.0585	0.020	ug/l	0.100	ND	58	44-192	6	25	M-04
Surr: Decachlorobiphenyl	*0.0770*		*ug/l*	*0.100*		*77*	*70-130*			*M-04*
Surr: Tetrachloro-meta-xylene	*0.0362*		*ug/l*	*0.100*		*36*	*70-130*			*M-04, S-11*
Matrix Spike Dup (W5H0358-MSD2)	**Source: 5H06094-03**			Analyzed: 08/20/15 22:22						
4,4´-DDD	0.0915	0.010	ug/l	0.100	ND	92	62-144	11	25	
4,4´-DDE	0.0857	0.010	ug/l	0.100	ND	86	53-134	3	25	
4,4´-DDT	0.0965	0.010	ug/l	0.100	ND	96	48-170	9	25	

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5H0358-MSD2)	**Source: 5H06094-03**			Analyzed: 08/20/15 22:22						
Aldrin	0.0794	0.010	ug/l	0.100	ND	79	49-107	9	25	
alpha-BHC	0.0753	0.010	ug/l	0.100	ND	75	47-125	12	25	
beta-BHC	0.0825	0.010	ug/l	0.100	ND	83	62-123	15	25	
delta-BHC	0.0981	0.010	ug/l	0.100	ND	98	56-140	10	25	
Dieldrin	0.0736	0.010	ug/l	0.100	ND	74	65-135	5	25	
Endosulfan I	0.0553	0.010	ug/l	0.100	ND	55	28-119	6	25	
Endosulfan II	0.0622	0.010	ug/l	0.100	ND	62	56-127	12	25	
Endosulfan sulfate	0.0941	0.010	ug/l	0.100	ND	94	72-171	17	25	
Endrin	0.110	0.010	ug/l	0.100	ND	110	53-123	8	25	
Endrin aldehyde	0.0809	0.010	ug/l	0.100	ND	81	34-158	2	25	
gamma-BHC (Lindane)	0.0771	0.010	ug/l	0.100	ND	77	49-126	8	25	
Heptachlor	0.0819	0.010	ug/l	0.100	ND	82	56-155	11	25	
Heptachlor epoxide	0.0820	0.010	ug/l	0.100	ND	82	55-137	9	25	
Methoxychlor	0.0917	0.010	ug/l	0.100	ND	92	44-192	16	25	
Surr: Decachlorobiphenyl	*0.0799*		*ug/l*	*0.100*		*80*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0490*		*ug/l*	*0.100*		*49*	*70-130*			*S-11*
Matrix Spike Dup (W5H0358-MSD3)	**Source: 5H06090-01**			Analyzed: 08/20/15 23:23						
4,4´-DDD	0.115	0.010	ug/l	0.100	ND	115	62-144	11	25	
4,4´-DDE	0.110	0.010	ug/l	0.100	ND	110	53-134	9	25	
4,4´-DDT	0.122	0.010	ug/l	0.100	ND	122	48-170	7	25	
Aldrin	0.0916	0.010	ug/l	0.100	ND	92	49-107	15	25	
alpha-BHC	0.0989	0.010	ug/l	0.100	ND	99	47-125	9	25	
beta-BHC	0.109	0.010	ug/l	0.100	ND	109	62-123	7	25	
delta-BHC	0.112	0.010	ug/l	0.100	ND	112	56-140	5	25	
Dieldrin	0.108	0.010	ug/l	0.100	ND	108	65-135	10	25	
Endosulfan I	0.0700	0.010	ug/l	0.100	ND	70	28-119	9	25	
Endosulfan II	0.0795	0.010	ug/l	0.100	ND	80	56-127	7	25	
Endosulfan sulfate	0.136	0.010	ug/l	0.100	ND	136	72-171	16	25	
Endrin	0.110	0.010	ug/l	0.100	ND	110	53-123	9	25	
Endrin aldehyde	0.0975	0.010	ug/l	0.100	ND	98	34-158	12	25	
gamma-BHC (Lindane)	0.102	0.010	ug/l	0.100	ND	102	49-126	9	25	
Heptachlor	0.102	0.010	ug/l	0.100	ND	102	56-155	10	25	
Heptachlor epoxide	0.100	0.010	ug/l	0.100	ND	100	55-137	8	25	
Methoxychlor	0.132	0.010	ug/l	0.100	ND	132	44-192	9	25	
Surr: Decachlorobiphenyl	*0.0928*		*ug/l*	*0.100*		*93*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0621*		*ug/l*	*0.100*		*62*	*70-130*			*S-11*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5H0269 - EPA 365.3

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5H0269 - EPA 365.3

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0269-BLK1)				Analyzed: 08/06/15 13:02						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W5H0269-BS1)				Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.204	0.010	mg/l	0.200		102	88-111			
Matrix Spike (W5H0269-MS1)		**Source: 5H05116-01**		Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.244	0.010	mg/l	0.200	0.0351	104	85-112			
Matrix Spike Dup (W5H0269-MSD1)		**Source: 5H05116-01**		Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.246	0.010	mg/l	0.200	0.0351	105	85-112	0.8	20	

Batch W5H0551 - EPA 365.3

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0551-BLK1)				Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W5H0551-BS1)				Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.216	0.010	mg/l	0.200		108	90-110			
Matrix Spike (W5H0551-MS1)		**Source: 5H05109-01**		Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.246	0.010	mg/l	0.200	0.0350	106	85-108			
Matrix Spike Dup (W5H0551-MSD1)		**Source: 5H05109-01**		Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.244	0.010	mg/l	0.200	0.0350	104	85-108	0.8	20	

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:56

Notes and Definitions

S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
M-04	Due to the nature of matrix interferences, sample extract 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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
33853	-A	MW-7S	8/3/15	16:15	12.8								

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: 18.2 °C						
pH: 7.05						
Sp Cond: 1762 µS/cm						
Turb: 0.70 NTU						

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon	MS	~~8/4/15~~ 8/3/15	~~9:17~~ 16:15	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Matan Salmon		8/4/15	9:30	
Received by:	MBAS		8/4/15	0920	
Relinquished by:					
Received by:					

[ ] Payment received | Check # | Amount: | Receipt # | Date:

5

CalAm PW_Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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 + divide 1L → 500mL + $Na_2S_2O_3$ + H_2SO_4

250mL + H_2SO_4

250mL NP

+2mL 1:1 HNO_3 to each 125mL

LJ 8/4/15

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Saturday, September 12, 2015

Lab Number: **AB33743**

Collection Date/Time: 8/2/2015 11:25 Sample Collector: SALMON M

Submittal Date/Time: 8/3/2015 8:25 Sample ID

Sample Description: MW-7M

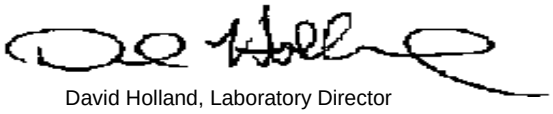
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**98**		2	8/5/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**18**		10	8/6/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	8/10/2015	TC
Arsenic, Total	EPA200.8	µg/L	**4**		1	8/6/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**282**		10	8/6/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**120**		10	8/5/2015	TC
Boron, Dissolved	EPA200.7	mg/L	**Not Detected**		0.25	8/5/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**6.6**		0.4	8/4/2015	TC
Calcium	EPA200.7	mg/L	**507**		5	8/5/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**520**		5	8/5/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		8/12/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	8/5/2015	TC
Chloride, Dissolved	EPA300.0	mg/L	**1739**		4	8/4/2015	TC
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		8/20/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**Not Detected**		3	8/4/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		100	8/5/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		8/8/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		8/17/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		8/12/2015	BSK
Dissolved Phosphorus	EPA 365.1	mg/L	**0.017**	E	0.01	8/13/2015	WECK
Endothall	EPA548.1	µg/L	**Not Detected**	E		8/11/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**Not Detected**		0.4	8/4/2015	TC
Glyphosate	EPA547	µg/L	**Not Detected**	E		8/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**2044**		10	9/11/2015	DH
Hydroxide	SM2320B	mg/L	**Not Detected**		5	8/5/2015	TC
Iodide	EPA9056M	µg/L	**Not Detected**	E	50	8/15/2015	WECK
Iron	EPA200.7	µg/L	**Not Detected**		100	8/5/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**Not Detected**		100	8/5/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	8/14/2015	TC
Lithium	EPA200.8	µg/L	**29**		1	8/6/2015	SM
Magnesium	EPA200.7	mg/L	**189**		5	8/5/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**192**		5	8/5/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**372**		100	8/5/2015	MW
Manganese, Total	EPA200.7	µg/L	**372**		100	8/5/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	8/4/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**15**		4.0	8/4/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	**3.4**		0.40	8/4/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**Not Detected**		0.4	8/4/2015	TC
Odor Threshold at 60 C	SM2150B	TON	**2**	H	1	8/4/2015	LRH
Ortho Phosphate as P	EPA 365.1	mg/L	**0.016**	E	0.01	8/6/2015	WECK

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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 (Field Test)	SM4500-H+B	pH	**7.17**			8/2/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**7.2**		0.1	8/3/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		8/12/2015	BSK
Potassium	EPA200.7	mg/L	**10**		5	8/5/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**10**		5.0	8/5/2015	MW
QC Ratio TDS/SEC	Calculation		**0.68**			8/5/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		8/11/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**30**		5	8/5/2015	MW
Sodium	EPA200.7	mg/L	**338**		5	8/5/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**342**		5	8/5/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**5650**		1	8/3/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**5507**		1	8/2/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**3689**		5	8/6/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**176**		4	8/4/2015	TC
Temperature (Field)	SM2550	° C	**18.4**			8/2/2015	MS
Total Diss. Solids	SM2540C	mg/L	**3832**		10	8/3/2015	HM
Turbidity	EPA180.1	NTU	**0.20**		0.05	8/3/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.88**		0.05	8/2/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Attached**	E		8/7/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**		100	8/5/2015	MW

Sample Comments: Odor:Earthy

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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

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Monterey CA, 93940

SAMPLE ID	**33743 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	338	0.04350	14.70
Potassium	10	0.02558	0.26
Calcium	507	0.04990	25.30
Magnesium	189	0.08229	15.55
NH3-N	0	0.07143	0.00
		SUM	55.81

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	98	0.02000	1.96
Sulfate	176	0.02082	3.66
Chloride	1739	0.02821	49.06
Nitrate-Nitrogen	3.4	0.07138	0.24
Phosphate-P	0.04	0.01031	0.00
Bromide	6.6	0.01252	0.08
		SUM	55.01

ANION-CATION BALANC **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	5650	
Cation Sum X 100	5581	**99%**
Anion Sum X 100	5501	**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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	342	0.04350	14.88
Potassium	10	0.02558	0.26
Calcium	520	0.04990	25.95
Magnesium	192	0.08229	15.80
NH3-N	0	0.07143	0.00
		SUM	56.88

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	98	0.02000	1.96
Sulfate	176	0.02082	3.66
Chloride	1739	0.02821	49.06
Nitrate-Nitrogen	3.4	0.07138	0.24
Phosphate-P	0.04	0.01031	0.00
Bromide	6.6	0.01252	0.08
		SUM	55.01

ANION-CATION BA **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	5650	
Cation Sum X 100	5688	**101%**
Anion Sum X 100	5501	**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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http://www.MBASinc.com

Alkalinity QC Summary (SM 2320B)

Date Analyzed: 8/5/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria	Time
ICVB	---	<10	---	< 10	9:02
ICV	40	42	105	95-105 %	9:02

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB33827	267	270	1	5	9:02

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 8/10/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.05	100.00%	90-110	1100
ICV	0.500	0.450	90.00%	90-110	1100
CCVB1	---	0.02	---	<0.05	1100
CCV1	0.500	0.470	94.00%	90-110	1100

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	
AB33882	ND	0.500	0.480	0.470	96	94	2.1	85-120	10	1100

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 8/3/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1415	100.2%	95-105	950
ICV	24800	24830	100.1%	95-105	1000

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB33743	5650	5650	0.0%	10	950

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: 8/3/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	3	---	<10	1350
ICVL	100	111	111	80-120	1350
ICV	500	506	101.2	90-110	1350

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB33735	360	386	7.0	10	1515
AB33745	26900	26100	3.0	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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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 8/14/2015
Time: 1000

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.364	---	<0.5
LCS	10.0	9.7	97	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
AB33712	1.0	10.0	11.1	10.8	101	98	2.7	85-120	10

2X on LCS, 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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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 8/3/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<0.05	1612
ICV	1.00	1.04	104.0%	95-105	1612
CCVB	---	ND	---	<0.05	1612
CCV	1.00	1.05	105.0%	95-105	1612

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB33750	1.800	1.800	0.00%	10	1612

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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300.0 QC Report

All units expressed in mg/L

Batch ID: **20150804**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.00	0.00	0.00	0.00	0.05	0.00
	ICV	2.07	20.17	2.20	20.76	2.19	2.06
	Rec 90-110%	103.35	100.87	109.90	103.80	109.45	103.15
	ICVL	0.19	2.40	0.20	1.93	0.22	0.49
	Rec 50-150%	92.92	119.98	100.49	96.73	110.94	246.56
Sample ID	**AB33750**	0.74	294.74	0.05	86.41	0.98	0.02
	MS	2.80	318.37	2.34	107.99	3.21	2.10
	Rec 80-120%	102.82	118.17	114.16	107.86	111.63	103.72
	MSD	2.75	315.23	2.36	106.97	3.23	2.15
	Rec 80-120%	100.69	102.46	115.41	102.78	112.51	106.14
	Diff 10%	1.54	0.99	1.07	0.94	0.55	2.28
	CCV	2.02	20.23	2.13	20.99	2.18	2.08
	Rec 90-110%	101.00	101.15	106.49	104.93	109.15	103.96
	Diff 10%	2.30	0.27	3.14	1.08	0.28	0.78
	CCVB	0.00	0.00	0.00	0.00	0.00	0.00

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Color QC Summary (SM 2120B)

Date Analyzed: 8/4/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	10:53
ICV	5	6	120.0	80-120	10:53
CCV	5	6	120.0	80-120	10:53
CCVB	---	<3	---	<3	10:53

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB33784	Not Detected	Not Detected	na	10	10:53

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 8/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.003	---	<0.05	856
ICVL	0.05	0.049	98	50-150	858
ICV	0.25	0.249	99.6	80-120	945

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	
AB33750	0.025	0.25	0.253	0.267	91.2	96.8	5.4	80/120	10	914

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
AB33838

Date Analyzed
Thursday, August 06, 2015

	ICVB	QCS 50	Sample	Spike	MS	MSD	MS-MSD	ICV	CCV	ICV-CCV	CCVB
	ug/L	%Rec.	ug/L	ug/L	%Rec.	% Rec.	% RPD	% Rec	% Rec	% RPD	ug/L
		85-115%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.0	97.4	27.6	50	103.2	99.3	2.5	97.2	102.7	5.50	0.03
Aluminum	0.1	100.1	-1.9	50	91.7	89.0	3.1	101.3	98.6	2.69	0.10
Arsenic	0.0	90.2	8.6	50	108.6	104.1	3.7	96.0	99.4	3.43	0.15
Strontium	0.0	99.5	888.4	50	150.0	95.6	2.9	99.4	98.1	1.32	0.00
Barium	0.0	96.7	194.7	50	107.8	92.3	3.2	97.1	95.8	1.28	0.00

The MS for Strontium was elevated, spike was less tha 6% of unspiked sample.

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 # 20150805

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	-0.01	1.02	102.2%	1.03	102.5%	0.3%	1	1.03	103.3%	1	1.0	99.3%
B 249.772	0.05-5ppm	0.01	0.00	1.05	104.6%	1.05	105.1%	0.5%	1	1.06	106.1%	1	1.0	101.7%
Ca 317.933	50-300ppm	-2.29	-2.30	52.1	104.1%	52.3	104.7%	0.5%	50	51.2	102.4%	50	47.3	94.6%
Ca 396.847	0.5-50ppm	-0.64	-0.65	51.6	103.1%	51.0	102.0%	1.1%	50	51.4	102.7%	50	49.1	98.2%
Cu 324.754	10ppb-100ppm	-14.40	-12.46	1051	105.1%	1033	103.3%	1.7%	1000	1042	104.2%	1000	988.6	98.9%
Cu 327.395	10ppb-100ppm	-10.14	-10.50	1066	106.6%	1052	105.2%	1.3%	1000	1054	105.4%	1000	1009.0	100.9%
Fe 238.204	10ppb-100ppm	-0.10	-3.07	1039	103.9%	1028	102.8%	1.1%	1000	1025	102.5%	1000	978.0	97.8%
Fe 259.940	10ppb-100ppm	-1.81	-0.41	1018	101.8%	1015	101.5%	0.3%	1000	1016	101.6%	1000	981.7	98.2%
K 766.491	0.5-750ppm	0.04	0.04	10.3	103.4%	10.2	101.7%	1.7%	10	10.3	103.3%	10	9.8	97.8%
Mg 202.582	50-1000ppm	-0.99	-1.03	53.6	107.2%	53.0	105.9%	1.2%	50	53.1	106.3%	50	49.9	99.9%
Mg 279.078	0.5-50ppm	-0.11	-0.11	51.9	103.9%	51.3	102.7%	1.2%	50	51.6	103.1%	50	48.4	96.8%
Mn 257.610	10ppb-11ppm	-12.16	-12.75	1037	103.7%	1037	103.7%	0.0%	1000	1028	102.8%	1000	996.0	99.6%
Mn 260.568	10ppb-11ppm	-11.80	-11.04	1029	102.9%	1030	103.0%	0.0%	1000	1022	102.2%	1000	998.9	99.9%
Na 568.821	50-1000ppm	2.46	2.41	54.3	108.6%	53.5	107.1%	1.5%	50	54.2	108.4%	50	56.5	113.0%
Na 589.592	0.5-50ppm	-0.11	-0.11	52.9	105.7%	51.6	103.2%	2.4%	50	53.0	106.0%	50	55.3	110.6%
Si 251.611	0.5-200ppm	-0.05	-0.20	51.8	103.6%	51.5	102.9%	0.6%	50	51.7	103.4%	50	49.4	98.7%
Si 252.411	0.5-200ppm	-0.08	-0.20	51.8	103.6%	51.5	103.1%	0.5%	50	51.7	103.3%	50	49.0	98.0%
Zn 213.857	10ppb-50ppm	-37.19	-50.32	1023	102.3%	1022	102.2%	0.1%	1000	1026	102.6%	1000	963.3	96.3%

Sample ID AB33839

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.14	1.10	96.1%	1.10	96.3%	0.2%	1	1.06	105.9%	2.4%	0.00
B 249.772	0.14	1.10	95.8%	1.10	95.9%	0.2%	1	1.05	105.3%	0.8%	0.01
Ca 317.933	56.6	107.6	101.9%	107.1	101.0%	0.4%	50	50.3	100.6%	1.7%	-3.18
Ca 396.847	55.9	92.7	73.7%	94.4	77.0%	1.8%	50	51.0	102.0%	0.7%	-0.33
Cu 324.754	-4	1018	102.2%	1012	101.6%	0.6%	1000	1037	103.7%	0.5%	-3.37
Cu 327.395	-2	1018	102.0%	1014	101.6%	0.3%	1000	1031	103.1%	2.2%	-3.84
Fe 238.204	14	1029	101.5%	1024	101.1%	0.4%	1000	1038	103.8%	1.3%	-0.96
Fe 259.940	14	1024	101.0%	1021	100.7%	0.3%	1000	1033	103.3%	1.6%	-0.79
K 766.491	2.2	12.0	98.1%	12.0	98.0%	0.1%	10	10.1	101.1%	2.2%	0.07
Mg 202.582	25.1	75.1	100.0%	74.9	99.5%	0.3%	50	51.1	102.3%	3.8%	-0.97
Mg 279.078	25.7	74.9	98.4%	74.4	97.4%	0.6%	50	51.6	103.1%	0.0%	-0.03
Mn 257.610	62	1071	100.9%	1062	100.1%	0.8%	1000	1031	103.1%	0.3%	-2.61
Mn 260.568	63	1074	101.0%	1065	100.2%	0.8%	1000	1030	103.0%	0.8%	-0.37
Na 568.821	31.2	79.7	97.1%	78.5	94.8%	1.5%	50	50.8	101.6%	6.4%	3.18
Na 589.592	31.2	80.0	97.6%	79.9	97.3%	0.1%	50	51.4	102.8%	3.1%	-0.02
Si 251.611	36.5	82.5	92.1%	82.0	91.0%	0.6%	50	52.2	104.3%	0.9%	-0.02
Si 252.411	36.5	82.7	92.3%	82.1	91.2%	0.7%	50	52.5	105.0%	1.6%	0.00
Zn 213.857	-25	973	99.8%	975	99.9%	0.1%	1000	1019	101.9%	1%	-25.06

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pH QC Summary (SM 4500 H+)

Date Analyzed: 8/3/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.88	100.3	95-105	16:30

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB33753	7.4	7.4	0	10	16:30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5H0606
8/18/2015
Invoice: A517272

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5H0606 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 8/6/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	Cal Am	**Project PO#:**	-
Received:	8/06/2015 - 15:16		
Report Due:	8/20/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 5.0

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet Ice
Received On Blue Ice
Packing Material - Bubble Wrap
Packing Material - Foam
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:

MS1.0	Matrix spike recoveries exceed control limits.
SR3.0	Surrogate recovery exceeds control limits. No material impact as all associated spike recoveries are within acceptable limits.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5H0606-01
Sampled By: Matan Salmon
Sample Description: MW-7M (monitoring) // AB33743

Sample Date - Time: 08/02/15 - 11:25
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A508977	08/07/15	08/08/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A508977	08/07/15	08/08/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	120 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A509049	08/10/15	08/12/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A509049	08/10/15	08/12/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A509049	08/10/15	08/12/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A509049	08/10/15	08/12/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A509049	08/10/15	08/12/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A509049	08/10/15	08/12/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A509049	08/10/15	08/12/15	
Surrogate: DCPAA	EPA 515.3	101 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A508944	08/07/15	08/07/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	

Certificate of Analysis

Sample ID: A5H0606-01
Sampled By: Matan Salmon
Sample Description: MW-7M (monitoring) // AB33743

Sample Date - Time: 08/02/15 - 11:25
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	A508944	08/07/15	08/07/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A508944	08/07/15	08/07/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A508944	08/07/15	08/07/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A508944	08/07/15	08/07/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A508944	08/07/15	08/07/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A508944	08/07/15	08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	100 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	102 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5H0606-01
Sampled By: Matan Salmon
Sample Description: MW-7M (monitoring) // AB33743

Sample Date - Time: 08/02/15 - 11:25
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/11/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/11/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A508940	08/07/15	08/11/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A508940	08/07/15	08/11/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A508940	08/07/15	08/11/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A508940	08/07/15	08/11/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A508940	08/07/15	08/11/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A508940	08/07/15	08/11/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A508940	08/07/15	08/11/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/11/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/11/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A508940	08/07/15	08/11/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A508940	08/07/15	08/11/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A508940	08/07/15	08/11/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/11/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A508940	08/07/15	08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	73 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A509108	08/11/15	08/12/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A509108	08/11/15	08/12/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A509108	08/11/15	08/12/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A509108	08/11/15	08/12/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A509108	08/11/15	08/12/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A509010	08/10/15	08/10/15	
Surrogate: AMPA	EPA 547	102 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A508990	08/08/15	08/11/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A508991	08/08/15	08/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A508977										Prepared: 08/07/2015	
Prep Method: EPA 504.1										Analyst: ANM	
Blank (A508977-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							08/07/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.56*			*0.46*		*122*	*70-130*			08/07/15	
Blank Spike (A508977-BS1)											
Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12		121	70-130			08/07/15	
Ethylene Dibromide (EDB)	0.14	0.020	ug/L	0.12		112	70-130			08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.58*			*0.46*		*128*	*70-130*			08/07/15	
Blank Spike Dup (A508977-BSD1)											
Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12		113	70-130	7	20	08/08/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		104	70-130	7	20	08/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.53*			*0.46*		*115*	*70-130*			08/08/15	
Matrix Spike (A508977-MS1), Source: A5H0346-06											
Dibromochloropropane (DBCP)	0.15	0.010	ug/L	0.12	ND	118	65-135			08/07/15	
Ethylene Dibromide (EDB)	0.14	0.020	ug/L	0.12	ND	108	65-135			08/07/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.58*			*0.46*		*126*	*70-130*			08/07/15	
EPA 515.3 - Quality Control											
Batch: A509049										Prepared: 08/10/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A509049-BLK1)											
2,4,5-T	ND	1.0	ug/L							08/11/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							08/11/15	
2,4-D	ND	10	ug/L							08/11/15	
Bentazon	ND	2.0	ug/L							08/11/15	
Dalapon	ND	10	ug/L							08/11/15	
Dicamba	ND	1.5	ug/L							08/11/15	
Dinoseb	ND	2.0	ug/L							08/11/15	
Pentachlorophenol	ND	0.20	ug/L							08/11/15	
Picloram	ND	1.0	ug/L							08/11/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			08/11/15	
Blank Spike (A509049-BS1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130			08/11/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80		108	70-130			08/11/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130			08/11/15	
Bentazon	8.2	2.0	ug/L	8.0		103	70-130			08/11/15	
Dalapon	4.2	10	ug/L	4.0		104	70-130			08/11/15	
Dicamba	6.5	1.5	ug/L	6.0		108	70-130			08/11/15	
Dinoseb	0.86	2.0	ug/L	0.80		108	70-130			08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		101	70-130			08/11/15	
Picloram	0.36	1.0	ug/L	0.40		90	70-130			08/11/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A509049										Prepared: 08/10/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A509049-BS1)											
Surrogate: DCPAA	*58*			*58*		*99*	*70-130*			08/11/15	
Blank Spike Dup (A509049-BSD1)											
2,4,5-T	4.4	1.0	ug/L	4.0		109	70-130	0	20	08/11/15	
2,4,5-TP (Silvex)	0.84	1.0	ug/L	0.80		105	70-130	2	20	08/11/15	
2,4-D	0.46	10	ug/L	0.40		115	70-130	2	20	08/11/15	
Bentazon	8.7	2.0	ug/L	8.0		109	70-130	6	20	08/11/15	
Dalapon	3.8	10	ug/L	4.0		96	70-130	8	20	08/11/15	
Dicamba	6.5	1.5	ug/L	6.0		108	70-130	0	20	08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80		99	70-130	9	20	08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		102	70-130	1	20	08/11/15	
Picloram	0.38	1.0	ug/L	0.40		96	70-130	7	20	08/11/15	
Surrogate: DCPAA	*56*			*58*		*97*	*70-130*			08/11/15	
Matrix Spike (A509049-MS1), Source: A5H0189-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	108	70-130			08/11/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80	ND	108	70-130			08/11/15	
2,4-D	0.45	10	ug/L	0.40	ND	112	70-130			08/11/15	
Bentazon	8.0	2.0	ug/L	8.0	ND	100	70-130			08/11/15	
Dalapon	4.4	10	ug/L	4.0	ND	110	70-130			08/11/15	
Dicamba	6.4	1.5	ug/L	6.0	ND	107	70-130			08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130			08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	99	70-130			08/11/15	
Picloram	0.45	1.0	ug/L	0.40	ND	113	70-130			08/11/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			08/11/15	
Matrix Spike Dup (A509049-MSD1), Source: A5H0189-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	107	70-130	0	20	08/11/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80	ND	104	70-130	4	20	08/11/15	
2,4-D	0.45	10	ug/L	0.40	ND	114	70-130	2	20	08/11/15	
Bentazon	7.9	2.0	ug/L	8.0	ND	98	70-130	2	20	08/11/15	
Dalapon	4.4	10	ug/L	4.0	ND	111	70-130	0	20	08/11/15	
Dicamba	6.5	1.5	ug/L	6.0	ND	108	70-130	1	20	08/11/15	
Dinoseb	0.79	2.0	ug/L	0.80	ND	99	70-130	0	20	08/11/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	100	70-130	2	20	08/11/15	
Picloram	0.45	1.0	ug/L	0.40	ND	113	70-130	0	20	08/11/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			08/11/15	
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A508944-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							08/07/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							08/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A508944-BLK1)											
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							08/07/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							08/07/15	
1,1-Dichloroethane	ND	0.50	ug/L							08/07/15	
1,1-Dichloroethene	ND	0.50	ug/L							08/07/15	
1,1-Dichloropropene	ND	0.50	ug/L							08/07/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							08/07/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
1,2-Dichloroethane	ND	0.50	ug/L							08/07/15	
1,2-Dichloropropane	ND	0.50	ug/L							08/07/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							08/07/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
1,3-Dichloropropane	ND	0.50	ug/L							08/07/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							08/07/15	
2,2-Dichloropropane	ND	0.50	ug/L							08/07/15	
2-Butanone	ND	5.0	ug/L							08/07/15	
2-Chlorotoluene	ND	0.50	ug/L							08/07/15	
2-Hexanone	ND	10	ug/L							08/07/15	
4-Chlorotoluene	ND	0.50	ug/L							08/07/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							08/07/15	
Acetone	ND	10	ug/L							08/07/15	
Benzene	ND	0.50	ug/L							08/07/15	
Bromobenzene	ND	0.50	ug/L							08/07/15	
Bromochloromethane	ND	0.50	ug/L							08/07/15	
Bromodichloromethane	ND	0.50	ug/L							08/07/15	
Bromoform	ND	0.50	ug/L							08/07/15	
Bromomethane	ND	0.50	ug/L							08/07/15	
Carbon Tetrachloride	ND	0.50	ug/L							08/07/15	
Chlorobenzene	ND	0.50	ug/L							08/07/15	
Chloroethane	ND	0.50	ug/L							08/07/15	
Chloroform	ND	0.50	ug/L							08/07/15	
Chloromethane	ND	0.50	ug/L							08/07/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							08/07/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							08/07/15	
Dibromochloromethane	ND	0.50	ug/L							08/07/15	
Dibromomethane	ND	0.50	ug/L							08/07/15	
Dichlorodifluoromethane	ND	0.50	ug/L							08/07/15	
Dichloromethane	ND	0.50	ug/L							08/07/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							08/07/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							08/07/15	
Ethylbenzene	ND	0.50	ug/L							08/07/15	
Hexachlorobutadiene	ND	0.50	ug/L							08/07/15	
Isopropylbenzene	ND	0.50	ug/L							08/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A508944-BLK1)											
m,p-Xylenes	ND	0.50	ug/L							08/07/15	
Methyl-t-butyl ether	ND	0.50	ug/L							08/07/15	
Naphthalene	ND	0.50	ug/L							08/07/15	
n-Butylbenzene	ND	0.50	ug/L							08/07/15	
n-Propylbenzene	ND	0.50	ug/L							08/07/15	
o-Xylene	ND	0.50	ug/L							08/07/15	
p-Isopropyltoluene	ND	0.50	ug/L							08/07/15	
sec-Butylbenzene	ND	0.50	ug/L							08/07/15	
Styrene	ND	0.50	ug/L							08/07/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							08/07/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							08/07/15	
tert-Butylbenzene	ND	0.50	ug/L							08/07/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							08/07/15	
Toluene	ND	0.50	ug/L							08/07/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							08/07/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							08/07/15	
Trichloroethene (TCE)	ND	0.50	ug/L							08/07/15	
Trichlorofluoromethane	ND	5.0	ug/L							08/07/15	
Vinyl Chloride	ND	0.50	ug/L							08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*97*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			08/07/15	
Blank Spike (A508944-BS1)											
1,1,1,2-Tetrachloroethane	8.8	0.50	ug/L	10		88	70-130			08/07/15	
1,1,1-Trichloroethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1,2,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.4	10	ug/L	10		94	70-130			08/07/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
1,1-Dichloroethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1-Dichloroethene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,1-Dichloropropene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,2,3-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
1,2,4-Trichlorobenzene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
1,2-Dichloroethane	9.6	0.50	ug/L	10		96	70-130			08/07/15	
1,2-Dichloropropane	9.5	0.50	ug/L	10		95	70-130			08/07/15	
1,3,5-Trimethylbenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
1,3-Dichloropropane	9.7	0.50	ug/L	10		97	70-130			08/07/15	
1,4-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
2,2-Dichloropropane	8.3	0.50	ug/L	10		83	70-130			08/07/15	
2-Butanone	9.6	5.0	ug/L	10		96	70-130			08/07/15	
2-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
2-Hexanone	8.7	10	ug/L	10		87	70-130			08/07/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A508944-BS1)											
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
4-Methyl-2-pentanone	8.3	5.0	ug/L	10		83	70-130			08/07/15	
Acetone	9.2	10	ug/L	10		92	70-130			08/07/15	
Benzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Bromobenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Bromochloromethane	10	0.50	ug/L	10		101	70-130			08/07/15	
Bromodichloromethane	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Bromoform	8.8	0.50	ug/L	10		88	70-130			08/07/15	
Bromomethane	7.7	0.50	ug/L	10		77	70-130			08/07/15	
Carbon disulfide	11	10	ug/L	10		106	70-130			08/07/15	
Carbon Tetrachloride	9.2	0.50	ug/L	10		92	70-130			08/07/15	
Chlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/07/15	
Chloroethane	9.5	0.50	ug/L	10		95	70-130			08/07/15	
Chloroform	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Chloromethane	8.5	0.50	ug/L	10		85	70-130			08/07/15	
cis-1,2-Dichloroethene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
cis-1,3-Dichloropropene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
Dibromochloromethane	9.1	0.50	ug/L	10		91	70-130			08/07/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130			08/07/15	
Dichlorodifluoromethane	8.6	0.50	ug/L	10		86	70-130			08/07/15	
Dichloromethane	10	0.50	ug/L	10		102	70-130			08/07/15	
Di-isopropyl ether (DIPE)	8.8	3.0	ug/L	10		88	70-130			08/07/15	
Ethyl tert-Butyl Ether (ETBE)	8.4	0.50	ug/L	10		84	70-130			08/07/15	
Ethylbenzene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
Hexachlorobutadiene	9.0	0.50	ug/L	10		90	70-130			08/07/15	
Isopropylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
m,p-Xylenes	19	0.50	ug/L	20		97	70-130			08/07/15	
Methyl-t-butyl ether	18	0.50	ug/L	20		89	70-130			08/07/15	
Naphthalene	8.6	0.50	ug/L	10		86	70-130			08/07/15	
n-Butylbenzene	9.1	0.50	ug/L	10		91	70-130			08/07/15	
n-Propylbenzene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
o-Xylene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
p-Isopropyltoluene	9.3	0.50	ug/L	10		93	70-130			08/07/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			08/07/15	
Styrene	9.1	0.50	ug/L	10		91	70-130			08/07/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		106	70-130			08/07/15	
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		101	70-130			08/07/15	
tert-Butylbenzene	9.4	0.50	ug/L	10		94	70-130			08/07/15	
Tetrachloroethene (PCE)	9.2	0.50	ug/L	10		92	70-130			08/07/15	
Toluene	9.6	0.50	ug/L	10		96	70-130			08/07/15	
trans-1,2-Dichloroethene	9.5	0.50	ug/L	10		95	70-130			08/07/15	
trans-1,3-Dichloropropene	8.6	0.50	ug/L	10		86	70-130			08/07/15	
Trichloroethene (TCE)	9.5	0.50	ug/L	10		95	70-130			08/07/15	
Trichlorofluoromethane	10	5.0	ug/L	10		100	70-130			08/07/15	
Vinyl Chloride	9.4	0.50	ug/L	10		94	70-130			08/07/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A508944-BS1)											
Surrogate: 1,2-Dichlorobenzene-d4	*51*			*50*		*103*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*102*	*70-130*			08/07/15	
Blank Spike Dup (A508944-BSD1)											
1,1,1,2-Tetrachloroethane	8.8	0.50	ug/L	10		88	70-130	1	30	08/07/15	
1,1,1-Trichloroethane	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,1,2,2-Tetrachloroethane	9.5	0.50	ug/L	10		95	70-130	4	30	08/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.0	10	ug/L	10		90	70-130	5	30	08/07/15	
1,1,2-Trichloroethane	9.5	0.50	ug/L	10		95	70-130	4	30	08/07/15	
1,1-Dichloroethane	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,1-Dichloroethene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,1-Dichloropropene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2,3-Trichlorobenzene	8.8	0.50	ug/L	10		88	70-130	3	30	08/07/15	
1,2,4-Trichlorobenzene	8.7	0.50	ug/L	10		87	70-130	3	30	08/07/15	
1,2,4-Trimethylbenzene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2-Dichlorobenzene	9.2	0.50	ug/L	10		92	70-130	5	30	08/07/15	
1,2-Dichloroethane	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
1,2-Dichloropropane	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,3,5-Trimethylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
1,3-Dichlorobenzene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
1,3-Dichloropropane	9.3	0.50	ug/L	10		93	70-130	4	30	08/07/15	
1,4-Dichlorobenzene	9.2	0.50	ug/L	10		92	70-130	5	30	08/07/15	
2,2-Dichloropropane	7.9	0.50	ug/L	10		79	70-130	5	30	08/07/15	
2-Butanone	8.6	5.0	ug/L	10		86	70-130	11	30	08/07/15	
2-Chlorotoluene	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
2-Hexanone	8.3	10	ug/L	10		83	70-130	4	30	08/07/15	
4-Chlorotoluene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
4-Methyl-2-pentanone	8.1	5.0	ug/L	10		81	70-130	2	30	08/07/15	
Acetone	8.7	10	ug/L	10		87	70-130	5	30	08/07/15	
Benzene	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
Bromobenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
Bromochloromethane	9.2	0.50	ug/L	10		92	70-130	9	30	08/07/15	
Bromodichloromethane	9.0	0.50	ug/L	10		90	70-130	4	30	08/07/15	
Bromoform	8.5	0.50	ug/L	10		85	70-130	4	30	08/07/15	
Bromomethane	7.7	0.50	ug/L	10		77	70-130	0	30	08/07/15	
Carbon disulfide	10	10	ug/L	10		100	70-130	6	30	08/07/15	
Carbon Tetrachloride	8.8	0.50	ug/L	10		88	70-130	5	30	08/07/15	
Chlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	08/07/15	
Chloroethane	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Chloroform	9.2	0.50	ug/L	10		92	70-130	4	30	08/07/15	
Chloromethane	8.3	0.50	ug/L	10		83	70-130	2	30	08/07/15	
cis-1,2-Dichloroethene	9.3	0.50	ug/L	10		93	70-130	4	30	08/07/15	
cis-1,3-Dichloropropene	8.5	0.50	ug/L	10		85	70-130	5	30	08/07/15	
Dibromochloromethane	8.6	0.50	ug/L	10		86	70-130	5	30	08/07/15	
Dibromomethane	9.3	0.50	ug/L	10		93	70-130	5	30	08/07/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A508944										Prepared: 08/07/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A508944-BSD1)											
Dichlorodifluoromethane	8.4	0.50	ug/L	10		84	70-130	2	30	08/07/15	
Dichloromethane	9.8	0.50	ug/L	10		98	70-130	4	30	08/07/15	
Di-isopropyl ether (DIPE)	8.7	3.0	ug/L	10		87	70-130	1	30	08/07/15	
Ethyl tert-Butyl Ether (ETBE)	8.2	0.50	ug/L	10		82	70-130	2	30	08/07/15	
Ethylbenzene	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Hexachlorobutadiene	8.5	0.50	ug/L	10		85	70-130	5	30	08/07/15	
Isopropylbenzene	9.0	0.50	ug/L	10		90	70-130	6	30	08/07/15	
m,p-Xylenes	18	0.50	ug/L	20		92	70-130	5	30	08/07/15	
Methyl-t-butyl ether	17	0.50	ug/L	20		85	70-130	4	30	08/07/15	
Naphthalene	8.8	0.50	ug/L	10		88	70-130	3	30	08/07/15	
n-Butylbenzene	8.8	0.50	ug/L	10		88	70-130	4	30	08/07/15	
n-Propylbenzene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
o-Xylene	9.0	0.50	ug/L	10		90	70-130	5	30	08/07/15	
p-Isopropyltoluene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
sec-Butylbenzene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
Styrene	8.7	0.50	ug/L	10		87	70-130	5	30	08/07/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		106	70-130	0	30	08/07/15	
tert-Butyl alcohol (TBA)	9.8	2.0	ug/L	10		98	70-130	3	30	08/07/15	
tert-Butylbenzene	8.9	0.50	ug/L	10		89	70-130	5	30	08/07/15	
Tetrachloroethene (PCE)	9.1	0.50	ug/L	10		91	70-130	1	30	08/07/15	
Toluene	9.4	0.50	ug/L	10		94	70-130	2	30	08/07/15	
trans-1,2-Dichloroethene	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
trans-1,3-Dichloropropene	8.2	0.50	ug/L	10		82	70-130	5	30	08/07/15	
Trichloroethene (TCE)	9.1	0.50	ug/L	10		91	70-130	5	30	08/07/15	
Trichlorofluoromethane	9.3	5.0	ug/L	10		93	70-130	7	30	08/07/15	
Vinyl Chloride	9.1	0.50	ug/L	10		91	70-130	4	30	08/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*50*			*50*		*100*	*70-130*			08/07/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*99*	*70-130*			08/07/15	
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A508940-BLK1)											
Alachlor	ND	1.0	ug/L							08/11/15	
Atrazine	ND	0.50	ug/L							08/11/15	
Benzo(a)pyrene	ND	0.10	ug/L							08/11/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							08/11/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							08/11/15	
Bromacil	ND	10	ug/L							08/11/15	
Butachlor	ND	0.38	ug/L							08/11/15	
Diazinon	ND	0.25	ug/L							08/11/15	
Dimethoate	ND	10	ug/L							08/11/15	
Metolachlor	ND	0.50	ug/L							08/11/15	
Metribuzin	ND	0.50	ug/L							08/11/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A508940-BLK1)											
Molinate	ND	2.0	ug/L							08/11/15	
Prometryn	ND	2.0	ug/L							08/11/15	
Propachlor	ND	0.50	ug/L							08/11/15	
Simazine	ND	1.0	ug/L							08/11/15	
Thiobencarb	ND	1.0	ug/L							08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.8*			*5.0*		*96*	*70-130*			08/11/15	
Blank Spike (A508940-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		109	70-130			08/11/15	
Atrazine	0.50	0.50	ug/L	0.50		100	70-130			08/11/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		116	70-130			08/11/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		104	70-130			08/11/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		109	70-130			08/11/15	
Bromacil	1.2	10	ug/L	1.0		120	70-130			08/11/15	
Butachlor	1.1	0.38	ug/L	1.0		108	70-130			08/11/15	
Diazinon	0.20	0.25	ug/L	0.20		100	70-130			08/11/15	
Dimethoate	0.83	10	ug/L	1.0		83	70-130			08/11/15	
Metolachlor	2.2	0.50	ug/L	2.0		108	70-130			08/11/15	
Metribuzin	0.97	0.50	ug/L	1.0		97	70-130			08/11/15	
Molinate	0.94	2.0	ug/L	1.0		94	70-130			08/11/15	
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			08/11/15	
Propachlor	0.51	0.50	ug/L	0.50		102	70-130			08/11/15	
Simazine	0.34	1.0	ug/L	0.35		97	70-130			08/11/15	
Thiobencarb	0.49	1.0	ug/L	0.50		99	70-130			08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.6*			*5.0*		*92*	*70-130*			08/11/15	
Blank Spike Dup (A508940-BSD1)											
Alachlor	1.1	1.0	ug/L	1.0		106	70-130	3	30	08/11/15	
Atrazine	0.53	0.50	ug/L	0.50		106	70-130	5	30	08/11/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		117	70-130	1	30	08/11/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		105	70-130	1	30	08/11/15	
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5		106	70-130	3	30	08/11/15	
Bromacil	1.2	10	ug/L	1.0		121	70-130	1	30	08/11/15	
Butachlor	1.0	0.38	ug/L	1.0		104	70-130	4	30	08/11/15	
Diazinon	0.19	0.25	ug/L	0.20		94	70-130	7	30	08/11/15	
Dimethoate	0.84	10	ug/L	1.0		84	70-130	1	30	08/11/15	
Metolachlor	2.1	0.50	ug/L	2.0		104	70-130	3	30	08/11/15	
Metribuzin	0.95	0.50	ug/L	1.0		95	70-130	2	30	08/11/15	
Molinate	0.88	2.0	ug/L	1.0		88	70-130	7	30	08/11/15	
Prometryn	1.4	2.0	ug/L	2.0		71	70-130	10	30	08/11/15	
Propachlor	0.49	0.50	ug/L	0.50		98	70-130	4	30	08/11/15	
Simazine	0.36	1.0	ug/L	0.35		104	70-130	7	30	08/11/15	
Thiobencarb	0.52	1.0	ug/L	0.50		103	70-130	5	30	08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.3*			*5.0*		*85*	*70-130*			08/11/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A508940										Prepared: 08/07/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A508940-MS1), Source: A5H0423-01											
Alachlor	1.1	1.0	ug/L	1.0	ND	110	70-130			08/11/15	
Atrazine	0.57	0.50	ug/L	0.50	ND	112	70-130			08/11/15	
Benzo(a)pyrene	0.15	0.10	ug/L	0.10	ND	152	70-130			08/11/15	MS1.0 ***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0	ND	110	70-130			08/11/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	110	70-130			08/11/15	
Bromacil	1.2	10	ug/L	1.0	ND	116	70-130			08/11/15	
Butachlor	1.1	0.38	ug/L	1.0	ND	111	70-130			08/11/15	
Diazinon	0.21	0.25	ug/L	0.20	ND	104	70-130			08/11/15	
Dimethoate	1.0	10	ug/L	1.0	ND	101	70-130			08/11/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	106	70-130			08/11/15	
Metribuzin	1.1	0.50	ug/L	1.0	ND	109	70-130			08/11/15	
Molinate	1.0	2.0	ug/L	1.0	ND	100	70-130			08/11/15	
Prometryn	2.1	2.0	ug/L	2.0	ND	102	70-130			08/11/15	
Propachlor	0.53	0.50	ug/L	0.50	ND	106	70-130			08/11/15	
Simazine	0.36	1.0	ug/L	0.35	ND	103	70-130			08/11/15	
Thiobencarb	0.53	1.0	ug/L	0.50	ND	106	70-130			08/11/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.6*			*5.0*		*91*	*70-130*			08/11/15	
EPA 531.1 - Quality Control											
Batch: A509108										Prepared: 08/11/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A509108-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							08/12/15	
Aldicarb	ND	3.0	ug/L							08/12/15	
Aldicarb Sulfone	ND	2.0	ug/L							08/12/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							08/12/15	
Carbaryl	ND	5.0	ug/L							08/12/15	
Carbofuran	ND	5.0	ug/L							08/12/15	
Methiocarb	ND	2.0	ug/L							08/12/15	
Methomyl	ND	2.0	ug/L							08/12/15	
Oxamyl	ND	20	ug/L							08/12/15	
Propoxur	ND	2.0	ug/L							08/12/15	
Blank Spike (A509108-BS1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		99	80-120			08/12/15	
Aldicarb	3.7	3.0	ug/L	4.0		94	80-120			08/12/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		100	80-120			08/12/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0		98	80-120			08/12/15	
Carbaryl	3.9	5.0	ug/L	4.0		98	80-120			08/12/15	
Carbofuran	4.1	5.0	ug/L	4.0		101	80-120			08/12/15	
Methiocarb	3.9	2.0	ug/L	4.0		97	80-120			08/12/15	
Methomyl	4.2	2.0	ug/L	4.0		104	80-120			08/12/15	
Oxamyl	4.0	20	ug/L	4.0		100	80-120			08/12/15	
Propoxur	4.0	2.0	ug/L	4.0		100	80-120			08/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A509108										Prepared: 08/11/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank Spike Dup (A509108-BSD1)											
3-Hydroxycarbofuran	3.8	3.0	ug/L	4.0		95	80-120	5	20	08/13/15	
Aldicarb	3.4	3.0	ug/L	4.0		85	80-120	10	20	08/13/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120	1	20	08/13/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		100	80-120	2	20	08/13/15	
Carbaryl	4.2	5.0	ug/L	4.0		105	80-120	7	20	08/13/15	
Carbofuran	3.9	5.0	ug/L	4.0		97	80-120	4	20	08/13/15	
Methiocarb	4.1	2.0	ug/L	4.0		103	80-120	5	20	08/13/15	
Methomyl	4.2	2.0	ug/L	4.0		104	80-120	0	20	08/13/15	
Oxamyl	4.1	20	ug/L	4.0		101	80-120	1	20	08/13/15	
Propoxur	3.8	2.0	ug/L	4.0		95	80-120	5	20	08/13/15	
Matrix Spike (A509108-MS1), Source: A5H0575-01											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0	ND	98	65-135			08/12/15	
Aldicarb	3.4	3.0	ug/L	4.0	ND	85	65-135			08/12/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			08/12/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0	ND	99	65-135			08/12/15	
Carbaryl	4.0	5.0	ug/L	4.0	ND	100	65-135			08/12/15	
Carbofuran	3.9	5.0	ug/L	4.0	ND	98	65-135			08/12/15	
Methiocarb	4.0	2.0	ug/L	4.0	ND	100	65-135			08/12/15	
Methomyl	4.0	2.0	ug/L	4.0	ND	100	65-135			08/12/15	
Oxamyl	4.1	20	ug/L	4.0	ND	102	65-135			08/12/15	
Propoxur	3.9	2.0	ug/L	4.0	ND	97	65-135			08/12/15	
EPA 547 - Quality Control											
Batch: A509010										Prepared: 08/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A509010-BLK1)											
Glyphosate	ND	25	ug/L							08/10/15	
Surrogate: AMPA	*100*			*100*		*101*	*70-130*			08/10/15	
Blank Spike (A509010-BS1)											
Glyphosate	89	25	ug/L	100		89	70-130			08/10/15	
Surrogate: AMPA	*85*			*100*		*85*	*70-130*			08/10/15	
Blank Spike Dup (A509010-BSD1)											
Glyphosate	100	25	ug/L	100		103	70-130	15	30	08/10/15	
Surrogate: AMPA	*100*			*100*		*105*	*70-130*			08/10/15	
Matrix Spike (A509010-MS1), Source: A5H0189-01											
Glyphosate	110	25	ug/L	100	ND	109	70-130			08/10/15	
Surrogate: AMPA	*88*			*100*		*87*	*70-130*			08/10/15	
Matrix Spike Dup (A509010-MSD1), Source: A5H0189-01											

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 547 - Quality Control											
Batch: A509010										Prepared: 08/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Matrix Spike Dup (A509010-MSD1), Source: A5H0189-01											
Glyphosate	100	25	ug/L	100	ND	102	70-130	7	30	08/10/15	
Surrogate: AMPA	*130*			*100*		*134*	*70-130*			08/10/15	*SR3.0*
EPA 548.1 - Quality Control											
Batch: A508990										Prepared: 08/08/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A508990-BLK1)											
Endothall	ND	45	ug/L							08/11/15	
Blank Spike (A508990-BS1)											
Endothall	17	45	ug/L	20		85	46-116			08/11/15	
Blank Spike Dup (A508990-BSD1)											
Endothall	15	45	ug/L	20		77	46-116	10	30	08/11/15	
Matrix Spike (A508990-MS1), Source: A5H0189-01											
Endothall	ND	45	ug/L	20	ND	0	46-116			08/11/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A508991										Prepared: 08/08/2015	
Prep Method: EPA 549.2										Analyst: MTM	
Blank (A508991-BLK1)											
Diquat	ND	4.0	ug/L							08/12/15	
Blank Spike (A508991-BS1)											
Diquat	3.6	4.0	ug/L	4.0		89	70-130			08/12/15	
Blank Spike Dup (A508991-BSD1)											
Diquat	3.6	4.0	ug/L	4.0		90	70-130	1	30	08/12/15	
Matrix Spike (A508991-MS1), Source: A5H0189-01											
Diquat	3.7	4.0	ug/L	4.0	ND	93	70-130			08/12/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	CA000792016-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

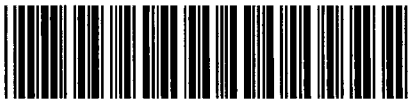
A5H0606

08062015

Monte6227

Turnaround: Standard

Due Date: 8/20/2015



Monterey Bay Analytical

Printed: 8/6/2015 6:19:22PM

BSK Associates Engineers & Laboratories

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A5H0606 08/06/2015
Monte6227 10

Turnaround Time Request
- [X] 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; 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
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?* [X] 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)*: 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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
1	MW-7M (monitoring)	8/2/15	1125	GW	AB33743	X	X	X	X	X	X	X	X	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Holland [signature]	MBAS	8/4/15	1600		
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 Whet [signature]		Date 8/6/15	Time 1516	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC (circled) UPS GSO WALK-IN FED EX Courier: ____
Cooling Method: Wet Blue None

Custody Seal: Y / N
Chilling Process Begun: Y / N
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

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BSK Associates SR-FL-0002-14

Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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: 1 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 $Na_2S_2O_3$	—	—							
None (P) White Cap	—	—							
Cr6 (P) Br. Green Label $NH_4OH(NH_4)_2SO_4$ **DW**	Cl, pH > 8	Y N							
Cr6 (P) Pink Label $NH_4OH(NH_4)_2SO_4$ **WW**	pH 9.3-9.7	Y N							
Cr6 (P) Pink Label $NH_4OH(NH_4)_2SO_4$ **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—							
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C						
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C						
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A						
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	4V						
$Na_2S_2O_3$ + 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	—	—							

8/6/15

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JH @ 1810 Labels checked by: SB @ 1821 RUSH Paged by: _____ @ _____

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

August 18, 2015 Ceres ID: 10751

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 August 12, 2015. This sample was analyzed 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

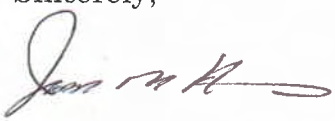
This work was authorized under M.B.A.'s Project # AB33743.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10751-001	MW-7M (monitoring)	8/12/2015	8/2/2015	11:25

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:	AB33743	Sample Size:	1.000 L	QC Batch #:	1350	Date Extracted:	13-Aug-15
				ZB-5 MS Analysis Date:	17-Aug-15		

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.37		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	99.9	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	110	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB33743	Sample Size:	1.000 L	QC Batch #:	1350	Date Extracted:	13-Aug-15
				ZB-5 MS Analysis Date:	17-Aug-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	11.0	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	97.3	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	11.2	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

EPA Method 1613B *Ceres Analytical Laboratory*

Sample ID:	**MW-7M (monitoring)**				
Client Data		**Sample Data**		**Laboratory Data**	
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10751-001
Project:	AB33743	Sample Size:	1.013 L	QC Batch #:	1350
Date Collected:	2-Aug-15			ZB-5 MS Analysis Date:	17-Aug-15
Time Collected:	11:25				

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.92		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	89.5	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	98.2	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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
Ceres Project ID:_____
Temperature: _____ °C

Pg. ___ of ___

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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-7M (monitoring)	8/2/2015	1125	Aq	1	X							AB33743
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**
D. Holland	8/11/2015	16:00		8/12/15	10:06

Client understands that all terms desribed 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: 10751	Date/Time: 8/12/15 10:06
Client Project ID: AB33743	Received Temp: 0.3 °C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N 0.3°C
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Aqueous sample pH: 7	
List COC discrepancies: NONE 8/12/15	
List Damaged Samples: NONE 8/12/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10751 PB: 1350 Sample #s: 1 Due Date: 8/26/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10751-1	1533.3 g	520.1 g	1.013 L

Chemist: _____ Date: 8/13/15

Method: 1613B
SOP #: 3014

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1350-MB001	Method Blank		1.00L	JL 8/13/15 YDH	JL 8/14/15 YDH	NA	JL 8/14/15	NA	JL 8/14/15 YDH
0-1350-OPR001	OPR		1.00L	(A) ↓ ↓	↓ ↓	↓	↓	↓	↓ ↓
10751-1350-001	MW-7M (monitoring)	✓	1.013L	↓ ↓	↓ ↓	↓	↓	↓	↓ ↓

Comments (A) OPR spiked with NSS.

Soxhlet Start: 15:10 8/13/15

Soxhlet Stop: 07:25 8/14/15

Samples Logged out by: JL 09:00 8/13/15

Samples Returned by: NA

Note samples Depleted: I

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 11:00 8/14/15 JL

Extracts returned to Storage Location: 16:20 8/17/15 JL

Chemist: JL

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10	2/11/20
NSS	B		
CSS	C	0	
RSS	D	20	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450 mL	C15B12BLK	7/30/16
Hexanes	30, 30, 100, 20 mL	C15C13BLK	7/30/16
S. Gel	4 g	P071615A	1/16/16
Basic Gel	4 g	P061915A	12/19/15
Acid Gel	8 g	P071615B	1/16/16
Acid Al	6 g	P072915A	1/29/16
Na_2SO_4	1.5 g	P041515A	10/15/15
20% DCM/Hex	30 mL	L070515A	1/5/16

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5H05115

Report Date: 08/26/15 13:54

Received Date: 08/05/15 11:40

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 08/05/ 15 11:40 with the Chain of Custody document. The samples were received in good condition, at 4.0 °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: 08/05/15 11:40
Date Reported: 08/26/15 13:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-7M (AB33743)	Matan Salmon	5H05115-01	Water	08/02/15 11:25

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

5H05115-01 MW-7M

Sampled: 08/02/15 11:25 **Sampled By:** Matan Salmon **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5H0730 Prepared: 08/15/15 09:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	50	ug/l	5	08/15/15 10:22	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5H0358 Prepared: 08/07/15 14:10 Analyst: Paolo Lorenzo A. Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	08/20/15 23:54	
4,4´-DDE	ND		0.010	ug/l	1	08/20/15 23:54	
4,4´-DDT	ND		0.010	ug/l	1	08/20/15 23:54	
Aldrin	ND		0.010	ug/l	1	08/20/15 23:54	
alpha-BHC	ND		0.010	ug/l	1	08/20/15 23:54	
Aroclor 1016	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1221	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1232	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1242	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1248	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1254	ND		0.10	ug/l	1	08/20/15 23:54	
Aroclor 1260	ND		0.10	ug/l	1	08/20/15 23:54	
beta-BHC	ND		0.010	ug/l	1	08/20/15 23:54	
Chlordane (tech)	ND		0.10	ug/l	1	08/20/15 23:54	
Chlorothalonil	ND		0.050	ug/l	1	08/20/15 23:54	
delta-BHC	ND		0.010	ug/l	1	08/20/15 23:54	
Dieldrin	ND		0.010	ug/l	1	08/20/15 23:54	
Endosulfan I	ND		0.010	ug/l	1	08/20/15 23:54	
Endosulfan II	ND		0.010	ug/l	1	08/20/15 23:54	
Endosulfan sulfate	ND		0.010	ug/l	1	08/20/15 23:54	
Endrin	ND		0.010	ug/l	1	08/20/15 23:54	
Endrin aldehyde	ND		0.010	ug/l	1	08/20/15 23:54	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	08/20/15 23:54	
Heptachlor	ND		0.010	ug/l	1	08/20/15 23:54	
Heptachlor epoxide	ND		0.010	ug/l	1	08/20/15 23:54	
Hexachlorobenzene	ND		0.050	ug/l	1	08/20/15 23:54	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	08/20/15 23:54	
Methoxychlor	ND		0.010	ug/l	1	08/20/15 23:54	
PCBs, Total	ND		0.50	ug/l	1	08/20/15 23:54	
Propachlor	ND		0.050	ug/l	1	08/20/15 23:54	
Toxaphene	ND		1.0	ug/l	1	08/20/15 23:54	
Trifluralin	ND		0.010	ug/l	1	08/20/15 23:54	
Surr: Decachlorobiphenyl	*80 %*	Conc:*0.0802*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*80 %*	Conc:*0.0803*	*70-130*	%			

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

5H05115-01 MW-7M

Sampled: 08/02/15 11:25 **Sampled By:** Matan Salmon **Matrix:** Water

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 365.3 Batch: W5H0269 Prepared: 08/06/15 10:58 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**0.016**	0.010	mg/l	1	08/06/15 13:02	

Method: EPA 365.3 Batch: W5H0551 Prepared: 08/11/15 16:08 Analyst: Nhat Duy M Nguyen

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**0.017**	0.010	mg/l	1	08/13/15 17:35	

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

QUALITY CONTROL SECTION

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Anions by IC, EPA Method 9056 - Quality Control

Batch W5H0730 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0730-BLK1)				Analyzed: 08/15/15 09:49						
Iodide	ND	10	ug/l							
LCS (W5H0730-BS1)				Analyzed: 08/15/15 10:04						
Iodide	40.2	10	ug/l	40.0		101	85-115			
Matrix Spike (W5H0730-MS1)	**Source: 5H13010-01**			Analyzed: 08/15/15 11:45						
Iodide	7160	1000	ug/l	4000	3250	98	80-120			
Matrix Spike Dup (W5H0730-MSD1)	**Source: 5H13010-01**			Analyzed: 08/15/15 12:05						
Iodide	7440	1000	ug/l	4000	3250	105	80-120	4	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0358-BLK1)				Analyzed: 08/20/15 19:48						
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							

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0358-BLK1)				Analyzed: 08/20/15 19:48						
Hexachlorobenzene	ND	0.050	ug/l							
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	*0.0840*		*ug/l*	*0.100*		*84*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0452*		*ug/l*	*0.100*		*45*	*70-130*			*S-11*
LCS (W5H0358-BS1)				Analyzed: 08/20/15 20:19						
4,4´-DDD	0.119	0.010	ug/l	0.100		119	55-142			
4,4´-DDE	0.111	0.010	ug/l	0.100		111	49-129			
4,4´-DDT	0.127	0.010	ug/l	0.100		127	54-160			
Aldrin	0.0835	0.010	ug/l	0.100		84	29-115			
alpha-BHC	0.104	0.010	ug/l	0.100		104	59-131			
beta-BHC	0.114	0.010	ug/l	0.100		114	63-136			
delta-BHC	0.120	0.010	ug/l	0.100		120	59-137			
Dieldrin	0.106	0.010	ug/l	0.100		106	59-135			
Endosulfan I	0.0719	0.010	ug/l	0.100		72	28-138			
Endosulfan II	0.0842	0.010	ug/l	0.100		84	53-133			
Endosulfan sulfate	0.104	0.010	ug/l	0.100		104	58-155			
Endrin	0.111	0.010	ug/l	0.100		111	57-148			
Endrin aldehyde	0.0996	0.010	ug/l	0.100		100	45-139			
gamma-BHC (Lindane)	0.105	0.010	ug/l	0.100		105	59-129			
Heptachlor	0.0978	0.010	ug/l	0.100		98	42-136			
Heptachlor epoxide	0.0991	0.010	ug/l	0.100		99	59-134			
Methoxychlor	0.101	0.010	ug/l	0.100		101	56-167			
Surr: Decachlorobiphenyl	*0.106*		*ug/l*	*0.100*		*106*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0547*		*ug/l*	*0.100*		*55*	*70-130*			*S-11*
Matrix Spike (W5H0358-MS1)	**Source: 5H06096-03**			Analyzed: 08/20/15 20:50						
4,4´-DDD	0.0771	0.020	ug/l	0.100	ND	77	62-144			M-04
4,4´-DDE	0.0730	0.020	ug/l	0.100	ND	73	53-134			M-04
4,4´-DDT	0.0583	0.020	ug/l	0.100	ND	58	48-170			M-04
Aldrin	0.0429	0.020	ug/l	0.100	ND	43	49-107			M-04, MS-05
alpha-BHC	0.0625	0.020	ug/l	0.100	ND	62	47-125			M-04
beta-BHC	0.0597	0.020	ug/l	0.100	ND	60	62-123			M-04, MS-05
delta-BHC	0.0653	0.020	ug/l	0.100	ND	65	56-140			M-04
Dieldrin	0.0823	0.020	ug/l	0.100	ND	82	65-135			M-04

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5H0358-MS1)	**Source: 5H06096-03**			Analyzed: 08/20/15 20:50						
Endosulfan I	0.0417	0.020	ug/l	0.100	ND	42	28-119			M-04
Endosulfan II	0.0471	0.020	ug/l	0.100	ND	47	56-127			M-04, MS-05
Endosulfan sulfate	0.0606	0.020	ug/l	0.100	ND	61	72-171			M-04, MS-05
Endrin	0.0814	0.020	ug/l	0.100	ND	81	53-123			M-04
Endrin aldehyde	0.0326	0.020	ug/l	0.100	ND	33	34-158			M-04, MS-05
gamma-BHC (Lindane)	0.0628	0.020	ug/l	0.100	ND	63	49-126			M-04
Heptachlor	0.0542	0.020	ug/l	0.100	ND	54	56-155			M-04, MS-05
Heptachlor epoxide	0.0552	0.020	ug/l	0.100	ND	55	55-137			M-04
Methoxychlor	0.0550	0.020	ug/l	0.100	ND	55	44-192			M-04
Surr: Decachlorobiphenyl	*0.0705*		*ug/l*	*0.100*		*70*	*70-130*			*M-04*
Surr: Tetrachloro-meta-xylene	*0.0308*		*ug/l*	*0.100*		*31*	*70-130*			*M-04, S-11*
Matrix Spike (W5H0358-MS2)	**Source: 5H06094-03**			Analyzed: 08/20/15 21:51						
4,4´-DDD	0.0819	0.010	ug/l	0.100	ND	82	62-144			
4,4´-DDE	0.0834	0.010	ug/l	0.100	ND	83	53-134			
4,4´-DDT	0.0880	0.010	ug/l	0.100	ND	88	48-170			
Aldrin	0.0723	0.010	ug/l	0.100	ND	72	49-107			
alpha-BHC	0.0669	0.010	ug/l	0.100	ND	67	47-125			
beta-BHC	0.0713	0.010	ug/l	0.100	ND	71	62-123			
delta-BHC	0.0884	0.010	ug/l	0.100	ND	88	56-140			
Dieldrin	0.0698	0.010	ug/l	0.100	ND	70	65-135			
Endosulfan I	0.0523	0.010	ug/l	0.100	ND	52	28-119			
Endosulfan II	0.0554	0.010	ug/l	0.100	ND	55	56-127			MS-05
Endosulfan sulfate	0.0796	0.010	ug/l	0.100	ND	80	72-171			
Endrin	0.102	0.010	ug/l	0.100	ND	102	53-123			
Endrin aldehyde	0.0828	0.010	ug/l	0.100	ND	83	34-158			
gamma-BHC (Lindane)	0.0712	0.010	ug/l	0.100	ND	71	49-126			
Heptachlor	0.0736	0.010	ug/l	0.100	ND	74	56-155			
Heptachlor epoxide	0.0753	0.010	ug/l	0.100	ND	75	55-137			
Methoxychlor	0.0782	0.010	ug/l	0.100	ND	78	44-192			
Surr: Decachlorobiphenyl	*0.0757*		*ug/l*	*0.100*		*76*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0522*		*ug/l*	*0.100*		*52*	*70-130*			*S-11*
Matrix Spike (W5H0358-MS3)	**Source: 5H06090-01**			Analyzed: 08/20/15 22:53						
4,4´-DDD	0.103	0.010	ug/l	0.100	ND	103	62-144			
4,4´-DDE	0.101	0.010	ug/l	0.100	ND	101	53-134			
4,4´-DDT	0.113	0.010	ug/l	0.100	ND	113	48-170			
Aldrin	0.0789	0.010	ug/l	0.100	ND	79	49-107			
alpha-BHC	0.0899	0.010	ug/l	0.100	ND	90	47-125			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5H0358-MS3)	**Source: 5H06090-01**			Analyzed: 08/20/15 22:53						
beta-BHC	0.101	0.010	ug/l	0.100	ND	101	62-123			
delta-BHC	0.106	0.010	ug/l	0.100	ND	106	56-140			
Dieldrin	0.0984	0.010	ug/l	0.100	ND	98	65-135			
Endosulfan I	0.0639	0.010	ug/l	0.100	ND	64	28-119			
Endosulfan II	0.0739	0.010	ug/l	0.100	ND	74	56-127			
Endosulfan sulfate	0.116	0.010	ug/l	0.100	ND	116	72-171			
Endrin	0.0997	0.010	ug/l	0.100	ND	100	53-123			
Endrin aldehyde	0.0867	0.010	ug/l	0.100	ND	87	34-158			
gamma-BHC (Lindane)	0.0938	0.010	ug/l	0.100	ND	94	49-126			
Heptachlor	0.0932	0.010	ug/l	0.100	ND	93	56-155			
Heptachlor epoxide	0.0926	0.010	ug/l	0.100	ND	93	55-137			
Methoxychlor	0.121	0.010	ug/l	0.100	ND	121	44-192			
Surr: Decachlorobiphenyl	*0.0863*		*ug/l*	*0.100*		*86*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0541*		*ug/l*	*0.100*		*54*	*70-130*			*S-11*
Matrix Spike Dup (W5H0358-MSD1)	**Source: 5H06096-03**			Analyzed: 08/20/15 21:20						
4,4´-DDD	0.0865	0.020	ug/l	0.100	ND	87	62-144	11	25	M-04
4,4´-DDE	0.0817	0.020	ug/l	0.100	ND	82	53-134	11	25	M-04
4,4´-DDT	0.0620	0.020	ug/l	0.100	ND	62	48-170	6	25	M-04
Aldrin	0.0553	0.020	ug/l	0.100	ND	55	49-107	25	25	M-04
alpha-BHC	0.0696	0.020	ug/l	0.100	ND	70	47-125	11	25	M-04
beta-BHC	0.0621	0.020	ug/l	0.100	ND	62	62-123	4	25	M-04
delta-BHC	0.0688	0.020	ug/l	0.100	ND	69	56-140	5	25	M-04
Dieldrin	0.0917	0.020	ug/l	0.100	ND	92	65-135	11	25	M-04
Endosulfan I	0.0440	0.020	ug/l	0.100	ND	44	28-119	5	25	M-04
Endosulfan II	0.0506	0.020	ug/l	0.100	ND	51	56-127	7	25	M-04, MS-05
Endosulfan sulfate	0.0640	0.020	ug/l	0.100	ND	64	72-171	6	25	M-04, MS-05
Endrin	0.0852	0.020	ug/l	0.100	ND	85	53-123	5	25	M-04
Endrin aldehyde	0.0358	0.020	ug/l	0.100	ND	36	34-158	9	25	M-04
gamma-BHC (Lindane)	0.0676	0.020	ug/l	0.100	ND	68	49-126	7	25	M-04
Heptachlor	0.0615	0.020	ug/l	0.100	ND	62	56-155	13	25	M-04
Heptachlor epoxide	0.0620	0.020	ug/l	0.100	ND	62	55-137	11	25	M-04
Methoxychlor	0.0585	0.020	ug/l	0.100	ND	58	44-192	6	25	M-04
Surr: Decachlorobiphenyl	*0.0770*		*ug/l*	*0.100*		*77*	*70-130*			*M-04*
Surr: Tetrachloro-meta-xylene	*0.0362*		*ug/l*	*0.100*		*36*	*70-130*			*M-04, S-11*
Matrix Spike Dup (W5H0358-MSD2)	**Source: 5H06094-03**			Analyzed: 08/20/15 22:22						
4,4´-DDD	0.0915	0.010	ug/l	0.100	ND	92	62-144	11	25	
4,4´-DDE	0.0857	0.010	ug/l	0.100	ND	86	53-134	3	25	
4,4´-DDT	0.0965	0.010	ug/l	0.100	ND	96	48-170	9	25	

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0358 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5H0358-MSD2)	**Source: 5H06094-03**			Analyzed: 08/20/15 22:22						
Aldrin	0.0794	0.010	ug/l	0.100	ND	79	49-107	9	25	
alpha-BHC	0.0753	0.010	ug/l	0.100	ND	75	47-125	12	25	
beta-BHC	0.0825	0.010	ug/l	0.100	ND	83	62-123	15	25	
delta-BHC	0.0981	0.010	ug/l	0.100	ND	98	56-140	10	25	
Dieldrin	0.0736	0.010	ug/l	0.100	ND	74	65-135	5	25	
Endosulfan I	0.0553	0.010	ug/l	0.100	ND	55	28-119	6	25	
Endosulfan II	0.0622	0.010	ug/l	0.100	ND	62	56-127	12	25	
Endosulfan sulfate	0.0941	0.010	ug/l	0.100	ND	94	72-171	17	25	
Endrin	0.110	0.010	ug/l	0.100	ND	110	53-123	8	25	
Endrin aldehyde	0.0809	0.010	ug/l	0.100	ND	81	34-158	2	25	
gamma-BHC (Lindane)	0.0771	0.010	ug/l	0.100	ND	77	49-126	8	25	
Heptachlor	0.0819	0.010	ug/l	0.100	ND	82	56-155	11	25	
Heptachlor epoxide	0.0820	0.010	ug/l	0.100	ND	82	55-137	9	25	
Methoxychlor	0.0917	0.010	ug/l	0.100	ND	92	44-192	16	25	
Surr: Decachlorobiphenyl	*0.0799*		*ug/l*	*0.100*		*80*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0490*		*ug/l*	*0.100*		*49*	*70-130*			*S-11*
Matrix Spike Dup (W5H0358-MSD3)	**Source: 5H06090-01**			Analyzed: 08/20/15 23:23						
4,4´-DDD	0.115	0.010	ug/l	0.100	ND	115	62-144	11	25	
4,4´-DDE	0.110	0.010	ug/l	0.100	ND	110	53-134	9	25	
4,4´-DDT	0.122	0.010	ug/l	0.100	ND	122	48-170	7	25	
Aldrin	0.0916	0.010	ug/l	0.100	ND	92	49-107	15	25	
alpha-BHC	0.0989	0.010	ug/l	0.100	ND	99	47-125	9	25	
beta-BHC	0.109	0.010	ug/l	0.100	ND	109	62-123	7	25	
delta-BHC	0.112	0.010	ug/l	0.100	ND	112	56-140	5	25	
Dieldrin	0.108	0.010	ug/l	0.100	ND	108	65-135	10	25	
Endosulfan I	0.0700	0.010	ug/l	0.100	ND	70	28-119	9	25	
Endosulfan II	0.0795	0.010	ug/l	0.100	ND	80	56-127	7	25	
Endosulfan sulfate	0.136	0.010	ug/l	0.100	ND	136	72-171	16	25	
Endrin	0.110	0.010	ug/l	0.100	ND	110	53-123	9	25	
Endrin aldehyde	0.0975	0.010	ug/l	0.100	ND	98	34-158	12	25	
gamma-BHC (Lindane)	0.102	0.010	ug/l	0.100	ND	102	49-126	9	25	
Heptachlor	0.102	0.010	ug/l	0.100	ND	102	56-155	10	25	
Heptachlor epoxide	0.100	0.010	ug/l	0.100	ND	100	55-137	8	25	
Methoxychlor	0.132	0.010	ug/l	0.100	ND	132	44-192	9	25	
Surr: Decachlorobiphenyl	*0.0928*		*ug/l*	*0.100*		*93*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0621*		*ug/l*	*0.100*		*62*	*70-130*			*S-11*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5H0269 - EPA 365.3

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5H0269 - EPA 365.3

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0269-BLK1)				Analyzed: 08/06/15 13:02						
o-Phosphate as P	ND	0.010	mg/l							
LCS (W5H0269-BS1)				Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.204	0.010	mg/l	0.200		102	88-111			
Matrix Spike (W5H0269-MS1)		**Source: 5H05116-01**		Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.244	0.010	mg/l	0.200	0.0351	104	85-112			
Matrix Spike Dup (W5H0269-MSD1)		**Source: 5H05116-01**		Analyzed: 08/06/15 13:02						
o-Phosphate as P	0.246	0.010	mg/l	0.200	0.0351	105	85-112	0.8	20	

Batch W5H0551 - EPA 365.3

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0551-BLK1)				Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W5H0551-BS1)				Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.216	0.010	mg/l	0.200		108	90-110			
Matrix Spike (W5H0551-MS1)		**Source: 5H05109-01**		Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.246	0.010	mg/l	0.200	0.0350	106	85-108			
Matrix Spike Dup (W5H0551-MSD1)		**Source: 5H05109-01**		Analyzed: 08/13/15 17:35						
Phosphorus, Dissolved	0.244	0.010	mg/l	0.200	0.0350	104	85-108	0.8	20	

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/05/15 11:40
Date Reported: 08/26/15 13:54

Notes and Definitions

S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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.
M-04	Due to the nature of matrix interferences, sample extract 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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
33743		MW-7M	8/2/15	11:25am	8.8°C						22		

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:	7.17		
		Sp Cond:	5507 µS/cm		
		Turb:	0.88 NTU		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon		8/2/15	11:25am	Is sample for regulatory purposes? (Yes) / No
Relinquished by:					
Received by:	Sarah McGinnis		8/3/15	0825	
Relinquished by:					
Received by:					

[ ] Payment received | Check # | Amount: | Receipt # | Date:

SMC

33743 Cal Am GeoScience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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
33743	125mL	HNO_3 + Filt in field	8/3/15 SMC
	125mL	HNO_3	↓
	(2) 1L AG	Added 1:1 HCl	

Lab ID	Cont. Size	Pres	Date/Initials

Comments

1L lab filtered → (0.45μm)

250mL NP

250mL H_2SO_4

500mL H_2SO_4 + $Na_2S_2O_3$

HM

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Saturday, September 12, 2015

Lab Number: **AB34038**

Collection Date/Time: 8/9/2015 15:00 Sample Collector: SALMON M.

Submittal Date/Time: 8/10/2015 11:53 Sample ID

Sample Description: MW-7D

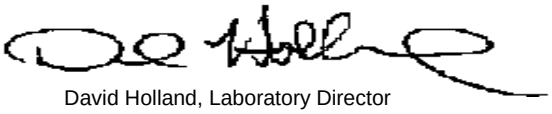
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**109**		2	8/14/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		100	8/18/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	8/24/2015	MW
Arsenic, Total	EPA200.8	µg/L	**41**		10	8/18/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**110**		100	8/18/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**133**		10	8/17/2015	TC
Boron, Dissolved	EPA200.7	mg/L	**1.71**		0.5	8/17/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**44.3**		10	8/10/2015	TC
Calcium	EPA200.7	mg/L	**1900**		5	8/17/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**1890**		5	8/17/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		8/20/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	8/17/2015	TC
Chloride, Dissolved	EPA300.0	mg/L	**13589**		100	8/10/2015	TC
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Attached**	E		8/27/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**Not Detected**		3	8/11/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		100	8/17/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		8/18/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		8/17/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		8/18/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		8/18/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**Not Detected**		1	8/10/2015	TC
Glyphosate	EPA547	µg/L	**Not Detected**	E		8/17/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**9030**		10	8/18/2015	TC
Hydroxide	SM2320B	mg/L	**Not Detected**		5	8/17/2015	TC
Iodide	EPA9056M	µg/L	**Not Detected**	E	500	8/15/2015	WECK
Iron	EPA200.7	µg/L	**Not Detected**		100	8/17/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**Not Detected**		100	8/17/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	8/25/2015	TC
Lithium	EPA200.8	µg/L	**271**		10	8/18/2015	SM
Magnesium	EPA200.7	mg/L	**1040**		5	8/17/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**1010**		5	8/17/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**230**		100	8/17/2015	MW
Manganese, Total	EPA200.7	µg/L	**232**		100	8/17/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	8/11/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**6**	J	10	8/10/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	**1.4**		1.00	8/10/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**Not Detected**		1	8/10/2015	TC
Odor Threshold at 60 C	SM2150B	TON	**1**		1	8/11/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.05**		0.01	8/11/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**6.77**			8/9/2015	MS

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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)	**6.9**		0.1	8/10/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		8/20/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.02**	J	0.03	8/26/2015	LRH
Potassium	EPA200.7	mg/L	**57**		5	8/17/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**55**		5	8/17/2015	MW
QC Ratio TDS/SEC	Calculation		**0.69**			8/14/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		8/17/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**35**		5	8/17/2015	MW
Sodium	EPA200.7	mg/L	**6834**		5	8/17/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**6540**		5	8/17/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**38800**		1	8/13/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**39065**		1	8/9/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**12676**		50	8/18/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**1882**		10	8/10/2015	TC
Temperature (Field)	SM2550	° C	**19.7**			8/9/2015	MS
Total Diss. Solids	SM2540C	mg/L	**26700**		10	8/11/2015	HM
Turbidity	EPA180.1	NTU	**0.20**		0.05	8/11/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.85**		0.05	8/9/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		8/13/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**		100	8/17/2015	MW

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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	**34038 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6834	0.04350	297.28
Potassium	57	0.02558	1.46
Calcium	1900	0.04990	94.81
Magnesium	1040	0.08229	85.58
NH3-N	0	0.07143	0.00
		SUM	479.13

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	109	0.02000	2.18
Sulfate	1882	0.02082	39.18
Chloride	13589	0.02821	383.35
Nitrate-Nitrogen	1.4	0.07138	0.10
Phosphate-P	0.02	0.01031	0.00
Bromide	44.3	0.01252	0.55
		SUM	425.36

ANION-CATION BALANCI **6** (% 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	38800	
Cation Sum X 100	47913	**123%**
Anion Sum X 100	42536	**110%**

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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6540	0.04350	284.49
Potassium	55	0.02558	1.41
Calcium	1890	0.04990	94.31
Magnesium	1010	0.08229	83.11
NH3-N	0	0.07143	0.00
		SUM	463.32

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	109	0.02000	2.18
Sulfate	1882	0.02082	39.18
Chloride	13589	0.02821	383.35
Nitrate-Nitrogen	1.4	0.07138	0.10
Phosphate-P	0.02	0.01031	0.00
Bromide	44.3	0.01252	0.55
		SUM	425.36

ANION-CATION BAI **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	38800	
Cation Sum X 100	46332	**119%**
Anion Sum X 100	42536	**110%**

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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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 8/14/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria	Time
ICVB	---	< 10 mg/L	---	<10mg/L	10:18
ICV	40	41	103	95-105 %	10:18

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB34038	109	109	0	5	10:18

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Color QC Summary (SM 2120B)

Date Analyzed: 8/11/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	15:27
ICV	5	6	120.0	80-120	15:27
CCV	5	6	120.0	80-120	15:27
CCVB	---	<3	---	<3	15:27

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB34083	Not Detected	Not Detected	na	10	15:27

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150817

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.02	0.01	1.02	102.4%	1.02	101.7%	0.7%	1	1.00	99.7%	1	1.0	100.8%
B 249.772	0.05-5ppm	0.02	0.01	1.02	102.4%	1.03	103.0%	0.6%	1	1.00	100.1%	1	1.0	101.5%
Ca 317.933	50-300ppm	-4.48	-4.54	50.8	101.5%	51.4	102.7%	1.2%	50	50.0	99.9%	50	47.8	95.7%
Ca 396.847	0.5-50ppm	-0.40	-0.45	53.2	106.4%	53.2	106.5%	0.1%	50	51.7	103.5%	50	51.6	103.2%
Cu 324.754	10ppb-100ppm	-0.54	-2.18	1096	109.6%	1095	109.5%	0.1%	1000	1028	102.8%	1000	1036.5	103.6%
Cu 327.395	10ppb-100ppm	0.49	-2.09	1095	109.5%	1089	108.9%	0.5%	1000	1033	103.3%	1000	1035.3	103.5%
Fe 238.204	10ppb-100ppm	-1.71	-2.06	1039	103.9%	1040	104.0%	0.2%	1000	1022	102.2%	1000	1012.3	101.2%
Fe 259.940	10ppb-100ppm	-1.35	-4.77	1050	105.0%	1052	105.2%	0.2%	1000	1028	102.8%	1000	1031.3	103.1%
K 766.491	0.5-750ppm	0.00	-0.01	10.3	102.9%	10.4	104.2%	1.3%	10	9.8	98.4%	10	10.0	99.7%
Mg 202.582	50-1000ppm	-1.35	-1.36	52.2	104.4%	52.1	104.2%	0.2%	50	50.4	100.9%	50	49.9	99.9%
Mg 279.078	0.5-50ppm	0.01	0.01	53.1	106.2%	53.5	107.0%	0.8%	50	51.3	102.6%	50	51.0	102.0%
Mn 257.610	10ppb-11ppm	-1.93	-2.17	1046	104.6%	1051	105.1%	0.5%	1000	1022	102.2%	1000	1031.5	103.1%
Mn 260.568	10ppb-11ppm	-2.73	-4.35	1069	106.9%	1068	106.8%	0.1%	1000	1039	103.9%	1000	1048.7	104.9%
Na 568.821	50-1000ppm	4.64	3.72	52.3	104.5%	52.9	105.7%	1.1%	50	48.7	97.4%	50	54.5	108.9%
Na 589.592	0.5-50ppm	-0.18	-0.21	53.5	107.1%	53.8	107.7%	0.6%	50	51.9	103.9%	50	56.3	112.6%
Si 251.611	0.5-200ppm	-0.14	-0.20	52.8	105.6%	52.8	105.6%	0.0%	50	51.7	103.4%	50	51.6	103.3%
Si 252.411	0.5-200ppm	-0.08	-0.12	52.2	104.3%	52.0	104.0%	0.3%	50	51.1	102.2%	50	51.1	102.1%
Zn 213.857	10ppb-50ppm	-35.74	-52.87	1031	103.1%	1025	102.5%	0.6%	1000	1016	101.6%	1000	983.7	98.4%

Sample ID AB34029

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	2.74	3.64	90.0%	3.69	95.1%	1.4%	1	1.02	101.6%	1.9%	0.02
B 249.772	2.77	3.67	90.2%	3.72	95.4%	1.4%	1	1.03	103.1%	3.0%	0.03
Ca 317.933	20.2	78.9	117.5%	80.1	120.0%	1.5%	50	56.8	113.6%	12.8%	-4.49
Ca 396.847	21.5	67.9	92.8%	68.2	93.4%	0.4%	50	49.1	98.2%	5.3%	-0.40
Cu 324.754	3673	4389	71.6%	4447	77.4%	1.3%	1000	960	96.0%	6.8%	-0.70
Cu 327.395	3683	4406	72.2%	4451	76.7%	1.0%	1000	963	96.3%	7.0%	0.25
Fe 238.204	2	1083	108.2%	1096	109.5%	1.2%	1000	1102	110.2%	7.6%	-3.39
Fe 259.940	2	1060	105.7%	1092	109.0%	3.0%	1000	1086	108.6%	5.4%	-1.44
K 766.491	2.2	11.4	91.5%	11.5	92.8%	1.1%	10	9.1	90.7%	8.2%	0.00
Mg 202.582	15.5	64.9	98.9%	65.7	100.4%	1.1%	50	48.9	97.8%	3.1%	-1.37
Mg 279.078	16.6	66.0	98.8%	66.9	100.6%	1.3%	50	50.3	100.7%	1.9%	0.01
Mn 257.610	2	1062	106.0%	1079	107.7%	1.6%	1000	1080	108.0%	5.5%	-1.79
Mn 260.568	5	1085	108.0%	1109	110.4%	2.2%	1000	1105	110.5%	6.2%	-1.46
Na 568.821	126.7	164.4	75.4%	166.9	80.3%	1.5%	50	42.1	84.1%	14.6%	2.90
Na 589.592	135.9	178.0	84.0%	178.5	85.0%	0.3%	50	46.2	92.4%	11.7%	-0.14
Si 251.611	16.7	69.2	104.9%	70.5	107.5%	1.8%	50	55.9	111.9%	7.9%	-0.12
Si 252.411	16.4	67.8	102.8%	69.0	105.2%	1.7%	50	54.6	109.1%	6.6%	-0.07
Zn 213.857	-17	1069	108.6%	1088	110.5%	1.7%	1000	1099	109.9%	8%	-37.11

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MBAS QC Summary (SM 5540C)

Date Analyzed: 8/11/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	-0.001	---	<0.05	823
ICVL	0.05	0.047	94	50-150	824
ICV	0.25	0.259	103.6	80-120	858

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	
AB34038	0.005	0.25	0.249	0.264	97.6	103.6	5.8	80/120	10	836

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: 8/24/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1300
ICVL	0.050	0.06	120.00%	90-110	1300
ICV	0.500	0.500	100.00%	90-110	1300
CCVB1	---	0.02	---	<0.05	1300
CCV1	0.500	0.480	96.00%	90-110	1300

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	
AB34494	ND	0.500	0.540	0.580	108	116	7.1	85-120	10	1300

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: 8/11/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.01	---	< 0.01	9:24
LCSL	0.01	0.01	100	50-150	9:24
ICV	0.30	0.29	97	90-110	9:24
QCS	0.30	0.30	100	80-120	9:24
CCV	0.30	0.30	100	80-120	9:24
CCVB	---	<0.01	---	< 0.01	9:24

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		
AB34038	0.05	0.30	0.34	0.36	97	103	6	70-130	10	9:24	9:24

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

ICVB= Initial Calibration Verification Blank; ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; CCVB= Continuing Calibration Verification Blank; MS= Matrix Sike; RPD = Relative Percent Difference; Rec % = Recovery percent

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Phosphorus QC Summary (Hach 8190)

Date: 8/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
LCB	---	<0.03	---	< 0.03	14:14
LCSL	0.03	0.04	133	50-150	14:14
LCS	0.50	0.50	100	90-110	14:14
QCS	0.50	0.49	98	80-120	14:14
LCSD	0.50	0.50	100	80-120	14:14
LCCB	---	<0.03	---	< 0.03	14:14

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		
AB34038	0.02	0.50	0.51	0.53	98	102	3.8	70-130	10	14:14	14:14

LCB = Laboratory ; LCSL = Laboratory Control Standard Low; LCS= Laboratory Control Standard; QCS = Quality Control Standar; LCSD= Laboratory Control Standard Dup; LCCB = Laboratory Control Continuing Blank; MS = Matrix Spike; MSD= Matrix Spike Duplicate

MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY
4 Justin Court Ste D, Monterey, CA 93940
831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 8/13/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1413	100.1%	95-105	1100
ICV	24800	24780	99.9%	95-105	1100

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB34192	1174	1173	0.1%	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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http://www.MBASinc.com

TDS QC Summary (SM 2540C)

Date Analyzed: 8/11/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	1300
ICVL	100	120	120	80-120	1300
ICV	500	506	101.2	90-110	1300

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB34127	24300	24500	0.8	10	1300

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

Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 8/25/2015
Time: 1300

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.353	---	<0.5
LCS	5.0	4.8	96	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
AB34481	ND	5.0	4.7	4.9	94	98	4.2	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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831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

Turbidity QC Summary (EPA 180.1)

Date Analyzed: 8/11/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	13:36
ICV	1.00	1.04	104.0%	95-105	13:36
CCVB	---	<0.05	---	<0.05	13:36
CCV	1.00	1.04	104.0%	95-105	13:36

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB34083	0.05	0.05	0%	10	13:36

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
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: **20150810**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.03	0.14	0.03	0.00	0.00	0.00
	ICV	2.06	19.76	2.15	20.05	1.95	1.98
	Rec 90-110%	102.89	98.82	107.27	100.26	97.67	99.17
	ICVL	0.21	1.92	0.21	1.59	0.24	0.23
	Rec 50-150%	106.62	96.24	107.49	79.54	119.04	115.60
Sample ID	**AB34046**	0.23	20.25	0.31	83.32	0.12	0.71
	MS	2.29	41.13	2.49	104.17	2.07	2.77
	Rec 80-120%	103.33	104.43	109.41	104.28	97.42	103.01
	MSD	2.17	39.98	2.39	102.40	1.98	2.67
	Rec 80-120%	96.98	98.68	104.02	95.44	93.16	98.01
	Diff 10%	5.70	2.84	4.42	1.71	4.21	3.69
	CCV	2.00	19.96	2.16	20.20	1.94	2.00
	Rec 90-110%	100.24	99.80	108.22	100.98	96.75	99.80
	Diff 10%	2.62	0.98	0.88	0.72	0.94	0.63
	CCVB	0.00	0.00	0.04	0.00	0.00	0.00

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5H1130
8/24/2015
Invoice: A517792

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5H1130 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 8/12/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	8/12/2015 - 15:19		
Report Due:	8/26/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 0.4

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:

MS1.0 Matrix spike recoveries exceed control limits.
MS1.5 Matrix spike recovery exceeds upper control limit. No material impact as sample results are Non-Detected.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5H1130-01
Sampled By: Matan Salmon
Sample Description: MW-7D (monitoring) // AB34038

Sample Date - Time: 08/09/15 - 15:00
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A509324	08/17/15	08/18/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A509324	08/17/15	08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	97 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A509517	08/19/15	08/20/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A509517	08/19/15	08/20/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A509517	08/19/15	08/20/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A509517	08/19/15	08/20/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A509517	08/19/15	08/20/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A509517	08/19/15	08/20/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A509517	08/19/15	08/20/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A509517	08/19/15	08/20/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A509517	08/19/15	08/20/15	
Surrogate: DCPAA	EPA 515.3	89 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A509194	08/13/15	08/13/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A509194	08/13/15	08/13/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A509194	08/13/15	08/13/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A509194	08/13/15	08/13/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A509194	08/13/15	08/13/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	

Certificate of Analysis

Sample ID: A5H1130-01
Sampled By: Matan Salmon
Sample Description: MW-7D (monitoring) // AB34038

Sample Date - Time: 08/09/15 - 15:00
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	A509194	08/13/15	08/13/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A509194	08/13/15	08/13/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A509194	08/13/15	08/13/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A509194	08/13/15	08/13/15	MS1.5
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A509194	08/13/15	08/13/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A509194	08/13/15	08/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	95 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	98 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5H1130-01
Sampled By: Matan Salmon
Sample Description: MW-7D (monitoring) // AB34038

Sample Date - Time: 08/09/15 - 15:00
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A509231	08/13/15	08/17/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A509231	08/13/15	08/17/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A509231	08/13/15	08/17/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A509231	08/13/15	08/17/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A509231	08/13/15	08/17/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A509231	08/13/15	08/17/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A509231	08/13/15	08/17/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A509231	08/13/15	08/17/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A509231	08/13/15	08/17/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A509231	08/13/15	08/17/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A509231	08/13/15	08/17/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A509231	08/13/15	08/17/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A509231	08/13/15	08/17/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A509231	08/13/15	08/17/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A509231	08/13/15	08/17/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A509231	08/13/15	08/17/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	88 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A509518	08/19/15	08/20/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A509518	08/19/15	08/20/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A509518	08/19/15	08/20/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A509518	08/19/15	08/20/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A509518	08/19/15	08/20/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A509518	08/19/15	08/20/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A509518	08/19/15	08/20/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A509518	08/19/15	08/20/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A509518	08/19/15	08/20/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A509518	08/19/15	08/20/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A509332	08/17/15	08/17/15	
Surrogate: AMPA	EPA 547	101 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A509316	08/14/15	08/18/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A509300	08/14/15	08/18/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A509324										Prepared: 08/17/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A509324-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							08/18/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*100*	*70-130*			08/18/15	
Blank Spike (A509324-BS1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		94	70-130			08/18/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		89	70-130			08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*101*	*70-130*			08/18/15	
Blank Spike Dup (A509324-BSD1)											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20		99	70-130	5	20	08/18/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20		95	70-130	7	20	08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*104*	*70-130*			08/18/15	
Matrix Spike (A509324-MS1), Source: A5H1495-01											
Dibromochloropropane (DBCP)	0.22	0.010	ug/L	0.20	0.023	100	65-135			08/18/15	
Ethylene Dibromide (EDB)	0.21	0.020	ug/L	0.20	ND	107	65-135			08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.45*		*100*	*70-130*			08/18/15	
Matrix Spike Dup (A509324-MSD1), Source: A5H1495-01											
Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20	0.023	95	65-135	4	20	08/18/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	101	65-135	5	20	08/18/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.45*		*98*	*70-130*			08/18/15	
EPA 515.3 - Quality Control											
Batch: A509517										Prepared: 08/19/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A509517-BLK1)											
2,4,5-T	ND	1.0	ug/L							08/20/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							08/20/15	
2,4-D	ND	10	ug/L							08/20/15	
Bentazon	ND	2.0	ug/L							08/20/15	
Dalapon	ND	10	ug/L							08/20/15	
Dicamba	ND	1.5	ug/L							08/20/15	
Dinoseb	ND	2.0	ug/L							08/20/15	
Pentachlorophenol	ND	0.20	ug/L							08/20/15	
Picloram	ND	1.0	ug/L							08/20/15	
Surrogate: DCPAA	*58*			*58*		*100*	*70-130*			08/20/15	
Blank Spike (A509517-BS1)											
2,4,5-T	4.3	1.0	ug/L	4.0		108	70-130			08/20/15	
2,4,5-TP (Silvex)	0.88	1.0	ug/L	0.80		110	70-130			08/20/15	
2,4-D	0.45	10	ug/L	0.40		113	70-130			08/20/15	
Bentazon	8.3	2.0	ug/L	8.0		104	70-130			08/20/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A509517										Prepared: 08/19/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A509517-BS1)											
Dalapon	4.2	10	ug/L	4.0		104	70-130			08/20/15	
Dicamba	6.4	1.5	ug/L	6.0		106	70-130			08/20/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130			08/20/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16		106	70-130			08/20/15	
Picloram	0.42	1.0	ug/L	0.40		104	70-130			08/20/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			08/20/15	
Blank Spike Dup (A509517-BSD1)											
2,4,5-T	4.2	1.0	ug/L	4.0		106	70-130	3	20	08/20/15	
2,4,5-TP (Silvex)	0.85	1.0	ug/L	0.80		106	70-130	4	20	08/20/15	
2,4-D	0.44	10	ug/L	0.40		111	70-130	2	20	08/20/15	
Bentazon	8.0	2.0	ug/L	8.0		100	70-130	3	20	08/20/15	
Dalapon	4.0	10	ug/L	4.0		100	70-130	4	20	08/20/15	
Dicamba	6.2	1.5	ug/L	6.0		103	70-130	3	20	08/20/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130	0	20	08/20/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		103	70-130	3	20	08/20/15	
Picloram	0.40	1.0	ug/L	0.40		100	70-130	4	20	08/20/15	
Surrogate: DCPAA	*56*			*58*		*96*	*70-130*			08/20/15	
Matrix Spike (A509517-MS1), Source: A5H1079-01											
2,4,5-T	4.4	1.0	ug/L	4.0	ND	109	70-130			08/20/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80	ND	108	70-130			08/20/15	
2,4-D	0.46	10	ug/L	0.40	ND	114	70-130			08/20/15	
Bentazon	8.2	2.0	ug/L	8.0	ND	103	70-130			08/20/15	
Dalapon	4.8	10	ug/L	4.0	ND	119	70-130			08/20/15	
Dicamba	6.4	1.5	ug/L	6.0	ND	106	70-130			08/20/15	
Dinoseb	0.82	2.0	ug/L	0.80	ND	102	70-130			08/20/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	105	70-130			08/20/15	
Picloram	0.40	1.0	ug/L	0.40	ND	99	70-130			08/20/15	
Surrogate: DCPAA	*57*			*58*		*99*	*70-130*			08/20/15	
Matrix Spike Dup (A509517-MSD1), Source: A5H1079-01											
2,4,5-T	4.4	1.0	ug/L	4.0	ND	109	70-130	0	20	08/20/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80	ND	104	70-130	4	20	08/20/15	
2,4-D	0.46	10	ug/L	0.40	ND	114	70-130	0	20	08/20/15	
Bentazon	8.3	2.0	ug/L	8.0	ND	104	70-130	1	20	08/20/15	
Dalapon	4.7	10	ug/L	4.0	ND	118	70-130	1	20	08/20/15	
Dicamba	6.4	1.5	ug/L	6.0	ND	107	70-130	1	20	08/20/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	102	70-130	0	20	08/20/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	105	70-130	0	20	08/20/15	
Picloram	0.39	1.0	ug/L	0.40	ND	98	70-130	1	20	08/20/15	
Surrogate: DCPAA	*58*			*58*		*99*	*70-130*			08/20/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A509194-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							08/13/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							08/13/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							08/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							08/13/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							08/13/15	
1,1-Dichloroethane	ND	0.50	ug/L							08/13/15	
1,1-Dichloroethene	ND	0.50	ug/L							08/13/15	
1,1-Dichloropropene	ND	0.50	ug/L							08/13/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							08/13/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							08/13/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							08/13/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							08/13/15	
1,2-Dichloroethane	ND	0.50	ug/L							08/13/15	
1,2-Dichloropropane	ND	0.50	ug/L							08/13/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							08/13/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							08/13/15	
1,3-Dichloropropane	ND	0.50	ug/L							08/13/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							08/13/15	
2,2-Dichloropropane	ND	0.50	ug/L							08/13/15	
2-Butanone	ND	5.0	ug/L							08/13/15	
2-Chlorotoluene	ND	0.50	ug/L							08/13/15	
2-Hexanone	ND	10	ug/L							08/13/15	
4-Chlorotoluene	ND	0.50	ug/L							08/13/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							08/13/15	
Acetone	ND	10	ug/L							08/13/15	
Benzene	ND	0.50	ug/L							08/13/15	
Bromobenzene	ND	0.50	ug/L							08/13/15	
Bromochloromethane	ND	0.50	ug/L							08/13/15	
Bromodichloromethane	ND	0.50	ug/L							08/13/15	
Bromoform	ND	0.50	ug/L							08/13/15	
Bromomethane	ND	0.50	ug/L							08/13/15	
Carbon Tetrachloride	ND	0.50	ug/L							08/13/15	
Chlorobenzene	ND	0.50	ug/L							08/13/15	
Chloroethane	ND	0.50	ug/L							08/13/15	
Chloroform	ND	0.50	ug/L							08/13/15	
Chloromethane	ND	0.50	ug/L							08/13/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							08/13/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							08/13/15	
Dibromochloromethane	ND	0.50	ug/L							08/13/15	
Dibromomethane	ND	0.50	ug/L							08/13/15	
Dichlorodifluoromethane	ND	0.50	ug/L							08/13/15	
Dichloromethane	ND	0.50	ug/L							08/13/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							08/13/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							08/13/15	
Ethylbenzene	ND	0.50	ug/L							08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A509194-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							08/13/15	
Isopropylbenzene	ND	0.50	ug/L							08/13/15	
m,p-Xylenes	ND	0.50	ug/L							08/13/15	
Methyl-t-butyl ether	ND	0.50	ug/L							08/13/15	
Naphthalene	ND	0.50	ug/L							08/13/15	
n-Butylbenzene	ND	0.50	ug/L							08/13/15	
n-Propylbenzene	ND	0.50	ug/L							08/13/15	
o-Xylene	ND	0.50	ug/L							08/13/15	
p-Isopropyltoluene	ND	0.50	ug/L							08/13/15	
sec-Butylbenzene	ND	0.50	ug/L							08/13/15	
Styrene	ND	0.50	ug/L							08/13/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							08/13/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							08/13/15	
tert-Butylbenzene	ND	0.50	ug/L							08/13/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							08/13/15	
Toluene	ND	0.50	ug/L							08/13/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							08/13/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							08/13/15	
Trichloroethene (TCE)	ND	0.50	ug/L							08/13/15	
Trichlorofluoromethane	ND	5.0	ug/L							08/13/15	
Vinyl Chloride	ND	0.50	ug/L							08/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*96*	*70-130*			08/13/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			08/13/15	
Blank Spike (A509194-BS1)											
1,1,1,2-Tetrachloroethane	9.2	0.50	ug/L	10		92	70-130			08/13/15	
1,1,1-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			08/13/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		104	70-130			08/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.7	10	ug/L	10		97	70-130			08/13/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10		105	70-130			08/13/15	
1,1-Dichloroethane	10	0.50	ug/L	10		102	70-130			08/13/15	
1,1-Dichloroethene	9.7	0.50	ug/L	10		97	70-130			08/13/15	
1,1-Dichloropropene	10	0.50	ug/L	10		102	70-130			08/13/15	
1,2,3-Trichlorobenzene	8.8	0.50	ug/L	10		88	70-130			08/13/15	
1,2,4-Trichlorobenzene	8.5	0.50	ug/L	10		85	70-130			08/13/15	
1,2,4-Trimethylbenzene	9.7	0.50	ug/L	10		97	70-130			08/13/15	
1,2-Dichlorobenzene	9.8	0.50	ug/L	10		98	70-130			08/13/15	
1,2-Dichloroethane	10	0.50	ug/L	10		102	70-130			08/13/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			08/13/15	
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130			08/13/15	
1,3-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			08/13/15	
1,3-Dichloropropane	10	0.50	ug/L	10		102	70-130			08/13/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			08/13/15	
2,2-Dichloropropane	8.0	0.50	ug/L	10		80	70-130			08/13/15	
2-Butanone	10	5.0	ug/L	10		100	70-130			08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A509194-BS1)											
2-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			08/13/15	
2-Hexanone	9.1	10	ug/L	10		91	70-130			08/13/15	
4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			08/13/15	
4-Methyl-2-pentanone	8.6	5.0	ug/L	10		86	70-130			08/13/15	
Acetone	10	10	ug/L	10		100	70-130			08/13/15	
Benzene	10	0.50	ug/L	10		104	70-130			08/13/15	
Bromobenzene	9.7	0.50	ug/L	10		97	70-130			08/13/15	
Bromochloromethane	10	0.50	ug/L	10		100	70-130			08/13/15	
Bromodichloromethane	9.9	0.50	ug/L	10		99	70-130			08/13/15	
Bromoform	8.1	0.50	ug/L	10		81	70-130			08/13/15	
Bromomethane	12	0.50	ug/L	10		121	70-130			08/13/15	
Carbon disulfide	9.8	10	ug/L	10		98	70-130			08/13/15	
Carbon Tetrachloride	9.5	0.50	ug/L	10		95	70-130			08/13/15	
Chlorobenzene	10	0.50	ug/L	10		103	70-130			08/13/15	
Chloroethane	10	0.50	ug/L	10		100	70-130			08/13/15	
Chloroform	10	0.50	ug/L	10		104	70-130			08/13/15	
Chloromethane	9.2	0.50	ug/L	10		92	70-130			08/13/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		103	70-130			08/13/15	
cis-1,3-Dichloropropene	9.2	0.50	ug/L	10		92	70-130			08/13/15	
Dibromochloromethane	9.0	0.50	ug/L	10		90	70-130			08/13/15	
Dibromomethane	10	0.50	ug/L	10		104	70-130			08/13/15	
Dichlorodifluoromethane	8.6	0.50	ug/L	10		86	70-130			08/13/15	
Dichloromethane	10	0.50	ug/L	10		102	70-130			08/13/15	
Di-isopropyl ether (DIPE)	9.6	3.0	ug/L	10		96	70-130			08/13/15	
Ethyl tert-Butyl Ether (ETBE)	8.6	0.50	ug/L	10		86	70-130			08/13/15	
Ethylbenzene	10	0.50	ug/L	10		101	70-130			08/13/15	
Hexachlorobutadiene	8.7	0.50	ug/L	10		87	70-130			08/13/15	
Isopropylbenzene	9.8	0.50	ug/L	10		98	70-130			08/13/15	
m,p-Xylenes	20	0.50	ug/L	20		102	70-130			08/13/15	
Methyl-t-butyl ether	18	0.50	ug/L	20		91	70-130			08/13/15	
Naphthalene	8.2	0.50	ug/L	10		82	70-130			08/13/15	
n-Butylbenzene	9.3	0.50	ug/L	10		93	70-130			08/13/15	
n-Propylbenzene	10	0.50	ug/L	10		100	70-130			08/13/15	
o-Xylene	9.9	0.50	ug/L	10		99	70-130			08/13/15	
p-Isopropyltoluene	9.5	0.50	ug/L	10		95	70-130			08/13/15	
sec-Butylbenzene	9.6	0.50	ug/L	10		96	70-130			08/13/15	
Styrene	10	0.50	ug/L	10		102	70-130			08/13/15	
tert-Amyl Methyl Ether (TAME)	12	3.0	ug/L	10		123	70-130			08/13/15	
tert-Butyl alcohol (TBA)	12	2.0	ug/L	10		124	70-130			08/13/15	
tert-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			08/13/15	
Tetrachloroethene (PCE)	9.6	0.50	ug/L	10		96	70-130			08/13/15	
Toluene	10	0.50	ug/L	10		103	70-130			08/13/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			08/13/15	
trans-1,3-Dichloropropene	8.6	0.50	ug/L	10		86	70-130			08/13/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A509194-BS1)											
Trichlorofluoromethane	7.3	5.0	ug/L	10		73	70-130			08/13/15	
Vinyl Chloride	9.2	0.50	ug/L	10		92	70-130			08/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*95*	*70-130*			08/13/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			08/13/15	
Blank Spike Dup (A509194-BSD1)											
1,1,1,2-Tetrachloroethane	9.0	0.50	ug/L	10		90	70-130	2	30	08/13/15	
1,1,1-Trichloroethane	9.5	0.50	ug/L	10		95	70-130	3	30	08/13/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		102	70-130	1	30	08/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.7	10	ug/L	10		97	70-130	0	30	08/13/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		102	70-130	3	30	08/13/15	
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	3	30	08/13/15	
1,1-Dichloroethene	9.5	0.50	ug/L	10		95	70-130	3	30	08/13/15	
1,1-Dichloropropene	9.8	0.50	ug/L	10		98	70-130	3	30	08/13/15	
1,2,3-Trichlorobenzene	8.7	0.50	ug/L	10		87	70-130	1	30	08/13/15	
1,2,4-Trichlorobenzene	8.4	0.50	ug/L	10		84	70-130	1	30	08/13/15	
1,2,4-Trimethylbenzene	9.3	0.50	ug/L	10		93	70-130	4	30	08/13/15	
1,2-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	4	30	08/13/15	
1,2-Dichloroethane	9.8	0.50	ug/L	10		98	70-130	4	30	08/13/15	
1,2-Dichloropropane	9.8	0.50	ug/L	10		98	70-130	3	30	08/13/15	
1,3,5-Trimethylbenzene	9.3	0.50	ug/L	10		93	70-130	3	30	08/13/15	
1,3-Dichlorobenzene	9.3	0.50	ug/L	10		93	70-130	4	30	08/13/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	08/13/15	
1,4-Dichlorobenzene	9.5	0.50	ug/L	10		95	70-130	4	30	08/13/15	
2,2-Dichloropropane	7.7	0.50	ug/L	10		77	70-130	3	30	08/13/15	
2-Butanone	9.8	5.0	ug/L	10		98	70-130	2	30	08/13/15	
2-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130	4	30	08/13/15	
2-Hexanone	9.0	10	ug/L	10		90	70-130	2	30	08/13/15	
4-Chlorotoluene	9.5	0.50	ug/L	10		95	70-130	4	30	08/13/15	
4-Methyl-2-pentanone	8.5	5.0	ug/L	10		85	70-130	1	30	08/13/15	
Acetone	9.7	10	ug/L	10		97	70-130	3	30	08/13/15	
Benzene	10	0.50	ug/L	10		100	70-130	4	30	08/13/15	
Bromobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	08/13/15	
Bromochloromethane	9.5	0.50	ug/L	10		95	70-130	5	30	08/13/15	
Bromodichloromethane	9.6	0.50	ug/L	10		96	70-130	3	30	08/13/15	
Bromoform	8.0	0.50	ug/L	10		80	70-130	2	30	08/13/15	
Bromomethane	12	0.50	ug/L	10		120	70-130	1	30	08/13/15	
Carbon disulfide	9.8	10	ug/L	10		98	70-130	0	30	08/13/15	
Carbon Tetrachloride	9.3	0.50	ug/L	10		93	70-130	2	30	08/13/15	
Chlorobenzene	10	0.50	ug/L	10		102	70-130	2	30	08/13/15	
Chloroethane	9.8	0.50	ug/L	10		98	70-130	2	30	08/13/15	
Chloroform	10	0.50	ug/L	10		100	70-130	4	30	08/13/15	
Chloromethane	9.3	0.50	ug/L	10		93	70-130	1	30	08/13/15	
cis-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	3	30	08/13/15	
cis-1,3-Dichloropropene	8.9	0.50	ug/L	10		89	70-130	3	30	08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A509194-BSD1)											
Dibromochloromethane	8.7	0.50	ug/L	10		87	70-130	3	30	08/13/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130	4	30	08/13/15	
Dichlorodifluoromethane	8.7	0.50	ug/L	10		87	70-130	1	30	08/13/15	
Dichloromethane	9.9	0.50	ug/L	10		99	70-130	3	30	08/13/15	
Di-isopropyl ether (DIPE)	9.3	3.0	ug/L	10		93	70-130	3	30	08/13/15	
Ethyl tert-Butyl Ether (ETBE)	8.3	0.50	ug/L	10		83	70-130	3	30	08/13/15	
Ethylbenzene	9.7	0.50	ug/L	10		97	70-130	4	30	08/13/15	
Hexachlorobutadiene	8.6	0.50	ug/L	10		86	70-130	2	30	08/13/15	
Isopropylbenzene	9.4	0.50	ug/L	10		94	70-130	5	30	08/13/15	
m,p-Xylenes	19	0.50	ug/L	20		97	70-130	5	30	08/13/15	
Methyl-t-butyl ether	18	0.50	ug/L	20		88	70-130	3	30	08/13/15	
Naphthalene	8.6	0.50	ug/L	10		86	70-130	5	30	08/13/15	
n-Butylbenzene	9.0	0.50	ug/L	10		90	70-130	3	30	08/13/15	
n-Propylbenzene	9.5	0.50	ug/L	10		95	70-130	5	30	08/13/15	
o-Xylene	9.4	0.50	ug/L	10		94	70-130	5	30	08/13/15	
p-Isopropyltoluene	9.1	0.50	ug/L	10		91	70-130	4	30	08/13/15	
sec-Butylbenzene	9.3	0.50	ug/L	10		93	70-130	4	30	08/13/15	
Styrene	10	0.50	ug/L	10		100	70-130	2	30	08/13/15	
tert-Amyl Methyl Ether (TAME)	12	3.0	ug/L	10		120	70-130	2	30	08/13/15	
tert-Butyl alcohol (TBA)	12	2.0	ug/L	10		119	70-130	4	30	08/13/15	
tert-Butylbenzene	9.1	0.50	ug/L	10		91	70-130	4	30	08/13/15	
Tetrachloroethene (PCE)	9.5	0.50	ug/L	10		95	70-130	2	30	08/13/15	
Toluene	10	0.50	ug/L	10		101	70-130	1	30	08/13/15	
trans-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	3	30	08/13/15	
trans-1,3-Dichloropropene	8.3	0.50	ug/L	10		83	70-130	3	30	08/13/15	
Trichloroethene (TCE)	9.6	0.50	ug/L	10		96	70-130	4	30	08/13/15	
Trichlorofluoromethane	7.4	5.0	ug/L	10		74	70-130	1	30	08/13/15	
Vinyl Chloride	9.2	0.50	ug/L	10		92	70-130	1	30	08/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	*47*			*50*		*94*	*70-130*			08/13/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*97*	*70-130*			08/13/15	
Matrix Spike (A509194-MS1), Source: A5H1130-01											
1,1,1,2-Tetrachloroethane	12	0.50	ug/L	10	ND	116	41-156			08/13/15	
1,1,1-Trichloroethane	13	0.50	ug/L	10	ND	126	48-160			08/13/15	
1,1,2,2-Tetrachloroethane	13	0.50	ug/L	10	ND	128	42-151			08/13/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	13	10	ug/L	10	ND	130	47-164			08/13/15	
1,1,2-Trichloroethane	13	0.50	ug/L	10	ND	128	45-152			08/13/15	
1,1-Dichloroethane	13	0.50	ug/L	10	ND	128	48-157			08/13/15	
1,1-Dichloroethene	13	0.50	ug/L	10	ND	125	51-158			08/13/15	
1,1-Dichloropropene	13	0.50	ug/L	10	ND	132	46-162			08/13/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10	ND	103	37-145			08/13/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10	ND	100	33-149			08/13/15	
1,2,4-Trimethylbenzene	12	0.50	ug/L	10	ND	121	44-146			08/13/15	
1,2-Dichlorobenzene	12	0.50	ug/L	10	ND	118	44-146			08/13/15	
1,2-Dichloroethane	12	0.50	ug/L	10	ND	123	47-151			08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A509194-MS1), Source: A5H1130-01											
1,2-Dichloropropane	13	0.50	ug/L	10	ND	126	47-155			08/13/15	
1,3,5-Trimethylbenzene	12	0.50	ug/L	10	ND	123	45-154			08/13/15	
1,3-Dichlorobenzene	12	0.50	ug/L	10	ND	120	44-146			08/13/15	
1,3-Dichloropropane	12	0.50	ug/L	10	ND	124	45-151			08/13/15	
1,4-Dichlorobenzene	12	0.50	ug/L	10	ND	121	43-146			08/13/15	
2,2-Dichloropropane	10	0.50	ug/L	10	ND	103	24-182			08/13/15	
2-Butanone	13	5.0	ug/L	10	ND	132	55-144			08/13/15	
2-Chlorotoluene	12	0.50	ug/L	10	ND	124	48-150			08/13/15	
2-Hexanone	13	10	ug/L	10	ND	125	40-159			08/13/15	
4-Chlorotoluene	12	0.50	ug/L	10	ND	123	43-150			08/13/15	
4-Methyl-2-pentanone	11	5.0	ug/L	10	ND	114	30-171			08/13/15	
Acetone	13	10	ug/L	10	ND	126	27-181			08/13/15	
Benzene	13	0.50	ug/L	10	ND	130	48-155			08/13/15	
Bromobenzene	12	0.50	ug/L	10	ND	120	43-151			08/13/15	
Bromochloromethane	12	0.50	ug/L	10	ND	120	48-161			08/13/15	
Bromodichloromethane	12	0.50	ug/L	10	ND	121	47-151			08/13/15	
Bromoform	10	0.50	ug/L	10	ND	101	29-162			08/13/15	
Bromomethane	14	0.50	ug/L	10	ND	145	10-200			08/13/15	
Carbon disulfide	13	10	ug/L	10	ND	127	57-161			08/13/15	
Carbon Tetrachloride	13	0.50	ug/L	10	ND	126	47-163			08/13/15	
Chlorobenzene	13	0.50	ug/L	10	ND	130	46-152			08/13/15	
Chloroethane	13	0.50	ug/L	10	ND	132	28-189			08/13/15	
Chloroform	13	0.50	ug/L	10	ND	129	52-148			08/13/15	
Chloromethane	12	0.50	ug/L	10	ND	116	53-159			08/13/15	
cis-1,2-Dichloroethene	13	0.50	ug/L	10	ND	128	50-152			08/13/15	
cis-1,3-Dichloropropene	11	0.50	ug/L	10	ND	114	34-156			08/13/15	
Dibromochloromethane	11	0.50	ug/L	10	ND	110	44-149			08/13/15	
Dibromomethane	12	0.50	ug/L	10	ND	124	46-150			08/13/15	
Dichlorodifluoromethane	11	0.50	ug/L	10	ND	113	33-170			08/13/15	
Dichloromethane	12	0.50	ug/L	10	ND	119	47-156			08/13/15	
Di-isopropyl ether (DIPE)	12	3.0	ug/L	10	ND	120	41-159			08/13/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10	ND	106	32-160			08/13/15	
Ethylbenzene	13	0.50	ug/L	10	ND	128	40-157			08/13/15	
Hexachlorobutadiene	10	0.50	ug/L	10	ND	102	38-151			08/13/15	
Isopropylbenzene	13	0.50	ug/L	10	ND	125	41-156			08/13/15	
m,p-Xylenes	25	0.50	ug/L	20	ND	127	49-154			08/13/15	
Methyl-t-butyl ether	22	0.50	ug/L	20	ND	110	41-156			08/13/15	
Naphthalene	10	0.50	ug/L	10	ND	103	35-154			08/13/15	
n-Butylbenzene	12	0.50	ug/L	10	ND	116	31-153			08/13/15	
n-Propylbenzene	13	0.50	ug/L	10	ND	127	39-156			08/13/15	
o-Xylene	12	0.50	ug/L	10	ND	123	27-164			08/13/15	
p-Isopropyltoluene	12	0.50	ug/L	10	ND	119	26-161			08/13/15	
sec-Butylbenzene	12	0.50	ug/L	10	ND	122	39-154			08/13/15	
Styrene	12	0.50	ug/L	10	ND	124	10-200			08/13/15	
tert-Amyl Methyl Ether (TAME)	15	3.0	ug/L	10	ND	152	24-161			08/13/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A509194										Prepared: 08/13/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A509194-MS1), Source: A5H1130-01											
tert-Butyl alcohol (TBA)	18	2.0	ug/L	10	ND	178	22-174			08/13/15	MS1.0 ***High***
tert-Butylbenzene	12	0.50	ug/L	10	ND	119	40-153			08/13/15	
Tetrachloroethene (PCE)	13	0.50	ug/L	10	ND	125	48-155			08/13/15	
Toluene	14	0.50	ug/L	10	ND	136	40-159			08/13/15	
trans-1,2-Dichloroethene	13	0.50	ug/L	10	ND	129	52-157			08/13/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10	ND	105	28-160			08/13/15	
Trichloroethene (TCE)	13	0.50	ug/L	10	ND	126	49-155			08/13/15	
Trichlorofluoromethane	9.6	5.0	ug/L	10	ND	96	47-169			08/13/15	
Vinyl Chloride	11	0.50	ug/L	10	ND	113	21-183			08/13/15	
Surrogate: 1,2-Dichlorobenzene-d4	*47*			*50*		*94*	*70-130*			08/13/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*97*	*70-130*			08/13/15	
EPA 525.2 - Quality Control											
Batch: A509231										Prepared: 08/13/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A509231-BLK1)											
Alachlor	ND	1.0	ug/L							08/17/15	
Atrazine	ND	0.50	ug/L							08/17/15	
Benzo(a)pyrene	ND	0.10	ug/L							08/17/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							08/17/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							08/17/15	
Bromacil	ND	10	ug/L							08/17/15	
Butachlor	ND	0.38	ug/L							08/17/15	
Diazinon	ND	0.25	ug/L							08/17/15	
Dimethoate	ND	10	ug/L							08/17/15	
Metolachlor	ND	0.50	ug/L							08/17/15	
Metribuzin	ND	0.50	ug/L							08/17/15	
Molinate	ND	2.0	ug/L							08/17/15	
Prometryn	ND	2.0	ug/L							08/17/15	
Propachlor	ND	0.50	ug/L							08/17/15	
Simazine	ND	1.0	ug/L							08/17/15	
Thiobencarb	ND	1.0	ug/L							08/17/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.0*			*5.0*		*100*	*70-130*			08/17/15	
Blank Spike (A509231-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		109	70-130			08/17/15	
Atrazine	0.50	0.50	ug/L	0.50		101	70-130			08/17/15	
Benzo(a)pyrene	0.095	0.10	ug/L	0.10		95	70-130			08/17/15	
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		112	70-130			08/17/15	
Bis(2-ethylhexyl) phthalate	1.8	3.0	ug/L	1.5		120	70-130			08/17/15	
Bromacil	1.2	10	ug/L	1.0		116	70-130			08/17/15	
Butachlor	1.1	0.38	ug/L	1.0		108	70-130			08/17/15	
Diazinon	0.20	0.25	ug/L	0.20		97	70-130			08/17/15	
Dimethoate	0.97	10	ug/L	1.0		97	70-130			08/17/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A509231										Prepared: 08/13/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank Spike (A509231-BS1)											
Metolachlor	2.1	0.50	ug/L	2.0		107	70-130			08/17/15	
Metribuzin	1.0	0.50	ug/L	1.0		104	70-130			08/17/15	
Molinate	0.98	2.0	ug/L	1.0		98	70-130			08/17/15	
Prometryn	1.8	2.0	ug/L	2.0		90	70-130			08/17/15	
Propachlor	0.50	0.50	ug/L	0.50		101	70-130			08/17/15	
Simazine	0.35	1.0	ug/L	0.35		101	70-130			08/17/15	
Thiobencarb	0.52	1.0	ug/L	0.50		104	70-130			08/17/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.8*			*5.0*		*96*	*70-130*			08/17/15	
Blank Spike Dup (A509231-BSD1)											
Alachlor	1.0	1.0	ug/L	1.0		103	70-130	6	30	08/17/15	
Atrazine	0.46	0.50	ug/L	0.50		93	70-130	8	30	08/17/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		117	70-130	21	30	08/17/15	
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		108	70-130	3	30	08/17/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		114	70-130	5	30	08/17/15	
Bromacil	1.2	10	ug/L	1.0		120	70-130	3	30	08/17/15	
Butachlor	1.0	0.38	ug/L	1.0		105	70-130	3	30	08/17/15	
Diazinon	0.20	0.25	ug/L	0.20		100	70-130	3	30	08/17/15	
Dimethoate	0.89	10	ug/L	1.0		89	70-130	9	30	08/17/15	
Metolachlor	2.1	0.50	ug/L	2.0		107	70-130	0	30	08/17/15	
Metribuzin	0.96	0.50	ug/L	1.0		96	70-130	7	30	08/17/15	
Molinate	0.99	2.0	ug/L	1.0		99	70-130	1	30	08/17/15	
Prometryn	1.9	2.0	ug/L	2.0		95	70-130	5	30	08/17/15	
Propachlor	0.52	0.50	ug/L	0.50		103	70-130	2	30	08/17/15	
Simazine	0.36	1.0	ug/L	0.35		102	70-130	1	30	08/17/15	
Thiobencarb	0.52	1.0	ug/L	0.50		103	70-130	0	30	08/17/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.3*			*5.0*		*86*	*70-130*			08/17/15	
Matrix Spike (A509231-MS1), Source: A5H0960-01											
Alachlor	1.1	1.0	ug/L	0.98	ND	114	70-130			08/17/15	
Atrazine	0.60	0.50	ug/L	0.49	ND	123	70-130			08/17/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.098	ND	118	70-130			08/17/15	
Bis(2-ethylhexyl) adipate	2.3	3.0	ug/L	2.0	ND	118	70-130			08/17/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	113	70-130			08/17/15	
Bromacil	1.2	10	ug/L	0.98	ND	123	70-130			08/17/15	
Butachlor	1.1	0.38	ug/L	0.98	ND	113	70-130			08/17/15	
Diazinon	0.20	0.25	ug/L	0.20	ND	104	70-130			08/17/15	
Dimethoate	1.0	10	ug/L	0.98	ND	103	70-130			08/17/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	108	70-130			08/17/15	
Metribuzin	1.0	0.50	ug/L	0.98	ND	101	70-130			08/17/15	
Molinate	1.0	2.0	ug/L	0.98	ND	104	70-130			08/17/15	
Prometryn	2.2	2.0	ug/L	2.0	ND	113	70-130			08/17/15	
Propachlor	0.51	0.50	ug/L	0.49	ND	104	70-130			08/17/15	
Simazine	0.36	1.0	ug/L	0.34	ND	100	70-130			08/17/15	
Thiobencarb	0.51	1.0	ug/L	0.49	ND	104	70-130			08/17/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A509231										Prepared: 08/13/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A509231-MS1), Source: A5H0960-01											
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.4*			*4.9*		*90*	*70-130*			08/17/15	
EPA 531.1 - Quality Control											
Batch: A509518										Prepared: 08/19/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A509518-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							08/20/15	
Aldicarb	ND	3.0	ug/L							08/20/15	
Aldicarb Sulfone	ND	2.0	ug/L							08/20/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							08/20/15	
Carbaryl	ND	5.0	ug/L							08/20/15	
Carbofuran	ND	5.0	ug/L							08/20/15	
Methiocarb	ND	2.0	ug/L							08/20/15	
Methomyl	ND	2.0	ug/L							08/20/15	
Oxamyl	ND	20	ug/L							08/20/15	
Propoxur	ND	2.0	ug/L							08/20/15	
Blank Spike (A509518-BS1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		99	80-120			08/20/15	
Aldicarb	3.5	3.0	ug/L	4.0		87	80-120			08/20/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0		101	80-120			08/20/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		100	80-120			08/20/15	
Carbaryl	4.0	5.0	ug/L	4.0		100	80-120			08/20/15	
Carbofuran	4.2	5.0	ug/L	4.0		104	80-120			08/20/15	
Methiocarb	3.8	2.0	ug/L	4.0		96	80-120			08/20/15	
Methomyl	3.8	2.0	ug/L	4.0		96	80-120			08/20/15	
Oxamyl	4.0	20	ug/L	4.0		101	80-120			08/20/15	
Propoxur	4.1	2.0	ug/L	4.0		102	80-120			08/20/15	
Blank Spike Dup (A509518-BSD1)											
3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		102	80-120	3	20	08/20/15	
Aldicarb	3.7	3.0	ug/L	4.0		92	80-120	5	20	08/20/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0		102	80-120	1	20	08/20/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		101	80-120	1	20	08/20/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	2	20	08/20/15	
Carbofuran	4.1	5.0	ug/L	4.0		104	80-120	1	20	08/20/15	
Methiocarb	3.8	2.0	ug/L	4.0		96	80-120	0	20	08/20/15	
Methomyl	3.8	2.0	ug/L	4.0		95	80-120	1	20	08/20/15	
Oxamyl	4.1	20	ug/L	4.0		103	80-120	2	20	08/20/15	
Propoxur	4.1	2.0	ug/L	4.0		102	80-120	1	20	08/20/15	
Matrix Spike (A509518-MS1), Source: A5H1079-01											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0	ND	104	65-135			08/20/15	
Aldicarb	3.4	3.0	ug/L	4.0	ND	85	65-135			08/20/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A509518										Prepared: 08/19/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Matrix Spike (A509518-MS1), Source: A5H1079-01											
Aldicarb Sulfone	4.1	2.0	ug/L	4.0	ND	103	65-135			08/20/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0	ND	103	65-135			08/20/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	103	65-135			08/20/15	
Carbofuran	4.3	5.0	ug/L	4.0	ND	106	65-135			08/20/15	
Methiocarb	4.0	2.0	ug/L	4.0	ND	101	65-135			08/20/15	
Methomyl	3.7	2.0	ug/L	4.0	ND	92	65-135			08/20/15	
Oxamyl	4.1	20	ug/L	4.0	ND	102	65-135			08/20/15	
Propoxur	4.3	2.0	ug/L	4.0	ND	107	65-135			08/20/15	
EPA 547 - Quality Control											
Batch: A509332										Prepared: 08/17/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A509332-BLK1)											
Glyphosate	ND	25	ug/L							08/17/15	
Surrogate: AMPA	*110*			*100*		*114*	*70-130*			08/17/15	
Blank Spike (A509332-BS1)											
Glyphosate	110	25	ug/L	100		106	70-130			08/17/15	
Surrogate: AMPA	*110*			*100*		*107*	*70-130*			08/17/15	
Blank Spike Dup (A509332-BSD1)											
Glyphosate	100	25	ug/L	100		102	70-130	4	30	08/17/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			08/17/15	
Matrix Spike (A509332-MS1), Source: A5H0823-01											
Glyphosate	110	25	ug/L	100	ND	104	70-130			08/17/15	
Surrogate: AMPA	*100*			*100*		*103*	*70-130*			08/17/15	
Matrix Spike Dup (A509332-MSD1), Source: A5H0823-01											
Glyphosate	100	25	ug/L	100	ND	104	70-130	1	30	08/17/15	
Surrogate: AMPA	*110*			*100*		*105*	*70-130*			08/17/15	
EPA 548.1 - Quality Control											
Batch: A509316										Prepared: 08/14/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A509316-BLK1)											
Endothall	ND	45	ug/L							08/18/15	
Blank Spike (A509316-BS1)											
Endothall	16	45	ug/L	20		80	46-116			08/18/15	
Blank Spike Dup (A509316-BSD1)											
Endothall	14	45	ug/L	20		68	46-116	16	30	08/18/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A509316										Prepared: 08/14/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Matrix Spike (A509316-MS1), Source: A5H0823-01											
Endothall	2.4	45	ug/L	20	ND	12	46-116			08/18/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A509300										Prepared: 08/14/2015	
Prep Method: EPA 549.2										Analyst: MTM	
Blank (A509300-BLK1)											
Diquat	ND	4.0	ug/L							08/18/15	
Blank Spike (A509300-BS1)											
Diquat	3.4	4.0	ug/L	4.0		86	70-130			08/18/15	
Blank Spike Dup (A509300-BSD1)											
Diquat	3.4	4.0	ug/L	4.0		86	70-130	0	30	08/18/15	
Matrix Spike (A509300-MS1), Source: A5H1079-01											
Diquat	3.4	4.0	ug/L	4.0	ND	86	70-130			08/18/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	CA000792016-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5H1130

08122015

Monte6227

Turnaround: Standard

Due Date: 8/26/2015

Monterey Bay Analytical

Printed: 8/12/2015 5:41:53PM

BSK Associates Engineers & Laboratories
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:

A5H1130 08/12/2015
Monte6227 10

*Required Fields

Temp: 0.4

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734
			E-mail*: mweidner@mbasinc.com, dholland@mbasinc	

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	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: _____
Sampler Name (Printed/Signature)*: Matan Salmon

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
	MW-7D (monitoring)	8/9/15	1500	GW	AB34038	X	X	X	X	X	X	X	X	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Holland	MBAS	8/11/15	1600		
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 8/12/15	Time 15:19	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____ Paper/BW
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

A5H1130 08/12/2015
Monte6227 10

BSK Associates SR-FL-0002-14

Sample Integrity

BSK Bottles: (Yes) No   Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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?	1					
Bacti $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	4V					
$Na_2S_2O_3$ + 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	—	—						

8/12/15 [initials]

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JHD @ 11:16   Labels checked by: [initials] @ 1123   RUSH Paged by: ______ @ ______

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

August 18, 2015 Ceres ID: 10753

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 August 12, 2015. This sample was analyzed 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

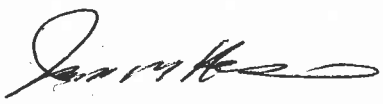
This work was authorized under M.B.A.'s Project # AB34038.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10753-001	MW-7D (monitoring)	8/12/2015	8/9/2015	15:00

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB34038

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1350
ZB-5 MS Analysis Date: 17-Aug-15
Date Received: NA
Date Extracted: 13-Aug-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.37		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	99.9	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	110	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB34038	Sample Size:	1.000 L	QC Batch #:	1350	Date Extracted:	13-Aug-15
				ZB-5 MS Analysis Date:	17-Aug-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	11.0	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	97.3	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	11.2	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

EPA Method 1613B *Ceres Analytical Laboratory*

Sample ID: **MW-7D (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10753-001	Date Received:	12-Aug-15
Project:	AB34038	Sample Size:	1.041 L	QC Batch #:	1350	Date Extracted:	13-Aug-15
Date Collected:	9-Aug-15			ZB-5 MS Analysis Date:	17-Aug-15		
Time Collected:	15:00						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	2.36		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	93.7	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	103	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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
Ceres Project ID:_____
Temperature: _____ °C

Pg. ___ of ___

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	Company Name:_____ Same	Ceres Quote #:_____
Contact Name:_____ David Holland	Contact Name:_____	P.O. # _____
Address: 4 Justin Court Ste D Monterey CA 93940	Address:_____	Project ID: _____
Ph:_ 831-375-6227	Ph:_____ Fx:_____	**TAT** (business days)_____
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other — Comments
1	MW-7D (monitoring)	8/9/2015	1500	Aq	1	X						AB34038
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**
D. Holland	8/11/2015	16:00		8/12/15	10:08

Client understands that all terms desribed 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: 10753	Date/Time: 8/12/15 10:06
Client Project ID: AB34038	Received Temp: 0.3 °C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Aqueous sample pH: 7	
List COC discrepancies: NEAT 8/12/15	
List Damaged Samples: NEAT 8/12/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10753 PB: 1350 Sample #s: 1 Due Date: 8/26/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10753-1	1542.80g	506.31g	1.041L

Chemist: _____ Date: 8/13/15

Method: 1613B
SOP #: 3011

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1350-MB001	Method Blank		1.000L	JON 8/13/15	JON 8/14/15	NA	8/14/15	NA	JON 8/14/15
0-1350-OPR001	OPR		1.000L	(A)	↓	↓	↓	↓	↓
10753-1350-001	MW-7D (monitoring)	✓	1.041L	↓	↓	↓	↓	↓	↓

Comments : (A) OPR spiked with NSS.

Soxhlet Start: 15:00 8/13/15

Soxhlet Stop: 07:25 8/14/15

Samples Logged out by: JON 09:00 8/13/15

Samples Returned by: NA

Note samples Depleted: \

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 11:00 8/14/15 JON

Extracts returned to Storage Location: 16:00 8/17/15 JON

Chemist: JON

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10	2/11/20
NSS	B		
CSS	C		
RSS	D	20	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450 mL	C15B12BLK	7/30/16
Hexanes	30, 30, 100, 20 mL	C15C13BLK	7/30/16
Si Gel	4 g	P071615A	1/16/16
Basic Gel	4 g	P061915A	12/19/15
Acid Gel	8 g	P071615B	1/16/16
Acid Al	6 g	P072915A	1/29/16
Na_2SO_4	1.5 g	P041515A	10/15/15
20% DCM/Hex	30 mL	L070515A	1/5/16

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5H12003

Report Date: 09/02/15 15:25

Received Date: 08/12/15 08:45

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 08/12/15 08:45 with the Chain of Custody document. The samples were received not in good condition, at 5.5 °C. 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: 08/12/15 08:45
Date Reported: 09/02/15 15:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-7D (monitoring)	Matan Salmon	5H12003-01	Water	08/09/15 15:00
Comments: AB33853				

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

5H12003-01 MW-7D (monitoring)

Sampled: 08/09/15 15:00 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB33853

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5H0730 Prepared: 08/15/15 09:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	08/15/15 10:51	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5H0781 Prepared: 08/14/15 12:46 Analyst: Paolo Lorenzo A. Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	08/27/15 19:24	
4,4´-DDE	ND		0.010	ug/l	1	08/27/15 19:24	
4,4´-DDT	ND		0.010	ug/l	1	08/27/15 19:24	
Aldrin	ND		0.010	ug/l	1	08/27/15 19:24	
alpha-BHC	ND		0.010	ug/l	1	08/27/15 19:24	
Aroclor 1016	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1221	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1232	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1242	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1248	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1254	ND		0.10	ug/l	1	08/27/15 19:24	
Aroclor 1260	ND		0.10	ug/l	1	08/27/15 19:24	
beta-BHC	ND		0.010	ug/l	1	08/27/15 19:24	
Chlordane (tech)	ND		0.10	ug/l	1	08/27/15 19:24	
Chlorothalonil	ND		0.050	ug/l	1	08/27/15 19:24	
delta-BHC	ND		0.010	ug/l	1	08/27/15 19:24	
Dieldrin	ND		0.010	ug/l	1	08/27/15 19:24	
Endosulfan I	ND		0.010	ug/l	1	08/27/15 19:24	
Endosulfan II	ND		0.010	ug/l	1	08/27/15 19:24	
Endosulfan sulfate	ND		0.010	ug/l	1	08/27/15 19:24	
Endrin	ND		0.010	ug/l	1	08/27/15 19:24	
Endrin aldehyde	ND		0.010	ug/l	1	08/27/15 19:24	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	08/27/15 19:24	
Heptachlor	ND		0.010	ug/l	1	08/27/15 19:24	
Heptachlor epoxide	ND		0.010	ug/l	1	08/27/15 19:24	
Hexachlorobenzene	ND		0.050	ug/l	1	08/27/15 19:24	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	08/27/15 19:24	
Methoxychlor	ND		0.010	ug/l	1	08/27/15 19:24	
PCBs, Total	ND		0.50	ug/l	1	08/27/15 19:24	
Propachlor	ND		0.050	ug/l	1	08/27/15 19:24	
Toxaphene	ND		1.0	ug/l	1	08/27/15 19:24	
Trifluralin	ND		0.010	ug/l	1	08/27/15 19:24	
Surr: Decachlorobiphenyl	*24 %*	Conc:*0.0240*	*70-130*	%			*S-GC*
Surr: Tetrachloro-meta-xylene	*72 %*	Conc:*0.0721*	*70-130*	%			

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

5H12003-01 MW-7D (monitoring)

Sampled: 08/09/15 15:00 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB33853

Chlorinated Pesticides and/or PCBs

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Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

QUALITY CONTROL SECTION

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Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

Anions by IC, EPA Method 9056 - Quality Control

Batch W5H0730 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0730-BLK1)				Analyzed: 08/15/15 09:49						
Iodide	ND	10	ug/l							
LCS (W5H0730-BS1)				Analyzed: 08/15/15 10:04						
Iodide	40.2	10	ug/l	40.0		101	85-115			
Matrix Spike (W5H0730-MS1)	**Source: 5H13010-01**			Analyzed: 08/15/15 11:45						
Iodide	7160	1000	ug/l	4000	3250	98	80-120			
Matrix Spike Dup (W5H0730-MSD1)	**Source: 5H13010-01**			Analyzed: 08/15/15 12:05						
Iodide	7440	1000	ug/l	4000	3250	105	80-120	4	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0781 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0781-BLK1)				Analyzed: 08/28/15 11:48						
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							

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0781 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5H0781-BLK1)				Analyzed: 08/28/15 11:48						
Hexachlorobenzene	ND	0.050	ug/l							
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	*0.122*		*ug/l*	*0.100*		*122*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0610*		*ug/l*	*0.100*		*61*	*70-130*			*S-11*
LCS (W5H0781-BS1)				Analyzed: 08/27/15 16:19						
4,4´-DDD	0.0966	0.010	ug/l	0.100		97	55-142			
4,4´-DDE	0.0707	0.010	ug/l	0.100		71	49-129			
4,4´-DDT	0.121	0.010	ug/l	0.100		121	54-160			
Aldrin	0.0531	0.010	ug/l	0.100		53	29-115			
alpha-BHC	0.0902	0.010	ug/l	0.100		90	59-131			
beta-BHC	0.107	0.010	ug/l	0.100		107	63-136			
delta-BHC	0.118	0.010	ug/l	0.100		118	59-137			
Dieldrin	0.0961	0.010	ug/l	0.100		96	59-135			
Endosulfan I	0.0942	0.010	ug/l	0.100		94	28-138			
Endosulfan II	0.0978	0.010	ug/l	0.100		98	53-133			
Endosulfan sulfate	0.0815	0.010	ug/l	0.100		82	58-155			
Endrin	0.107	0.010	ug/l	0.100		107	57-148			
Endrin aldehyde	0.0978	0.010	ug/l	0.100		98	45-139			
gamma-BHC (Lindane)	0.0896	0.010	ug/l	0.100		90	59-129			
Heptachlor	0.0696	0.010	ug/l	0.100		70	42-136			
Heptachlor epoxide	0.0946	0.010	ug/l	0.100		95	59-134			
Methoxychlor	0.0779	0.010	ug/l	0.100		78	56-167			
Surr: Decachlorobiphenyl	*0.0943*		*ug/l*	*0.100*		*94*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0477*		*ug/l*	*0.100*		*48*	*70-130*			*S-11*
Matrix Spike (W5H0781-MS1)	**Source: 5H13045-01**			Analyzed: 08/28/15 17:52						
4,4´-DDD	0.119	0.010	ug/l	0.100	ND	119	62-144			
4,4´-DDE	0.0880	0.010	ug/l	0.100	ND	88	53-134			
4,4´-DDT	0.157	0.010	ug/l	0.100	ND	157	48-170			
Aldrin	0.0711	0.010	ug/l	0.100	ND	71	49-107			
alpha-BHC	0.118	0.010	ug/l	0.100	ND	118	47-125			
beta-BHC	0.129	0.010	ug/l	0.100	ND	129	62-123			MS-05
delta-BHC	0.140	0.010	ug/l	0.100	ND	140	56-140			
Dieldrin	0.112	0.010	ug/l	0.100	ND	112	65-135			
Endosulfan I	0.109	0.010	ug/l	0.100	ND	109	28-119			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5H0781 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%RE	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5H0781-MS1)	**Source: 5H13045-01**			Analyzed: 08/28/15 17:52						
Endosulfan II	0.120	0.010	ug/l	0.100	ND	120	56-127			
Endosulfan sulfate	0.119	0.010	ug/l	0.100	ND	119	72-171			
Endrin	0.129	0.010	ug/l	0.100	ND	129	53-123			MS-05
Endrin aldehyde	0.130	0.010	ug/l	0.100	ND	130	34-158			
gamma-BHC (Lindane)	0.118	0.010	ug/l	0.100	ND	118	49-126			
Heptachlor	0.0942	0.010	ug/l	0.100	ND	94	56-155			
Heptachlor epoxide	0.109	0.010	ug/l	0.100	ND	109	55-137			
Methoxychlor	0.124	0.010	ug/l	0.100	ND	124	44-192			
Surr: Decachlorobiphenyl	*0.106*		*ug/l*	*0.100*		*106*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0720*		*ug/l*	*0.100*		*72*	*70-130*			
Matrix Spike Dup (W5H0781-MSD1)	**Source: 5H13045-01**			Analyzed: 08/28/15 18:23						
4,4´-DDD	0.117	0.010	ug/l	0.100	ND	117	62-144	2	25	
4,4´-DDE	0.108	0.010	ug/l	0.100	ND	108	53-134	20	25	
4,4´-DDT	0.155	0.010	ug/l	0.100	ND	155	48-170	1	25	
Aldrin	0.0700	0.010	ug/l	0.100	ND	70	49-107	2	25	
alpha-BHC	0.105	0.010	ug/l	0.100	ND	105	47-125	11	25	
beta-BHC	0.122	0.010	ug/l	0.100	ND	122	62-123	5	25	
delta-BHC	0.132	0.010	ug/l	0.100	ND	132	56-140	6	25	
Dieldrin	0.108	0.010	ug/l	0.100	ND	108	65-135	3	25	
Endosulfan I	0.104	0.010	ug/l	0.100	ND	104	28-119	4	25	
Endosulfan II	0.115	0.010	ug/l	0.100	ND	115	56-127	4	25	
Endosulfan sulfate	0.114	0.010	ug/l	0.100	ND	114	72-171	4	25	
Endrin	0.123	0.010	ug/l	0.100	ND	123	53-123	5	25	
Endrin aldehyde	0.102	0.010	ug/l	0.100	ND	102	34-158	23	25	
gamma-BHC (Lindane)	0.107	0.010	ug/l	0.100	ND	107	49-126	10	25	
Heptachlor	0.0912	0.010	ug/l	0.100	ND	91	56-155	3	25	
Heptachlor epoxide	0.105	0.010	ug/l	0.100	ND	105	55-137	4	25	
Methoxychlor	0.121	0.010	ug/l	0.100	ND	121	44-192	2	25	
Surr: Decachlorobiphenyl	*0.101*		*ug/l*	*0.100*		*101*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0724*		*ug/l*	*0.100*		*72*	*70-130*			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 08/12/15 08:45
Date Reported: 09/02/15 15:25

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.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
334038		MW-7D	8/9/15	1500	5.6								

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:	19.7°C		
		pH:	6.77		
		Sp Cond:	39065 µS/cm		
		Turb:	0.85 NTU		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon		8/9/15	15:00	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	↓	↓	8/10/15	11:15	Sample for metals (diss.) was preserved w/ 2 ml of 50% HNO_3
Received by:					
Relinquished by:					
Received by:	Monterey Bay Analytical Serv		8/10/15	11:15	

[ ] Payment received Check # Amount: Receipt # Date:

ERH

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Monday, July 06, 2015

Lab Number: AB31150

Collection Date/Time: 5/28/2015 16:48 Sample Collector: KEITA A.

Submittal Date/Time: 5/28/2015 17:55 Sample ID

Sample Description: MW-8S

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**320**		2	6/9/2015	LJ
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	6/3/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	6/5/2015	MW
Arsenic, Total	EPA200.8	µg/L	**1**		1	6/3/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**57**		10	6/3/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**390**		10	6/10/2015	LJ
Boron, Dissolved	EPA200.7	mg/L	**0.22**		0.5	5/29/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**0.9**		0.1	5/29/2015	TC
Calcium	EPA200.7	mg/L	**149**		5	5/29/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**151**		5	5/29/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		6/17/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	6/10/2015	LJ
Chloride, Dissolved	EPA300.0	mg/L	**261**		1	5/29/2015	TC
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Attached**	E		6/17/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**3**		3	5/29/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		6/10/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		6/15/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		6/15/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		6/5/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.1**		0.1	5/29/2015	TC
Glyphosate	EPA547	µg/L	**Not Detected**	E		6/5/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**578**		10	6/1/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	6/10/2015	LJ
Iodide	EPA9056M	µg/L	**Not Detected**	E	12	6/5/2015	WECK
Iron	EPA200.7	µg/L	**104**		100	5/29/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**99**		100	5/29/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	6/17/2015	HM
Lithium	EPA200.8	µg/L	**Not Detected**		1	6/12/2015	SM
Magnesium	EPA200.7	mg/L	**50**		5	5/29/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**51**		5	5/29/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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

Manganese, Dissolved	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
Manganese, Total	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	5/29/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**123**		1	5/30/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	**28.2**		0.1	5/30/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.4**		0.1	5/29/2015	TC
Odor Threshold at 60 C	SM2150B	TON	**2**		1	5/29/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.10**		0.03	5/29/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.13**			5/28/2015	AK
pH (Laboratory)	SM4500-H+B	pH (H)	**7.4**		0.1	5/29/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		6/6/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.11**		0.03	6/16/2015	LRH
Potassium	EPA200.7	mg/L	**4.1**		5	5/29/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**4.3**		5	5/29/2015	MW
QC Ratio TDS/SEC	Calculation		**0.62**			6/3/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		6/6/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**37**		5	5/29/2015	MW
Sodium	EPA200.7	mg/L	**262**		5	5/29/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**265**		5	5/29/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**2036**		1	6/2/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**2004**		1	5/28/2015	AK
Strontium, Dissolved	EPA200.8	µg/L	**868**		5	6/3/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**258**		1	5/29/2015	TC
Temperature (Field)	SM2550	° C	**16.83**			5/28/2015	AK
Total Diss. Solids	SM2540C	mg/L	**1260**		10	6/1/2015	HM
Turbidity	EPA180.1	NTU	**0.10**		0.05	5/29/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.92**		0.05	5/28/2015	AK
Volatile Org. Compounds (524)	EPA524	µg/L	**Attached**	E		6/4/2015	BSK
Zinc	EPA200.7	µg/L	**636**		100	5/29/2015	MW

Sample Comments:

Report Approved by:

David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**31150 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	262	0.04350	11.40
Potassium	4.1	0.02558	0.10
Calcium	149	0.04990	7.44
Magnesium	50	0.08229	4.11
NH3-N	0	0.07143	0.00
		SUM	23.05

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	320	0.02000	6.40
Sulfate	258	0.02082	5.37
Chloride	261	0.02821	7.36
Nitrate-Nitrogen	27.7	0.07138	1.98
Phosphate-P	0.00	0.01031	0.00
Bromide	0.9	0.01252	0.01
		SUM	21.12

ANION-CATION BALANC **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	2036	
Cation Sum X 100	2305	**113%**
Anion Sum X 100	2112	**104%**

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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	265	0.04350	11.53
Potassium	4.3	0.02558	0.11
Calcium	151	0.04990	7.53
Magnesium	51	0.08229	4.20
NH3-N	0	0.07143	0.00
		SUM	23.37

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	320	0.02000	6.40
Sulfate	258	0.02082	5.37
Chloride	261	0.02821	7.36
Nitrate-Nitrogen	27.7	0.07138	1.98
Phosphate-P	0.00	0.01031	0.00
Bromide	0.9	0.01252	0.01
		SUM	21.12

ANION-CATION BA **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	2036	
Cation Sum X 100	2337	**115%**
Anion Sum X 100	2112	**104%**

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: 6/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	102.5	95-105	13:01

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB31164 D	398	398	0	5	13:43

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Color QC Summary (SM 2120B)

Date Analyzed: 5/29/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<3	1725
ICV	5	5	100.0	80-120	1725

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB31152	100	100	0.0	10	1725

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB31190

Date Analyzed
Wednesday, June 03, 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	113.3	0.10	140.3	133.5	4.99	4928.2	50	-457.0	-453.9	0.7	104.9	153.1	37.34	0.43
Aluminum	0.0	94.5	1.35	108.8	105.1	3.45	8.2	50	82.6	83.7	1.3	98.0	103.9	5.90	0.16
Arsenic	0.0	97.3	-0.09	103.5	99.7	3.71	259.3	50	65.4	73.3	11.4	98.9	98.3	0.64	0.09
Strontium	0.0	104.1	0.01	106.0	102.8	3.12	4242.5	50	-356.6	-161.2	75.5	102.8	101.2	1.60	0.01
Barium	0.0	99.2	0.00	103.7	100.7	2.89	99.2	50	80.4	86.4	7.2	99.4	94.0	5.55	0.00

Note: Li and Be data not reported.

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

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB31448

Date Analyzed
Friday, June 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%	3-Jun	70-130%	70-130%	20%			70-130%	70-130%	20%	85-115%	85-115%	20%	
Lithium	0.1	97.6	1.07	106.2	101.0	5.06	52.7	50	99.1	108.8	9.3	93.2	107.7	14.40	0.06

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: 6/5/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	ND	---	<0.05	11:00
ICVL	0.050	0.05	100.00%	90-110	11:00
ICV	0.500	0.490	98.00%	90-110	11:00
CCVB1	---	ND	---	<0.05	11:00
CCV1	0.500	0.460	92.00%	90-110	11:00

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	
AB31031	0.000	0.500	0.420	0.470	84	94	11.2	85-120	10	11:00

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: 5/29/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.85	6.85	100.0	95-105	1455

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB31165	7.4	7.4	0	10	1455

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: 6/16/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:09
LCSL	0.03	0.03	100	50-150	14:09
ICV	0.50	0.54	108	90-110	14:09
QCS	0.50	0.50	100	80-120	14:09
ICV	0.50	0.52	104	90-110	15:54
QCS	0.50	0.50	100	80-120	15:54
CCV	0.50	0.53	106	80-120	15:54

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		
AB31032	0.07	0.50	0.54	0.56	94	98	3.6	70-130	10	15:54	15:54

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

ICV= Initial Calibration Verification, CCV= Continuing Calibration Verification, RPD = Relative Percent Difference; Rec = Recovery

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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 6/2/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	935

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB31139	564	562	0.4%	10	935
AB31160	2111	2097	0.7%	10	945

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: 6/1/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	3	---	<10	940
ICVL	100	103	103	80-120	940
ICV	500	506	101.2	90-110	940

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB31140	617	608	1.5	10	940
AB31154	860	851	1.1	10	1015

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: 5/29/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<0.05	859
ICV	1.00	1.04	104.0%	95-105	859

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB31030	2.2	2.2	0.00%	10	859

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150529

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	-0.01	0.00	1.01	101.1%	0.99	99.5%	1.6%	1	0.95	94.7%	1	1.0	95.7%
B 249.772	0.05-5ppm	0.00	0.01	1.03	103.5%	1.01	101.1%	2.3%	1	0.96	96.0%	1	1.0	98.2%
Ca 317.933	50-300ppm	-7.16	-7.14	50.1	100.1%	49.4	98.8%	1.4%	50	46.8	93.6%	50	48.3	96.7%
Ca 396.847	0.5-50ppm	-0.27	-0.25	51.1	102.3%	50.6	101.3%	0.9%	50	48.0	96.1%	50	50.3	100.6%
Cu 324.754	10ppb-100ppm	-4.50	-2.24	1037	103.7%	1017	101.7%	1.9%	1000	950	95.0%	1000	1012.7	101.3%
Cu 327.395	10ppb-100ppm	-3.77	-3.70	1037	103.7%	1019	101.9%	1.8%	1000	949	94.9%	1000	1016.0	101.6%
Fe 238.204	10ppb-100ppm	-0.41	-1.02	1005	100.5%	985	98.5%	2.0%	1000	957	95.7%	1000	996.9	99.7%
Fe 259.940	10ppb-100ppm	-1.37	-2.08	1031	103.1%	1009	100.9%	2.1%	1000	973	97.3%	1000	1026.0	102.6%
K 766.491	0.5-750ppm	-0.15	-0.14	10.3	103.5%	10.4	103.5%	0.0%	10	9.7	96.6%	10	10.3	103.3%
Mg 202.582	50-1000ppm	-3.01	-3.04	52.4	104.9%	51.0	101.9%	2.9%	50	48.9	97.7%	50	51.7	103.4%
Mg 279.078	0.5-50ppm	-0.03	0.01	51.2	102.4%	50.2	100.4%	2.0%	50	48.2	96.4%	50	50.2	100.3%
Mn 257.610	10ppb-11ppm	-3.42	-2.99	1013	101.3%	995	99.5%	1.8%	1000	958	95.8%	1000	1005.7	100.6%
Mn 260.568	10ppb-11ppm	-3.69	-2.72	1044	104.4%	1020	102.0%	2.3%	1000	982	98.2%	1000	1035.3	103.5%
Na 568.821	50-1000ppm	4.31	4.79	52.2	104.5%	51.9	103.8%	0.7%	50	45.8	91.5%	50	50.1	100.2%
Na 589.592	0.5-50ppm	0.02	0.11	51.6	103.2%	51.2	102.5%	0.7%	50	47.6	95.3%	50	51.4	102.7%
Si 251.611	0.5-200ppm	-0.07	-0.08	51.2	102.5%	50.3	100.6%	1.8%	50	49.4	98.9%	50	51.4	102.8%
Si 252.411	0.5-200ppm	-0.01	-0.03	49.5	99.1%	48.9	97.8%	1.4%	50	48.2	96.3%	50	49.9	99.8%
Zn 213.857	10ppb-50ppm	-7.22	-7.56	993	99.3%	979	97.9%	1.4%	1000	965	96.5%	1000	976.7	97.7%

Sample ID AB31021

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.16	1.05	89.5%	1.03	87.7%	1.7%	1	0.89	88.7%	6.5%	0.00
B 249.772	0.16	1.08	92.6%	1.08	91.9%	0.7%	1	0.91	91.2%	5.1%	0.00
Ca 317.933	12.4	65.6	106.5%	66.1	107.3%	0.7%	50	46.4	92.8%	0.9%	-7.11
Ca 396.847	17.0	60.7	87.4%	60.7	87.6%	0.1%	50	45.0	90.0%	6.5%	-0.22
Cu 324.754	-1	921	92.1%	916	91.7%	0.5%	1000	902	90.2%	5.3%	-2.99
Cu 327.395	-3	925	92.8%	920	92.3%	0.5%	1000	908	90.8%	4.3%	-2.61
Fe 238.204	105	1048	94.3%	1045	94.1%	0.2%	1000	926	92.6%	3.3%	0.40
Fe 259.940	111	1076	96.5%	1065	95.4%	1.0%	1000	947	94.7%	2.7%	0.49
K 766.491	0.9	10.4	95.3%	10.5	96.1%	0.7%	10	9.4	93.6%	3.2%	-0.15
Mg 202.582	3.6	53.8	100.4%	53.7	100.1%	0.2%	50	47.0	94.0%	3.9%	-2.92
Mg 279.078	6.1	53.0	93.8%	52.8	93.4%	0.4%	50	46.5	93.0%	3.6%	0.02
Mn 257.610	4	945	94.1%	939	93.5%	0.6%	1000	918	91.8%	4.2%	-3.14
Mn 260.568	4	988	98.4%	980	97.5%	0.9%	1000	962	96.2%	2.0%	-3.24
Na 568.821	45.7	91.0	90.6%	91.1	90.9%	0.2%	50	44.3	88.6%	3.3%	3.87
Na 589.592	46.9	90.3	86.8%	90.9	87.9%	0.6%	50	46.0	92.1%	3.4%	0.22
Si 251.611	9.1	57.4	96.6%	57.0	95.9%	0.6%	50	48.6	97.1%	1.8%	-0.02
Si 252.411	8.6	54.8	92.3%	54.3	91.3%	0.9%	50	46.0	91.9%	4.7%	0.01
Zn 213.857	709	1595	88.5%	1594	88.4%	0.1%	1000	951	95.1%	1%	-4.89

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: 20150529.00

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		2.0	20.0	2.0	20.0	2.0	2.0
	ICVB	0.0	0.0	0.0	0.0	0.0	0.0
	ICV	2.0	20.4	2.1	20.9	1.9	1.9
	Rec 90-110%	101.6	102.0	103.1	104.3	94.1	96.2
	ICVL	0.2	1.8	0.2	1.7	0.2	0.2
	Rec 50-150%	96.6	89.7	100.6	85.4	116.8	105.8
Sample ID	AB31133	0.1	18.9	0.2	44.0	0.1	0.9
	MS	2.0	38.7	2.1	63.8	1.9	2.7
	Rec 80-120%	92.4	98.7	96.1	98.9	93.1	92.6
	MSD	2.0	38.6	2.1	63.8	2.0	2.7
	Rec 80-120%	92.2	98.6	95.9	99.3	93.5	92.4
	Diff 10%	0.2	0.1	0.2	0.1	0.4	0.2
	CCV	2.0	20.4	2.1	21.0	1.9	2.0
	Rec 90-110%	101.6	102.2	104.6	104.9	96.1	97.7
	Diff 10%	0.0	0.2	1.5	0.6	2.2	1.5
	CCVB	0.0	0.0	0.0	0.0	0.0	0.0

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831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

MBAS QC Summary (SM 5540C)

Date Analyzed: 5/29/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	834
ICVL	0.050	0.046	92	80-120	835
ICV	0.250	0.249	99.6	80-120	1037

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	
AB31150	0.016	0.250	0.258	0.251	96.8	94	2.8	80/120	10	1016

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: 5/29/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	14:46
LCSL	0.03	0.03	100	50-150	14:46
ICV	0.30	0.30	100	90-110	14:46
QCS	0.30	0.28	93	80-120	14:46
CCV	0.30	0.30	100	80-120	14:46

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		
AB31150	0.10	0.30	0.39	0.41	97	103	5.0	70-130	10	14:46	14:46

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

June 17, 2015

Ceres ID: 10682

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 June 3, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

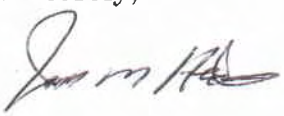
This work was authorized under M.B.A.'s Project # AB31150.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10682-001	MW-8S (monitoring)	6/3/2015	5/28/2015	16:48

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB31150

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1329
ZB-5 MS Analysis Date: 17-Jun-15
Date Received: NA
Date Extracted: 15-Jun-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.37		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	99.7	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	105	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB31150	Sample Size:	1.000 L	QC Batch #:	1329	Date Extracted:	15-Jun-15
				ZB-5 MS Analysis Date:	17-Jun-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	11.0	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	93.2	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	104	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-8S (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10682-001	Date Received:	3-Jun-15
Project:	AB31150	Sample Size:	1.016 L	QC Batch #:	1329	Date Extracted:	15-Jun-15
Date Collected:	28-May-15			ZB-5 MS Analysis Date:	17-Jun-15		
Time Collected:	16:48						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.73		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	83.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	93.8	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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: 10682
Temperature: 2.8 °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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)___ Results by 4/13/15
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 / Comments
		Date	Time	Matrix								☐ 1998 WHO ☐ 2005 WHO ☐ Other
1	MW-8S (monitoring)	5/28/2015	1648	Aq	1	X						AB31150
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**
D. Holland	6/2/2015	16:00		6/3/15	10:10

Client understands that all terms desribed 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: 10682	Date/Time: 6/3/15 10:10
Client Project ID: AB31150	Received Temperature: 2.8 Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / (N)
Intact?	Y / N
NA:	NA
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
List COC discrepancies: NaN 6/3/15	
List Damaged Samples: NaN 6/3/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10682 PB: 1329 Sample #s: 1 Due Date: 6/17/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt.

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10682-1	1536.59g	520.18g	1.016L

Chemist _____ Date 6/15/15

Method: 1613B
SOP #: 3021

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1329-MB001	Method Blank		1.000 L	[illegible] 6/15/15	[illegible] 6/15/15	NA	[illegible] 6/15/15	NA	[illegible] 6/16/15
0-1329-OPR001	OPR		1.000 L	(A)					
10682-1329-001	MW-8S (monitoring)	✓	1.016 L						

Comments : (A) OPR spiked with NSS.

Soxhlet Start: 14:50 6/15/15

Soxhlet Stop: 07:55 6/16/15

Samples Logged out by: [illegible] 07:15 6/15/15

Samples Returned by: NA

Note samples Depleted: I

Sample Extracts Storage Location: Box 16 11:00 6/16/15

Extracts to Instrument: 11:00 6/16/15 [illegible]

Extracts returned to Storage Location: 13:50 6/17/15 [illegible]

Form M1.0 rev5

Chemist: [illegible]

Effective Date: 8/7/14

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	5021115A	10	2/10/20
NSS	B		
CSS	C		
RSS	D	20	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	145871	4/3/16
Hexanes	30,30,100,20ml	147232	4/3/16
5% Gel	4g	P060215A	12/2/15
Basic Gel	4g	P021915A	8/19/15
Acid Gel	8g	P060215B	12/2/15
Acid Al	6g	P042015A	10/20/15
Na_2SO_4	1.5g	P041515A	10/15/15
20% DCM: Hex	30ml	L060115A	12/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5F03038

Report Date: 06/19/15 09:30

Received Date: 06/03/15 10:00

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 06/03/15 10:00 with the Chain of Custody document. The samples were received in good condition, at 3.3 °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: 06/03/15 10:00
Date Reported: 06/19/15 09:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-8S (monitoring) (AB31150)	Andrew Kieta	5F03038-01	Water	05/28/15 16:48

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

5F03038-01 MW-8S (monitoring)

Sampled: 05/28/15 16:48 **Sampled By:** Andrew Kieta **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5F0320 Prepared: 06/05/15 13:00 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	12	ug/l	1.25	06/05/15 15:58	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5F0162 Prepared: 06/03/15 11:53 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	06/17/15 23:22	
4,4´-DDE	ND		0.010	ug/l	1	06/17/15 23:22	
4,4´-DDT	ND		0.010	ug/l	1	06/17/15 23:22	
Aldrin	ND		0.010	ug/l	1	06/17/15 23:22	
alpha-BHC	ND		0.010	ug/l	1	06/17/15 23:22	
Aroclor 1016	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1221	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1232	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1242	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1248	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1254	ND		0.10	ug/l	1	06/17/15 23:22	
Aroclor 1260	ND		0.10	ug/l	1	06/17/15 23:22	
beta-BHC	ND		0.010	ug/l	1	06/17/15 23:22	
Chlordane (tech)	ND		0.10	ug/l	1	06/17/15 23:22	
Chlorothalonil	ND		0.050	ug/l	1	06/17/15 23:22	
delta-BHC	ND		0.010	ug/l	1	06/17/15 23:22	
Dieldrin	**0.013**		0.010	ug/l	1	06/17/15 23:22	
Endosulfan I	ND		0.010	ug/l	1	06/17/15 23:22	
Endosulfan II	ND		0.010	ug/l	1	06/17/15 23:22	
Endosulfan sulfate	**0.032**		0.010	ug/l	1	06/17/15 23:22	
Endrin	ND		0.010	ug/l	1	06/17/15 23:22	
Endrin aldehyde	ND		0.010	ug/l	1	06/17/15 23:22	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	06/17/15 23:22	
Heptachlor	ND		0.010	ug/l	1	06/17/15 23:22	
Heptachlor epoxide	ND		0.010	ug/l	1	06/17/15 23:22	
Hexachlorobenzene	ND		0.050	ug/l	1	06/17/15 23:22	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	06/17/15 23:22	
Methoxychlor	ND		0.010	ug/l	1	06/17/15 23:22	
PCBs, Total	ND		0.50	ug/l	1	06/17/15 23:22	
Propachlor	ND		0.050	ug/l	1	06/17/15 23:22	
Toxaphene	ND		1.0	ug/l	1	06/17/15 23:22	
Trifluralin	ND		0.010	ug/l	1	06/17/15 23:22	
Surr: Decachlorobiphenyl	*108 %*	Conc:*0.108*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*94 %*	Conc:*0.0944*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

QUALITY CONTROL SECTION

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

Anions by IC, EPA Method 9056 - Quality Control

Batch W5F0320 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0320-BLK1)				Analyzed: 06/05/15 13:51						
Iodide	ND	10	ug/l							
LCS (W5F0320-BS1)				Analyzed: 06/05/15 14:21						
Iodide	41.2	10	ug/l	40.0		103	85-115			
Matrix Spike (W5F0320-MS1)	**Source: 5F03038-01**			Analyzed: 06/05/15 16:29						
Iodide	46.2	12	ug/l	50.0	2.55	87	80-120			
Matrix Spike Dup (W5F0320-MSD1)	**Source: 5F03038-01**			Analyzed: 06/05/15 17:03						
Iodide	48.5	12	ug/l	50.0	2.55	92	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0162 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0162-BLK1)				Analyzed: 06/17/15 21:20						
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							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0162 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0162-BLK1)				Analyzed: 06/17/15 21:20						
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	*0.101*		*ug/l*	*0.100*		*101*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0741*		*ug/l*	*0.100*		*74*	*70-130*			
LCS (W5F0162-BS1)				Analyzed: 06/17/15 21:50						
4,4´-DDD	0.116	0.010	ug/l	0.100		116	55-142			
4,4´-DDE	0.111	0.010	ug/l	0.100		111	49-129			
4,4´-DDT	0.120	0.010	ug/l	0.100		120	54-160			
Aldrin	0.0952	0.010	ug/l	0.100		95	29-115			
alpha-BHC	0.104	0.010	ug/l	0.100		104	59-131			
beta-BHC	0.124	0.010	ug/l	0.100		124	63-136			
delta-BHC	0.128	0.010	ug/l	0.100		128	59-137			
Dieldrin	0.107	0.010	ug/l	0.100		107	59-135			
Endosulfan I	0.0858	0.010	ug/l	0.100		86	28-138			
Endosulfan II	0.0919	0.010	ug/l	0.100		92	53-133			
Endosulfan sulfate	0.106	0.010	ug/l	0.100		106	58-155			
Endrin	0.105	0.010	ug/l	0.100		105	57-148			
Endrin aldehyde	0.110	0.010	ug/l	0.100		110	45-139			
gamma-BHC (Lindane)	0.107	0.010	ug/l	0.100		107	59-129			
Heptachlor	0.0985	0.010	ug/l	0.100		99	42-136			
Heptachlor epoxide	0.106	0.010	ug/l	0.100		106	59-134			
Methoxychlor	0.102	0.010	ug/l	0.100		102	56-167			
Surr: Decachlorobiphenyl	*0.113*		*ug/l*	*0.100*		*113*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0862*		*ug/l*	*0.100*		*86*	*70-130*			
LCS Dup (W5F0162-BSD1)				Analyzed: 06/17/15 22:21						
4,4´-DDD	0.0974	0.010	ug/l	0.100		97	55-142	17	25	
4,4´-DDE	0.0968	0.010	ug/l	0.100		97	49-129	14	25	
4,4´-DDT	0.103	0.010	ug/l	0.100		103	54-160	15	25	
Aldrin	0.0889	0.010	ug/l	0.100		89	29-115	7	25	
alpha-BHC	0.0990	0.010	ug/l	0.100		99	59-131	5	25	
beta-BHC	0.106	0.010	ug/l	0.100		106	63-136	16	25	
delta-BHC	0.107	0.010	ug/l	0.100		107	59-137	18	25	
Dieldrin	0.0929	0.010	ug/l	0.100		93	59-135	14	25	
Endosulfan I	0.0753	0.010	ug/l	0.100		75	28-138	13	25	
Endosulfan II	0.0777	0.010	ug/l	0.100		78	53-133	17	25	
Endosulfan sulfate	0.0885	0.010	ug/l	0.100		88	58-155	18	25	

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0162 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5F0162-BSD1)				Analyzed: 06/17/15 22:21						
Endrin	0.0922	0.010	ug/l	0.100		92	57-148	13	25	
Endrin aldehyde	0.0901	0.010	ug/l	0.100		90	45-139	20	25	
gamma-BHC (Lindane)	0.0976	0.010	ug/l	0.100		98	59-129	9	25	
Heptachlor	0.0921	0.010	ug/l	0.100		92	42-136	7	25	
Heptachlor epoxide	0.0934	0.010	ug/l	0.100		93	59-134	13	25	
Methoxychlor	0.0868	0.010	ug/l	0.100		87	56-167	16	25	
Surr: Decachlorobiphenyl	*0.110*		*ug/l*	*0.100*		*110*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0793*		*ug/l*	*0.100*		*79*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 06/03/15 10:00
Date Reported: 06/19/15 09:30

Notes and Definitions

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)

A5F0265
6/15/2015
Invoice: A512315

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5F0265 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 6/3/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	6/03/2015 - 10:30		
Report Due:	6/17/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 2.6

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet Ice
Received On Blue Ice
Packing Material - Bubble Wrap
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:

None applied

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5F0265-01
Sampled By: Andrew Kieta
Sample Description: MW-8M (monitoring) // AB31153

Sample Date - Time: 05/29/15 - 10:56
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A506519	06/11/15	06/12/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A506519	06/11/15	06/12/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A506519	06/11/15	06/12/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A506519	06/11/15	06/12/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A506519	06/11/15	06/12/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A506519	06/11/15	06/12/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A506519	06/11/15	06/12/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A506519	06/11/15	06/12/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A506519	06/11/15	06/12/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A506519	06/11/15	06/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A506519										Prepared: 06/11/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Blank (A506519-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							06/12/15	
Aldicarb	ND	3.0	ug/L							06/12/15	
Aldicarb Sulfone	ND	2.0	ug/L							06/12/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							06/12/15	
Carbaryl	ND	5.0	ug/L							06/12/15	
Carbofuran	ND	5.0	ug/L							06/12/15	
Methiocarb	ND	2.0	ug/L							06/12/15	
Methomyl	ND	2.0	ug/L							06/12/15	
Oxamyl	ND	20	ug/L							06/12/15	
Propoxur	ND	2.0	ug/L							06/12/15	
Blank Spike (A506519-BS1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		101	80-120			06/12/15	
Aldicarb	3.9	3.0	ug/L	4.0		97	80-120			06/12/15	
Aldicarb Sulfone	4.2	2.0	ug/L	4.0		104	80-120			06/12/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		103	80-120			06/12/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120			06/12/15	
Carbofuran	4.1	5.0	ug/L	4.0		103	80-120			06/12/15	
Methiocarb	4.0	2.0	ug/L	4.0		100	80-120			06/12/15	
Methomyl	4.0	2.0	ug/L	4.0		101	80-120			06/12/15	
Oxamyl	4.2	20	ug/L	4.0		105	80-120			06/12/15	
Propoxur	4.1	2.0	ug/L	4.0		103	80-120			06/12/15	
Blank Spike Dup (A506519-BSD1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120	1	20	06/12/15	
Aldicarb	3.7	3.0	ug/L	4.0		93	80-120	4	20	06/12/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0		103	80-120	1	20	06/12/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		105	80-120	2	20	06/12/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	0	20	06/12/15	
Carbofuran	4.1	5.0	ug/L	4.0		103	80-120	0	20	06/12/15	
Methiocarb	4.1	2.0	ug/L	4.0		101	80-120	1	20	06/12/15	
Methomyl	3.9	2.0	ug/L	4.0		97	80-120	4	20	06/12/15	
Oxamyl	4.1	20	ug/L	4.0		103	80-120	2	20	06/12/15	
Propoxur	3.9	2.0	ug/L	4.0		97	80-120	5	20	06/12/15	
Matrix Spike (A506519-MS1), Source: A5F0265-01											
3-Hydroxycarbofuran	4.4	3.0	ug/L	4.0	ND	110	65-135			06/12/15	
Aldicarb	4.4	3.0	ug/L	4.0	ND	110	65-135			06/12/15	
Aldicarb Sulfone	4.4	2.0	ug/L	4.0	ND	111	65-135			06/12/15	
Aldicarb Sulfoxide	4.4	3.0	ug/L	4.0	ND	111	65-135			06/12/15	
Carbaryl	4.3	5.0	ug/L	4.0	ND	108	65-135			06/12/15	
Carbofuran	4.2	5.0	ug/L	4.0	ND	106	65-135			06/12/15	
Methiocarb	4.1	2.0	ug/L	4.0	ND	103	65-135			06/12/15	
Methomyl	4.4	2.0	ug/L	4.0	ND	110	65-135			06/12/15	
Oxamyl	4.5	20	ug/L	4.0	ND	112	65-135			06/12/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A506519										Prepared: 06/11/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Matrix Spike (A506519-MS1), Source: A5F0265-01											
Propoxur	4.3	2.0	ug/L	4.0	ND	107	65-135			06/12/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5F0265

06032015

Monte6227

Turnaround: Standard
Due Date: 6/17/2015

Monterey Bay Analytical

Printed: 6/3/2

BSK Associates
Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

2.6

A5F0265 06/03/2015
Monte6227 10

Turnaround Time Request
- [X] 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; Additional cc's: David Holland	Invoice To*: David Holland; PO#:	Phone*: 831-375-6227; Fax: 831-641-0734; E-mail*: mweidner@mbasinc.com, dholland@mbasin
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?* [X] 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)*: Andrew Kieta			

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 531
1	MW-8M (monitoring)	5/29/15	1056	GW	AB31153	X

Relinquished by: (Signature and Printed Name) D. Holland	Company MBAS	Date 6/2/15	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 Whet.		Date 6/3/15	Time 10:30	Payment Received at Delivery: Check / Cash; Date: Amount: PIA#: Init.	

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: ____ Custody Seal: Y (N)
Cooling Method: Wet Blue None 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

SR-FL-0012-06

BSK Associates SR-FL-0002-13

A5F0265 06/03/2015
Monte6227 10

Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info

Was temperature within range? Chemistry **≤ 6°C** Micro **< 10°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 $Na_2S_2O_3$	—	—
None (P) White Cap	—	—
Cr6 (P) Br. Green Label $NH_4OH(NH_4)_2SO_4$ **DW**	Cl, 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	—	—
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—
$Na_2S_2O_3$ + 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

Labeled by: NH @ 12113 Labels checked by: MW @ 12:38 RUSH Paged by:

Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
31150		MW-8S	5/28	16:48	12.7°						21		
		See Attach.											

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:	16.83		
		pH:	7.13		
		Sp Cond:	2,054 uS/cm		
		Turb:	0.92		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Andrew Kieta		5/28/15	1755	Is sample for regulatory purposes? (Yes) / No
Relinquished by:					
Received by:	David Holland		5/28/15	1755	add 4ml 1M HNO3 to 2 x 250 ml metals bottles
Relinquished by:					
Received by:					

[ ] Payment received Check # Amount: Receipt # Date:

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_2B
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_3H / 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

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.

Cal Am DW Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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	

Discrepency 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 0.45μ vacuum filtration + divide → 500mL + H_2SO_4 + $Na_2S_2O_3$ for diss. TKN, NH_3 membrane

↳ 250mL + H_2SO_4 for diss. Total P

↳ 250mL 101-preserve for ortho phosphate

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

MBAS
Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Monday, July 06, 2015

Lab Number: AB31032

Collection Date/Time: 5/27/2015 12:38 Sample Collector: KIETA A

Submittal Date/Time: 5/27/2015 14:13 Sample ID

Sample Description: MW-8M

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**140**		2	6/2/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**292**		100	5/28/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	6/5/2015	MW
Arsenic, Total	EPA200.8	µg/L	**28**		10	5/28/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**154**		100	5/28/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**171**		10	6/2/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	**1.83**		0.5	5/29/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**42.1**		1	5/29/2015	TC
Calcium	EPA200.7	mg/L	**1110**		5	5/29/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**1140**		5	5/29/2015	MW
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	6/2/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	**12380**		100	5/29/2015	TC
Chlorinated Pesticides and PCB (	EPA508	µg/L	**Not Detected**	E		6/10/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**Not Detected**		3	5/28/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		6/3/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		6/5/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		5/29/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		6/3/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.4**	J	1	5/29/2015	TC
Glyphosate	EPA547	µg/L	**Not Detected**	E		6/10/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**6080**		10	6/1/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	6/2/2015	LRH
Iodide	EPA9056M	µg/L	**Not Detected**	E	10	6/5/2015	WECK
Iron	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**Not Detected**		100	5/29/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	6/2/2015	TC
Lithium	EPA200.8	µg/L	**132**		10	5/28/2015	SM
Magnesium	EPA200.7	mg/L	**801**		5	5/29/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**828**		5	5/29/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**353**		100	5/29/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

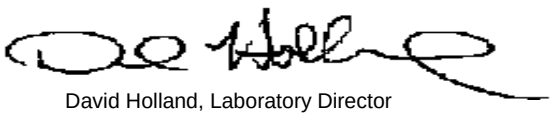
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Manganese, Total	EPA200.7	µg/L	**354**		100	5/29/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	5/28/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**5**		10	5/29/2015	TC
Nitrate+Nitrite as N	EPA300.0	mg/L	**1.5**		1.00	5/29/2015	TC
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.4**	J	1	5/29/2015	TC
Odor Threshold at 60 C	SM2150B	TON	**1**		1	5/28/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.06**		0.03	5/28/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**6.67**			5/27/2015	AK
pH (Laboratory)	SM4500-H+B	pH (H)	**7.2**		0.1	5/27/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		6/6/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.07**		0.03	6/16/2015	LRH
Potassium	EPA200.7	mg/L	**108**		5	5/29/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**111**		5	5/29/2015	MW
QC Ratio TDS/SEC	Calculation		**0.69**			6/1/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		6/2/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**30**		5	5/29/2015	MW
Sodium	EPA200.7	mg/L	**6106**		5	5/29/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**6270**		5	5/29/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**35020**		1	5/28/2015	HM
Specific Conductance (E.C) (Fiel	SM2510B	µmhos/cm	**35040**		1	5/27/2015	AK
Strontium, Dissolved	EPA200.8	µg/L	**8504**		50	5/28/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**1743**		1	5/29/2015	TC
Temperature (Field)	SM2550	° C	**17.17**			5/27/2015	AK
Total Diss. Solids	SM2540C	mg/L	**24000**		10	6/1/2015	HM
Turbidity	EPA180.1	NTU	**0.10**		0.05	5/29/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.56**		0.05	5/27/2015	AK
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		6/1/2015	BSK
Zinc	EPA200.7	µg/L	**340**		100	5/29/2015	MW

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**31032 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6106	0.04350	265.61
Potassium	108	0.02558	2.76
Calcium	1110	0.04990	55.39
Magnesium	801	0.08229	65.91
NH3-N	0	0.07143	0.00
		SUM	389.68

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	140	0.02000	2.80
Sulfate	1743	0.02082	36.29
Chloride	12380	0.02821	349.24
Nitrate-Nitrogen	1.1	0.07138	0.08
Phosphate-P	0.00	0.01031	0.00
Bromide	42.1	0.01252	0.53
		SUM	388.93

ANION-CATION BALANC **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	35020	
Cation Sum X 100	38968	**111%**
Anion Sum X 100	38893	**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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	6270	0.04350	272.75
Potassium	111	0.02558	2.84
Calcium	1140	0.04990	56.89
Magnesium	828	0.08229	68.14
NH3-N	0	0.07143	0.00
		SUM	400.61

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	140	0.02000	2.80
Sulfate	1743	0.02082	36.29
Chloride	12380	0.02821	349.24
Nitrate-Nitrogen	1.1	0.07138	0.08
Phosphate-P	0.00	0.01031	0.00
Bromide	42.1	0.01252	0.53
		SUM	388.93

ANION-CATION BA **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	35020	
Cation Sum X 100	40061	**114%**
Anion Sum X 100	38893	**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.

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5E2342
6/10/2015
Invoice: A511936

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5E2342 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 5/28/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	5/28/2015 - 11:03		
Report Due:	6/11/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 0.0

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.
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.
MS1.5	Matrix spike recovery exceeds upper control limit. No material impact as sample results are Non-Detected.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5E2342-01
Sampled By: Andrew Kieta
Sample Description: MW-8M (monitoring) // AB31032

Sample Date - Time: 05/27/15 - 12:38
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A506098	06/03/15	06/03/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A506098	06/03/15	06/03/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	106 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A506230	06/05/15	06/06/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A506230	06/05/15	06/06/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A506230	06/05/15	06/06/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A506230	06/05/15	06/06/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A506230	06/05/15	06/06/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A506230	06/05/15	06/06/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A506230	06/05/15	06/06/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A506230	06/05/15	06/06/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A506230	06/05/15	06/06/15	
Surrogate: DCPAA	EPA 515.3	98 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A505981	06/01/15	06/01/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A505981	06/01/15	06/01/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A505981	06/01/15	06/01/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A505981	06/01/15	06/01/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A505981	06/01/15	06/01/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	

Certificate of Analysis

Sample ID: A5E2342-01
Sampled By: Andrew Kieta
Sample Description: MW-8M (monitoring) // AB31032

Sample Date - Time: 05/27/15 - 12:38
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	A505981	06/01/15	06/01/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A505981	06/01/15	06/01/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A505981	06/01/15	06/01/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A505981	06/01/15	06/01/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A505981	06/01/15	06/01/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A505981	06/01/15	06/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	99 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	104 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5E2342-01
Sampled By: Andrew Kieta
Sample Description: MW-8M (monitoring) // AB31032

Sample Date - Time: 05/27/15 - 12:38
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A505996	06/01/15	06/02/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A505996	06/01/15	06/02/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A505996	06/01/15	06/02/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A505996	06/01/15	06/02/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A505996	06/01/15	06/02/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A505996	06/01/15	06/02/15	BS1.0
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A505996	06/01/15	06/02/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A505996	06/01/15	06/02/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A505996	06/01/15	06/02/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A505996	06/01/15	06/02/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A505996	06/01/15	06/02/15	BS1.0, MS1.5
Molinate	EPA 525.2	ND	2.0	ug/L	1	A505996	06/01/15	06/02/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A505996	06/01/15	06/02/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A505996	06/01/15	06/02/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A505996	06/01/15	06/02/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A505996	06/01/15	06/02/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	102 %	*Acceptable range: 70-130 %*						
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A506427	06/10/15	06/10/15	
Surrogate: AMPA	EPA 547	92 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A506087	06/02/15	06/03/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A505920	05/28/15	05/29/15	CV0.0

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A506098										Prepared: 06/03/2015	
Prep Method: EPA 504.1										Analyst: PYA	
Blank (A506098-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							06/03/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							06/03/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*103*	*70-130*			06/03/15	
Blank Spike (A506098-BS1)											
Dibromochloropropane (DBCP)	0.14	0.010	ug/L	0.12		109	70-130			06/03/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		105	70-130			06/03/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.49*			*0.46*		*106*	*70-130*			06/03/15	
Blank Spike Dup (A506098-BSD1)											
Dibromochloropropane (DBCP)	0.13	0.010	ug/L	0.12		106	70-130	2	20	06/04/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.12		103	70-130	2	20	06/04/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*106*	*70-130*			06/04/15	
Matrix Spike (A506098-MS1), Source: A5F0039-06											
Dibromochloropropane (DBCP)	0.28	0.010	ug/L	0.13	0.18	82	65-135			06/03/15	
Ethylene Dibromide (EDB)	0.13	0.020	ug/L	0.13	ND	100	65-135			06/03/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.49*			*0.46*		*105*	*70-130*			06/03/15	
EPA 515.3 - Quality Control											
Batch: A506230										Prepared: 06/05/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A506230-BLK1)											
2,4,5-T	ND	1.0	ug/L							06/05/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							06/05/15	
2,4-D	ND	10	ug/L							06/05/15	
Bentazon	ND	2.0	ug/L							06/05/15	
Dalapon	ND	10	ug/L							06/05/15	
Dicamba	ND	1.5	ug/L							06/05/15	
Dinoseb	ND	2.0	ug/L							06/05/15	
Pentachlorophenol	ND	0.20	ug/L							06/05/15	
Picloram	ND	1.0	ug/L							06/05/15	
Surrogate: DCPAA	*42*			*58*		*72*	*70-130*			06/05/15	
Blank Spike (A506230-BS1)											
2,4,5-T	3.6	1.0	ug/L	4.0		91	70-130			06/05/15	
2,4,5-TP (Silvex)	0.72	1.0	ug/L	0.80		91	70-130			06/05/15	
2,4-D	0.37	10	ug/L	0.40		92	70-130			06/05/15	
Bentazon	7.9	2.0	ug/L	8.0		99	70-130			06/05/15	
Dalapon	3.9	10	ug/L	4.0		97	70-130			06/05/15	
Dicamba	5.8	1.5	ug/L	6.0		97	70-130			06/05/15	
Dinoseb	0.77	2.0	ug/L	0.80		96	70-130			06/05/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		95	70-130			06/05/15	
Picloram	0.36	1.0	ug/L	0.40		91	70-130			06/05/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A506230										Prepared: 06/05/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A506230-BS1)											
Surrogate: DCPAA	*55*			*58*		*96*	*70-130*			06/05/15	
Blank Spike Dup (A506230-BSD1)											
2,4,5-T	3.8	1.0	ug/L	4.0		95	70-130	4	20	06/06/15	
2,4,5-TP (Silvex)	0.76	1.0	ug/L	0.80		95	70-130	4	20	06/06/15	
2,4-D	0.40	10	ug/L	0.40		99	70-130	8	20	06/06/15	
Bentazon	7.9	2.0	ug/L	8.0		99	70-130	0	20	06/06/15	
Dalapon	4.1	10	ug/L	4.0		102	70-130	5	20	06/06/15	
Dicamba	5.9	1.5	ug/L	6.0		98	70-130	2	20	06/06/15	
Dinoseb	0.87	2.0	ug/L	0.80		109	70-130	12	20	06/06/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		96	70-130	1	20	06/06/15	
Picloram	0.39	1.0	ug/L	0.40		98	70-130	7	20	06/06/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			06/06/15	
Matrix Spike (A506230-MS1), Source: A5E2070-01											
2,4,5-T	3.8	1.0	ug/L	4.0	ND	96	70-130			06/05/15	
2,4,5-TP (Silvex)	0.70	1.0	ug/L	0.80	ND	87	70-130			06/05/15	
2,4-D	0.40	10	ug/L	0.40	ND	99	70-130			06/05/15	
Bentazon	8.1	2.0	ug/L	8.0	ND	101	70-130			06/05/15	
Dalapon	4.3	10	ug/L	4.0	ND	108	70-130			06/05/15	
Dicamba	6.0	1.5	ug/L	6.0	ND	100	70-130			06/05/15	
Dinoseb	0.78	2.0	ug/L	0.80	ND	98	70-130			06/05/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	97	70-130			06/05/15	
Picloram	0.40	1.0	ug/L	0.40	ND	101	70-130			06/05/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			06/05/15	
Matrix Spike Dup (A506230-MSD1), Source: A5E2070-01											
2,4,5-T	3.8	1.0	ug/L	4.0	ND	96	70-130	0	20	06/05/15	
2,4,5-TP (Silvex)	0.72	1.0	ug/L	0.80	ND	90	70-130	3	20	06/05/15	
2,4-D	0.40	10	ug/L	0.40	ND	99	70-130	0	20	06/05/15	
Bentazon	7.9	2.0	ug/L	8.0	ND	99	70-130	1	20	06/05/15	
Dalapon	4.3	10	ug/L	4.0	ND	108	70-130	0	20	06/05/15	
Dicamba	5.9	1.5	ug/L	6.0	ND	99	70-130	1	20	06/05/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130	2	20	06/05/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130	0	20	06/05/15	
Picloram	0.40	1.0	ug/L	0.40	ND	100	70-130	1	20	06/05/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			06/05/15	
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A505981-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							06/01/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							06/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A505981-BLK1)											
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							06/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							06/01/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							06/01/15	
1,1-Dichloroethane	ND	0.50	ug/L							06/01/15	
1,1-Dichloroethene	ND	0.50	ug/L							06/01/15	
1,1-Dichloropropene	ND	0.50	ug/L							06/01/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							06/01/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							06/01/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							06/01/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							06/01/15	
1,2-Dichloroethane	ND	0.50	ug/L							06/01/15	
1,2-Dichloropropane	ND	0.50	ug/L							06/01/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							06/01/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							06/01/15	
1,3-Dichloropropane	ND	0.50	ug/L							06/01/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							06/01/15	
2,2-Dichloropropane	ND	0.50	ug/L							06/01/15	
2-Butanone	ND	5.0	ug/L							06/01/15	
2-Chlorotoluene	ND	0.50	ug/L							06/01/15	
2-Hexanone	ND	10	ug/L							06/01/15	
4-Chlorotoluene	ND	0.50	ug/L							06/01/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							06/01/15	
Acetone	ND	10	ug/L							06/01/15	
Benzene	ND	0.50	ug/L							06/01/15	
Bromobenzene	ND	0.50	ug/L							06/01/15	
Bromochloromethane	ND	0.50	ug/L							06/01/15	
Bromodichloromethane	ND	0.50	ug/L							06/01/15	
Bromoform	ND	0.50	ug/L							06/01/15	
Bromomethane	ND	0.50	ug/L							06/01/15	
Carbon Tetrachloride	ND	0.50	ug/L							06/01/15	
Chlorobenzene	ND	0.50	ug/L							06/01/15	
Chloroethane	ND	0.50	ug/L							06/01/15	
Chloroform	ND	0.50	ug/L							06/01/15	
Chloromethane	ND	0.50	ug/L							06/01/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							06/01/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							06/01/15	
Dibromochloromethane	ND	0.50	ug/L							06/01/15	
Dibromomethane	ND	0.50	ug/L							06/01/15	
Dichlorodifluoromethane	ND	0.50	ug/L							06/01/15	
Dichloromethane	ND	0.50	ug/L							06/01/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							06/01/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							06/01/15	
Ethylbenzene	ND	0.50	ug/L							06/01/15	
Hexachlorobutadiene	ND	0.50	ug/L							06/01/15	
Isopropylbenzene	ND	0.50	ug/L							06/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A505981-BLK1)											
m,p-Xylenes	ND	0.50	ug/L							06/01/15	
Methyl-t-butyl ether	ND	0.50	ug/L							06/01/15	
Naphthalene	ND	0.50	ug/L							06/01/15	
n-Butylbenzene	ND	0.50	ug/L							06/01/15	
n-Propylbenzene	ND	0.50	ug/L							06/01/15	
o-Xylene	ND	0.50	ug/L							06/01/15	
p-Isopropyltoluene	ND	0.50	ug/L							06/01/15	
sec-Butylbenzene	ND	0.50	ug/L							06/01/15	
Styrene	ND	0.50	ug/L							06/01/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							06/01/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							06/01/15	
tert-Butylbenzene	ND	0.50	ug/L							06/01/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							06/01/15	
Toluene	ND	0.50	ug/L							06/01/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							06/01/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							06/01/15	
Trichloroethene (TCE)	ND	0.50	ug/L							06/01/15	
Trichlorofluoromethane	ND	5.0	ug/L							06/01/15	
Vinyl Chloride	ND	0.50	ug/L							06/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*98*	*70-130*			06/01/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*101*	*70-130*			06/01/15	
Blank Spike (A505981-BS1)											
1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		104	70-130			06/01/15	
1,1,1-Trichloroethane	11	0.50	ug/L	10		106	70-130			06/01/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10		104	70-130			06/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		109	70-130			06/01/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		105	70-130			06/01/15	
1,1-Dichloroethane	11	0.50	ug/L	10		105	70-130			06/01/15	
1,1-Dichloroethene	11	0.50	ug/L	10		106	70-130			06/01/15	
1,1-Dichloropropene	11	0.50	ug/L	10		106	70-130			06/01/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		104	70-130			06/01/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		102	70-130			06/01/15	
1,2,4-Trimethylbenzene	11	0.50	ug/L	10		105	70-130			06/01/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		103	70-130			06/01/15	
1,2-Dichloroethane	10	0.50	ug/L	10		104	70-130			06/01/15	
1,2-Dichloropropane	10	0.50	ug/L	10		105	70-130			06/01/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		106	70-130			06/01/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		105	70-130			06/01/15	
1,3-Dichloropropane	10	0.50	ug/L	10		104	70-130			06/01/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		104	70-130			06/01/15	
2,2-Dichloropropane	11	0.50	ug/L	10		106	70-130			06/01/15	
2-Butanone	10	5.0	ug/L	10		102	70-130			06/01/15	
2-Chlorotoluene	10	0.50	ug/L	10		104	70-130			06/01/15	
2-Hexanone	10	10	ug/L	10		102	70-130			06/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A505981-BS1)											
4-Chlorotoluene	11	0.50	ug/L	10		106	70-130			06/01/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		101	70-130			06/01/15	
Acetone	9.8	10	ug/L	10		98	70-130			06/01/15	
Benzene	11	0.50	ug/L	10		105	70-130			06/01/15	
Bromobenzene	10	0.50	ug/L	10		104	70-130			06/01/15	
Bromochloromethane	11	0.50	ug/L	10		106	70-130			06/01/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130			06/01/15	
Bromoform	10	0.50	ug/L	10		101	70-130			06/01/15	
Bromomethane	10	0.50	ug/L	10		104	70-130			06/01/15	
Carbon disulfide	11	10	ug/L	10		111	70-130			06/01/15	
Carbon Tetrachloride	11	0.50	ug/L	10		106	70-130			06/01/15	
Chlorobenzene	10	0.50	ug/L	10		105	70-130			06/01/15	
Chloroethane	11	0.50	ug/L	10		107	70-130			06/01/15	
Chloroform	10	0.50	ug/L	10		104	70-130			06/01/15	
Chloromethane	11	0.50	ug/L	10		109	70-130			06/01/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10		106	70-130			06/01/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			06/01/15	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130			06/01/15	
Dibromomethane	10	0.50	ug/L	10		105	70-130			06/01/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		109	70-130			06/01/15	
Dichloromethane	11	0.50	ug/L	10		106	70-130			06/01/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		105	70-130			06/01/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		104	70-130			06/01/15	
Ethylbenzene	10	0.50	ug/L	10		105	70-130			06/01/15	
Hexachlorobutadiene	11	0.50	ug/L	10		108	70-130			06/01/15	
Isopropylbenzene	11	0.50	ug/L	10		105	70-130			06/01/15	
m,p-Xylenes	21	0.50	ug/L	20		105	70-130			06/01/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		104	70-130			06/01/15	
Naphthalene	10	0.50	ug/L	10		101	70-130			06/01/15	
n-Butylbenzene	11	0.50	ug/L	10		107	70-130			06/01/15	
n-Propylbenzene	11	0.50	ug/L	10		105	70-130			06/01/15	
o-Xylene	10	0.50	ug/L	10		104	70-130			06/01/15	
p-Isopropyltoluene	11	0.50	ug/L	10		106	70-130			06/01/15	
sec-Butylbenzene	11	0.50	ug/L	10		106	70-130			06/01/15	
Styrene	11	0.50	ug/L	10		111	70-130			06/01/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130			06/01/15	
tert-Butyl alcohol (TBA)	9.4	2.0	ug/L	10		94	70-130			06/01/15	
tert-Butylbenzene	10	0.50	ug/L	10		105	70-130			06/01/15	
Tetrachloroethene (PCE)	11	0.50	ug/L	10		106	70-130			06/01/15	
Toluene	11	0.50	ug/L	10		105	70-130			06/01/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		106	70-130			06/01/15	
trans-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130			06/01/15	
Trichloroethene (TCE)	11	0.50	ug/L	10		105	70-130			06/01/15	
Trichlorofluoromethane	11	5.0	ug/L	10		112	70-130			06/01/15	
Vinyl Chloride	11	0.50	ug/L	10		114	70-130			06/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A505981-BS1)											
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*102*	*70-130*			06/01/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*102*	*70-130*			06/01/15	
Blank Spike Dup (A505981-BSD1)											
1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		105	70-130	1	30	06/01/15	
1,1,1-Trichloroethane	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10		106	70-130	2	30	06/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		110	70-130	1	30	06/01/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
1,1-Dichloroethane	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
1,1-Dichloroethene	11	0.50	ug/L	10		108	70-130	1	30	06/01/15	
1,1-Dichloropropene	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		105	70-130	1	30	06/01/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		104	70-130	1	30	06/01/15	
1,2,4-Trimethylbenzene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		105	70-130	1	30	06/01/15	
1,2-Dichloroethane	11	0.50	ug/L	10		106	70-130	2	30	06/01/15	
1,2-Dichloropropane	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
1,3-Dichlorobenzene	11	0.50	ug/L	10		105	70-130	1	30	06/01/15	
1,3-Dichloropropane	11	0.50	ug/L	10		106	70-130	2	30	06/01/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		105	70-130	1	30	06/01/15	
2,2-Dichloropropane	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
2-Butanone	10	5.0	ug/L	10		103	70-130	1	30	06/01/15	
2-Chlorotoluene	11	0.50	ug/L	10		106	70-130	2	30	06/01/15	
2-Hexanone	10	10	ug/L	10		103	70-130	1	30	06/01/15	
4-Chlorotoluene	11	0.50	ug/L	10		105	70-130	1	30	06/01/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		103	70-130	1	30	06/01/15	
Acetone	9.9	10	ug/L	10		99	70-130	1	30	06/01/15	
Benzene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
Bromobenzene	11	0.50	ug/L	10		105	70-130	2	30	06/01/15	
Bromochloromethane	11	0.50	ug/L	10		106	70-130	0	30	06/01/15	
Bromodichloromethane	10	0.50	ug/L	10		102	70-130	0	30	06/01/15	
Bromoform	9.5	0.50	ug/L	10		95	70-130	7	30	06/01/15	
Bromomethane	11	0.50	ug/L	10		112	70-130	7	30	06/01/15	
Carbon disulfide	11	10	ug/L	10		110	70-130	1	30	06/01/15	
Carbon Tetrachloride	11	0.50	ug/L	10		106	70-130	0	30	06/01/15	
Chlorobenzene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
Chloroethane	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
Chloroform	11	0.50	ug/L	10		105	70-130	1	30	06/01/15	
Chloromethane	11	0.50	ug/L	10		108	70-130	2	30	06/01/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		102	70-130	1	30	06/01/15	
Dibromochloromethane	9.8	0.50	ug/L	10		98	70-130	2	30	06/01/15	
Dibromomethane	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505981										Prepared: 06/01/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike Dup (A505981-BSD1)											
Dichlorodifluoromethane	11	0.50	ug/L	10		108	70-130	2	30	06/01/15	
Dichloromethane	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		106	70-130	1	30	06/01/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
Ethylbenzene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
Hexachlorobutadiene	11	0.50	ug/L	10		108	70-130	1	30	06/01/15	
Isopropylbenzene	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
m,p-Xylenes	21	0.50	ug/L	20		106	70-130	1	30	06/01/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		106	70-130	1	30	06/01/15	
Naphthalene	10	0.50	ug/L	10		104	70-130	4	30	06/01/15	
n-Butylbenzene	11	0.50	ug/L	10		109	70-130	1	30	06/01/15	
n-Propylbenzene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
o-Xylene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
p-Isopropyltoluene	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
sec-Butylbenzene	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
Styrene	11	0.50	ug/L	10		113	70-130	2	30	06/01/15	
tert-Amyl Methyl Ether (TAME)	10	3.0	ug/L	10		104	70-130	0	30	06/01/15	
tert-Butyl alcohol (TBA)	9.8	2.0	ug/L	10		98	70-130	4	30	06/01/15	
tert-Butylbenzene	11	0.50	ug/L	10		106	70-130	2	30	06/01/15	
Tetrachloroethene (PCE)	11	0.50	ug/L	10		108	70-130	2	30	06/01/15	
Toluene	11	0.50	ug/L	10		106	70-130	1	30	06/01/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		108	70-130	1	30	06/01/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130	2	30	06/01/15	
Trichloroethene (TCE)	11	0.50	ug/L	10		107	70-130	1	30	06/01/15	
Trichlorofluoromethane	11	5.0	ug/L	10		110	70-130	2	30	06/01/15	
Vinyl Chloride	11	0.50	ug/L	10		111	70-130	2	30	06/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*102*	*70-130*			06/01/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*102*	*70-130*			06/01/15	
Matrix Spike (A505981-MS1), Source: A5E2406-02											
Di-isopropyl ether (DIPE)	9.6	3.0	ug/L	10	ND	96	70-130			06/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*102*	*70-130*			06/01/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*101*	*70-130*			06/01/15	
EPA 525.2 - Quality Control											
Batch: A505996										Prepared: 06/01/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A505996-BLK1)											
Alachlor	ND	1.0	ug/L							06/01/15	
Atrazine	ND	0.50	ug/L							06/01/15	
Benzo(a)pyrene	ND	0.10	ug/L							06/01/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							06/01/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							06/01/15	
Bromacil	ND	10	ug/L							06/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 525.2 - Quality Control												
Batch: A505996										Prepared: 06/01/2015		
Prep Method: EPA 525.2										Analyst: KHH		
Blank (A505996-BLK1)												
Butachlor	ND	0.38	ug/L							06/01/15		
Diazinon	ND	0.25	ug/L							06/01/15		
Dimethoate	ND	10	ug/L							06/01/15		
Metolachlor	ND	0.50	ug/L							06/01/15		
Metribuzin	ND	0.50	ug/L							06/01/15		
Molinate	ND	2.0	ug/L							06/01/15		
Prometryn	ND	2.0	ug/L							06/01/15		
Propachlor	ND	0.50	ug/L							06/01/15		
Simazine	ND	1.0	ug/L							06/01/15		
Thiobencarb	ND	1.0	ug/L							06/01/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*102*	*70-130*			06/01/15		
Blank Spike (A505996-BS1)												
Alachlor	1.1	1.0	ug/L	1.0		106	70-130			06/01/15		
Atrazine	0.49	0.50	ug/L	0.50		98	70-130			06/01/15		
Benzo(a)pyrene	0.094	0.10	ug/L	0.10		94	70-130			06/01/15		
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		109	70-130			06/01/15		
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		110	70-130			06/01/15		
Bromacil	1.2	10	ug/L	1.0		122	70-130			06/01/15		
Butachlor	1.0	0.38	ug/L	1.0		102	70-130			06/01/15		
Diazinon	0.19	0.25	ug/L	0.20		93	70-130			06/01/15		
Dimethoate	1.1	10	ug/L	1.0		106	70-130			06/01/15		
Metolachlor	2.1	0.50	ug/L	2.0		107	70-130			06/01/15		
Metribuzin	1.4	0.50	ug/L	1.0		139	70-130			06/01/15	BS	***High***
Molinate	1.0	2.0	ug/L	1.0		105	70-130			06/01/15		
Prometryn	1.7	2.0	ug/L	2.0		86	70-130			06/01/15		
Propachlor	0.51	0.50	ug/L	0.50		103	70-130			06/01/15		
Simazine	0.34	1.0	ug/L	0.35		97	70-130			06/01/15		
Thiobencarb	0.50	1.0	ug/L	0.50		101	70-130			06/01/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*102*	*70-130*			06/01/15		
Blank Spike Dup (A505996-BSD1)												
Alachlor	1.1	1.0	ug/L	1.0		106	70-130	0	30	06/02/15		
Atrazine	0.51	0.50	ug/L	0.50		102	70-130	4	30	06/02/15		
Benzo(a)pyrene	0.12	0.10	ug/L	0.10		121	70-130	25	30	06/02/15		
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		109	70-130	0	30	06/02/15		
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		111	70-130	1	30	06/02/15		
Bromacil	1.3	10	ug/L	1.0		133	70-130	9	30	06/02/15	BS	***High***
Butachlor	1.1	0.38	ug/L	1.0		107	70-130	5	30	06/02/15		
Diazinon	0.18	0.25	ug/L	0.20		90	70-130	3	30	06/02/15		
Dimethoate	1.1	10	ug/L	1.0		106	70-130	0	30	06/02/15		
Metolachlor	2.2	0.50	ug/L	2.0		111	70-130	3	30	06/02/15		
Metribuzin	1.4	0.50	ug/L	1.0		142	70-130	2	30	06/02/15	BS	***High***
Molinate	1.1	2.0	ug/L	1.0		107	70-130	2	30	06/02/15		
Prometryn	1.9	2.0	ug/L	2.0		95	70-130	10	30	06/02/15		

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A505996										Prepared: 06/01/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank Spike Dup (A505996-BSD1)											
Propachlor	0.51	0.50	ug/L	0.50		103	70-130	0	30	06/02/15	
Simazine	0.37	1.0	ug/L	0.35		106	70-130	9	30	06/02/15	
Thiobencarb	0.52	1.0	ug/L	0.50		104	70-130	3	30	06/02/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.2*			*5.0*		*104*	*70-130*			06/02/15	
Matrix Spike (A505996-MS1), Source: A5E2342-01											
Alachlor	1.1	1.0	ug/L	0.97	ND	112	70-130			06/02/15	
Atrazine	0.49	0.50	ug/L	0.48	ND	101	70-130			06/02/15	
Benzo(a)pyrene	0.11	0.10	ug/L	0.097	ND	118	70-130			06/02/15	
Bis(2-ethylhexyl) adipate	1.9	3.0	ug/L	1.9	ND	100	70-130			06/02/15	
Bis(2-ethylhexyl) phthalate	1.5	3.0	ug/L	1.5	ND	107	70-130			06/02/15	
Bromacil	1.2	10	ug/L	0.97	ND	126	70-130			06/02/15	
Butachlor	0.99	0.38	ug/L	0.97	ND	102	70-130			06/02/15	
Diazinon	0.18	0.25	ug/L	0.19	ND	94	70-130			06/02/15	
Dimethoate	1.0	10	ug/L	0.97	ND	106	70-130			06/02/15	
Metolachlor	2.0	0.50	ug/L	1.9	ND	105	70-130			06/02/15	
Metribuzin	1.3	0.50	ug/L	0.97	ND	137	70-130			06/02/15	MS1.0 ***High***
Molinate	0.95	2.0	ug/L	0.97	ND	98	70-130			06/02/15	
Prometryn	1.8	2.0	ug/L	1.9	ND	95	70-130			06/02/15	
Propachlor	0.47	0.50	ug/L	0.48	ND	97	70-130			06/02/15	
Simazine	0.36	1.0	ug/L	0.34	ND	106	70-130			06/02/15	
Thiobencarb	0.50	1.0	ug/L	0.48	ND	104	70-130			06/02/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.7*			*4.8*		*97*	*70-130*			06/02/15	
EPA 547 - Quality Control											
Batch: A506427										Prepared: 06/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A506427-BLK1)											
Glyphosate	ND	25	ug/L							06/10/15	
Surrogate: AMPA	*130*			*100*		*126*	*70-130*			06/10/15	
Blank Spike (A506427-BS1)											
Glyphosate	97	25	ug/L	100		97	70-130			06/10/15	
Surrogate: AMPA	*110*			*100*		*115*	*70-130*			06/10/15	
Blank Spike Dup (A506427-BSD1)											
Glyphosate	94	25	ug/L	100		94	70-130	3	30	06/10/15	
Surrogate: AMPA	*85*			*100*		*85*	*70-130*			06/10/15	
Matrix Spike (A506427-MS1), Source: A5E2342-01											
Glyphosate	100	25	ug/L	100	ND	101	70-130			06/10/15	
Surrogate: AMPA	*100*			*100*		*98*	*70-130*			06/10/15	
Matrix Spike Dup (A506427-MSD1), Source: A5E2342-01											

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 547 - Quality Control											
Batch: A506427										Prepared: 06/10/2015	
Prep Method: EPA 547										Analyst: WPR	
Matrix Spike Dup (A506427-MSD1), Source: A5E2342-01											
Glyphosate	93	25	ug/L	100	ND	91	70-130	10	30	06/10/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			06/10/15	
EPA 548.1 - Quality Control											
Batch: A506087										Prepared: 06/02/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank (A506087-BLK1)											
Endothall	ND	45	ug/L							06/03/15	
Blank Spike (A506087-BS1)											
Endothall	18	45	ug/L	20		90	46-116			06/03/15	
Blank Spike Dup (A506087-BSD1)											
Endothall	16	45	ug/L	20		81	46-116	11	30	06/03/15	
Matrix Spike (A506087-MS1), Source: A5E2327-01											
Endothall	ND	45	ug/L	20	ND	0	46-116			06/03/15	MS1.0 ***Low***
Matrix Spike (A506087-MS2), Source: A5E2333-01											
Endothall	10	45	ug/L	20	ND	52	46-116			06/03/15	
EPA 549.2 - Quality Control											
Batch: A505920										Prepared: 05/28/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A505920-BLK1)											
Diquat	ND	4.0	ug/L							05/29/15	
Blank Spike (A505920-BS1)											
Diquat	5.1	4.0	ug/L	4.0		127	70-130			05/29/15	
Blank Spike Dup (A505920-BSD1)											
Diquat	5.0	4.0	ug/L	4.0		125	70-130	2	30	05/29/15	
Matrix Spike (A505920-MS1), Source: A5E2070-01											
Diquat	4.9	4.0	ug/L	4.0	ND	124	70-130			05/29/15	
Matrix Spike (A505920-MS2), Source: A5E2327-01											
Diquat	5.1	4.0	ug/L	4.0	ND	126	70-130			05/29/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

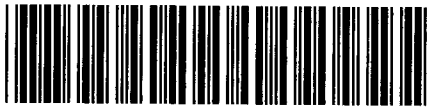
A5E2342

05282015

Monte6227

Turnaround: Standard

Due Date: 6/11/2015



Monterey Bay Analytical

BSK Associates Engineers & Laboratories
1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

A5E2342 05/28/2015
Monte6227 10
C

*Required Fields Temp: 0.0

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am
Project #:
How would you like to receive your completed results?* [X] E-Mail [ ] Fax [ ] Mail

Reporting Options: [ ] Trace (J-Flag) [ ] Swamp [ ] EDD Type: _____

Sampler Name (Printed/Signature)*: Andrew Kieta

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549	
	MW-8M (monitoring)	5/27/15	1238	GW	AB31032	X	X	X	X	X	X	X	X	

531 VOA broken in transit, no sample received. MW 5/28/15 11:03

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	5/27/15	1600		
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 5/28/15	Time 11:03	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____ BW/Paper
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

BSK Associates SR-FL-0002-13

A5E2342
Monte6227

05/28/2015
10

Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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: John By/Time: mw 11:25	(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 $Na_2S_2O_3$	—	—	
None (P) White Cap	—	—	
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, 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	—	—	
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2A,4V
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	
$Na_2S_2O_3$ + 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	—	—	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	—	—	

5/28/15 MW

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

$Na_2S_2O_3$ + MCAA VOA broken in transit - No sample received. mw

Labeled by: mw @ 12:57 Labels checked by: CW @ 12:58 RUSH Paged by:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

June 10, 2015 Ceres ID: 10672

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 May 28, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

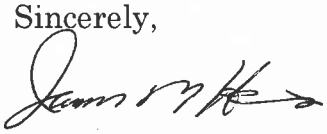
This work was authorized under M.B.A.'s Project # AB31032.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10672-001	MW-8M (monitoring)	5/28/2015	5/27/2015	12:38

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:	AB31032	Sample Size:	1.000 L	QC Batch #:	1327	Date Extracted:	2-Jun-15
				ZB-5 MS Analysis Date:	5-Jun-15		

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.15		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	101	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	103	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB31032	Sample Size:	1.000 L	QC Batch #:	1327	Date Extracted:	2-Jun-15
				ZB-5 MS Analysis Date:	5-Jun-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	10.2	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	93.0	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	9.92	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-8M (monitoring)**

Client Data

Name:	Monterey Bay Analytical
Project:	AB31032
Date Collected:	27-May-15
Time Collected:	12:38

Sample Data

Matrix:	Aqueous
Sample Size:	1.020 L

Laboratory Data

Lab Sample ID:	10672-001	Date Received:	28-May-15
QC Batch #:	1327	Date Extracted:	2-Jun-15
ZB-5 MS Analysis Date:	5-Jun-15		

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.30		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	82.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	96.4	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:_____

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	Company Name:_____ Same	Ceres Quote #:_____
Contact Name:_____ David Holland	Contact Name:_____	P.O. # _____
Address: 4 Justin Court Ste D Monterey CA 93940	Address:_____	Project ID: _____
Ph:_ 831-375-6227	Ph:_____ Fx:_____	**TAT** (business days)___ Results by 4/13/15
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other — Comments
1	MW-8M (monitoring)	5/27/2015 ~~1238~~	~~0:00~~ 1238	Aq	1	X						AB31032
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
D. Holland	5/27/2015	16:00	James M. Hodi	5/28/15	09:39

Client understands that all terms desribed 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: 10672	Date/Time: 5/28/15 09:39
Client Project ID: AB31032	Received Temperature: 3.6°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies:	
List Damaged Samples:	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10672 PB: 1327 Sample #s: 1 Due Date: 6/11/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- (☐ 1613 2,3,7,8-TCDD)
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt.

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10672-1	1544.99	525.30g	1.020 L

Chemist J Date 6/2/15

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

				ISS/PAR	CSS				RSS
Ceres ID	Client ID	Ver.	wt/vol	chem/date/witness	chem/date/witness	AP	AB/AC	FC	chem/date/witness
0-1327-MB001	Method Blank		1.000L	6/2/15 JDart	6/3/15 JDart	NA	6/3/15	NA	6/3/15 JDart
0-1327-OPR001	OPR		1.000L	(A)					
10672-1327-001	MW-8M (monitoring)	✓	1.020L						

Comments: (A) OPR spiked with NSS.

Soxhlet Start: 15:20 6/2/15

Soxhlet Stop: 07:45 6/3/15

Samples Logged out by: 6/2/15 11:10

Samples Returned by: NA

Note samples Depleted: 1

Sample Extracts Storage Location: Box 16 11:40 6/3/15

Extracts to Instrument: 6/5/15 07:40

Extracts returned to Storage Location: 6/5/15 14:10

Chemist:

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	50211 15A	10 µl	2/11/20
NSS	B		
CSS	C		
RSS	D	20 µl	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450 ml	145871	4/3/16
Hexanes	30, 30, 100, 20 ml	147232	4/3/16
5% Gel	4 g	P060215A	12/2/15
Basic Gel	4 g	P021915A	8/19/15
Acid Gel	8 g	P060215B	12/2/15
Acid Al	6 g	P042015A	10/20/15
Na_2SO_4	1.5 g	P041515A	10/15/15
20% DCM: Hex	30 ml	L060115A	12/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5E28075

Report Date: 06/15/15 14:26

Received Date: 05/28/15 10:20

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 05/28/15 10:20 with the Chain of Custody document. The samples were received in good condition, at 3.0 °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: 05/28/15 10:20
Date Reported: 06/15/15 14:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-8M (monitoring) (AB31032)	Andrew Kieta	5E28075-01	Water	05/27/15 12:38

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 05/28/15 10:20
Date Reported: 06/15/15 14:26

5E28075-01 MW-8M (monitoring)

Sampled: 05/27/15 12:38 **Sampled By:** Andrew Kieta **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5F0320 Prepared: 06/05/15 13:00 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	250	ug/l	25	06/05/15 15:44	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5F0011 Prepared: 06/01/15 09:00 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	06/10/15 06:50	
4,4´-DDE	ND		0.010	ug/l	1	06/10/15 06:50	
4,4´-DDT	ND		0.010	ug/l	1	06/10/15 06:50	
Aldrin	ND		0.010	ug/l	1	06/10/15 06:50	
alpha-BHC	ND		0.010	ug/l	1	06/10/15 06:50	
Aroclor 1016	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1221	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1232	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1242	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1248	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1254	ND		0.10	ug/l	1	06/10/15 06:50	
Aroclor 1260	ND		0.10	ug/l	1	06/10/15 06:50	
beta-BHC	ND		0.010	ug/l	1	06/10/15 06:50	
Chlordane (tech)	ND		0.10	ug/l	1	06/10/15 06:50	
Chlorothalonil	ND		0.050	ug/l	1	06/10/15 06:50	
delta-BHC	ND		0.010	ug/l	1	06/10/15 06:50	
Dieldrin	ND		0.010	ug/l	1	06/10/15 06:50	
Endosulfan I	ND		0.010	ug/l	1	06/10/15 06:50	
Endosulfan II	ND		0.010	ug/l	1	06/10/15 06:50	
Endosulfan sulfate	ND		0.010	ug/l	1	06/10/15 06:50	
Endrin	ND		0.010	ug/l	1	06/10/15 06:50	
Endrin aldehyde	ND		0.010	ug/l	1	06/10/15 06:50	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	06/10/15 06:50	
Heptachlor	ND		0.010	ug/l	1	06/10/15 06:50	
Heptachlor epoxide	ND		0.010	ug/l	1	06/10/15 06:50	
Hexachlorobenzene	ND		0.050	ug/l	1	06/10/15 06:50	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	06/10/15 06:50	
Methoxychlor	ND		0.010	ug/l	1	06/10/15 06:50	
PCBs, Total	ND		0.50	ug/l	1	06/10/15 06:50	
Propachlor	ND		0.050	ug/l	1	06/10/15 06:50	
Toxaphene	ND		1.0	ug/l	1	06/10/15 06:50	
Trifluralin	ND		0.010	ug/l	1	06/10/15 06:50	
Surr: Decachlorobiphenyl	*72 %*	Conc:*0.0720*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*99 %*	Conc:*0.0992*	*70-130*	%			

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 05/28/15 10:20
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QUALITY CONTROL SECTION

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Date Received: 05/28/15 10:20
Date Reported: 06/15/15 14:26

Anions by IC, EPA Method 9056 - Quality Control

Batch W5F0320 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0320-BLK1)				Analyzed: 06/05/15 13:51						
Iodide	ND	10	ug/l							
LCS (W5F0320-BS1)				Analyzed: 06/05/15 14:21						
Iodide	41.2	10	ug/l	40.0		103	85-115			
Matrix Spike (W5F0320-MS1)	**Source: 5F03038-01**			Analyzed: 06/05/15 16:29						
Iodide	46.2	12	ug/l	50.0	2.55	87	80-120			
Matrix Spike Dup (W5F0320-MSD1)	**Source: 5F03038-01**			Analyzed: 06/05/15 17:03						
Iodide	48.5	12	ug/l	50.0	2.55	92	80-120	5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0011 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0011-BLK1)				Analyzed: 06/10/15 04:48						
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							

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Date Received: 05/28/15 10:20
Date Reported: 06/15/15 14:26

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0011 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5F0011-BLK1)				Analyzed: 06/10/15 04:48						
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	*0.109*		*ug/l*	*0.100*		*109*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0977*		*ug/l*	*0.100*		*98*	*70-130*			
LCS (W5F0011-BS1)				Analyzed: 06/10/15 05:18						
4,4´-DDD	0.107	0.010	ug/l	0.100		107	55-142			
4,4´-DDE	0.107	0.010	ug/l	0.100		107	49-129			
4,4´-DDT	0.120	0.010	ug/l	0.100		120	54-160			
Aldrin	0.0959	0.010	ug/l	0.100		96	29-115			
alpha-BHC	0.103	0.010	ug/l	0.100		103	59-131			
beta-BHC	0.121	0.010	ug/l	0.100		121	63-136			
delta-BHC	0.124	0.010	ug/l	0.100		124	59-137			
Dieldrin	0.103	0.010	ug/l	0.100		103	59-135			
Endosulfan I	0.0826	0.010	ug/l	0.100		83	28-138			
Endosulfan II	0.0887	0.010	ug/l	0.100		89	53-133			
Endosulfan sulfate	0.109	0.010	ug/l	0.100		109	58-155			
Endrin	0.107	0.010	ug/l	0.100		107	57-148			
Endrin aldehyde	0.107	0.010	ug/l	0.100		107	45-139			
gamma-BHC (Lindane)	0.105	0.010	ug/l	0.100		105	59-129			
Heptachlor	0.103	0.010	ug/l	0.100		103	42-136			
Heptachlor epoxide	0.102	0.010	ug/l	0.100		102	59-134			
Methoxychlor	0.0903	0.010	ug/l	0.100		90	56-167			
Surr: Decachlorobiphenyl	*0.115*		*ug/l*	*0.100*		*115*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.102*		*ug/l*	*0.100*		*102*	*70-130*			
LCS Dup (W5F0011-BSD1)				Analyzed: 06/10/15 05:49						
4,4´-DDD	0.111	0.010	ug/l	0.100		111	55-142	4	25	
4,4´-DDE	0.112	0.010	ug/l	0.100		112	49-129	5	25	
4,4´-DDT	0.125	0.010	ug/l	0.100		125	54-160	4	25	
Aldrin	0.103	0.010	ug/l	0.100		103	29-115	8	25	
alpha-BHC	0.112	0.010	ug/l	0.100		112	59-131	8	25	
beta-BHC	0.128	0.010	ug/l	0.100		128	63-136	6	25	
delta-BHC	0.130	0.010	ug/l	0.100		130	59-137	5	25	
Dieldrin	0.109	0.010	ug/l	0.100		109	59-135	6	25	
Endosulfan I	0.0872	0.010	ug/l	0.100		87	28-138	5	25	
Endosulfan II	0.0937	0.010	ug/l	0.100		94	53-133	5	25	
Endosulfan sulfate	0.121	0.010	ug/l	0.100		121	58-155	11	25	

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 05/28/15 10:20
Date Reported: 06/15/15 14:26

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5F0011 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5F0011-BSD1)				Analyzed: 06/10/15 05:49						
Endrin	0.112	0.010	ug/l	0.100		112	57-148	4	25	
Endrin aldehyde	0.106	0.010	ug/l	0.100		106	45-139	0.9	25	
gamma-BHC (Lindane)	0.113	0.010	ug/l	0.100		113	59-129	7	25	
Heptachlor	0.111	0.010	ug/l	0.100		111	42-136	8	25	
Heptachlor epoxide	0.108	0.010	ug/l	0.100		108	59-134	6	25	
Methoxychlor	0.110	0.010	ug/l	0.100		110	56-167	20	25	
Surr: Decachlorobiphenyl	*0.119*		*ug/l*	*0.100*		*119*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.106*		*ug/l*	*0.100*		*106*	*70-130*			

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Date Received: 05/28/15 10:20
Date Reported: 06/15/15 14:26

Notes and Definitions

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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size	Analysis Requested: See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balanc	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter
31032		MW-8M	5/27	12:38							21			Field Parameters:					
																Temp:	17.17		
																pH:	6.67		
																Sp Cond:	35.04	mS/cm	(35,040 µS)
																Turb:	0.56		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Andrew Kieta		5/27	14:11	Is sample for regulatory purposes? (Yes) / No
Relinquished by:					
Received by:	Sarah McGinnis		5/27/15	1413	
Relinquished by:					
Received by:					

[ ] Payment received Check # Amount: Receipt # Date:

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_2B
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_3H / 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

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.

Cal Am GeoScience

31022 - 31032

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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
31022-31032	250mL	HNO_3	5/27/15 SMC
	250mL filt	HNO_3	
	500mL filt	H_2SO_4	
	250mL filt	H_2SO_4	

Lab ID	Cont. Size	Pres	Date/Initials

Comments

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

MBAS
Monterey Bay Analytical Services
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831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Friday, June 12, 2015

Lab Number: **AB30918**

Collection Date/Time: 5/21/2015 11:05 Sample Collector: SALMON M

Submittal Date/Time: 5/21/2015 14:13 Sample ID

Sample Description: MW-8D (monitoring)

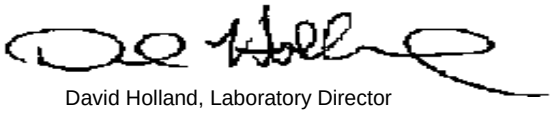
Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**152**		2	5/27/2015	LJ
Aluminum, Total	EPA200.8	µg/L	**37**		10	5/28/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	5/26/2015	TC
Arsenic, Total	EPA200.8	µg/L	**1**		1	5/28/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**88**		10	5/28/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**185**		10	5/27/2015	LRH
Boron, Dissolved	EPA200.7	mg/L	**0.05**		0.05	5/22/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**0.6**		0.1	5/21/2015	MW
Calcium	EPA200.7	mg/L	**64**		0.5	5/22/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**59**		0.5	5/22/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		5/28/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	5/27/2015	LRH
Chloride, Dissolved	EPA300.0	mg/L	**220**		1	5/21/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		6/6/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**11**		3	5/21/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		10	5/22/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		5/29/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		5/27/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		5/29/2015	BSK
Endothall	EPA548.1	µg/L	**Not Detected**	E		5/28/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.3**		0.1	5/21/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		6/1/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**263**		10	5/26/2015	MW
Hydroxide	SM2320B	mg/L	**Not Detected**		5	5/27/2015	LRH
Iodide	EPA9056M	µg/L	**Not Detected**	E	10	5/29/2015	WECK
Iron	EPA200.7	µg/L	**81**		10	5/22/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**15**		10	5/22/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	5/28/2015	TC
Lithium	EPA200.8	µg/L	**49**		1	5/28/2015	SM
Magnesium	EPA200.7	mg/L	**25**		0.5	5/22/2015	MW
Magnesium, Dissolved	EPA200.7	mg/L	**23**		0.5	5/22/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**283**		10	5/22/2015	MW
Manganese, Total	EPA200.7	µg/L	**310**		10	5/22/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	5/22/2015	HM

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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

Nitrate as NO3	EPA300.0	mg/L	**2**	1	5/21/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**0.7**	0.1	5/21/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.3**	0.1	5/21/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**1**	1	5/22/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.06**	0.03	5/22/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.33**		5/21/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**7.6**	0.1	5/21/2015	HM
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E	5/29/2015	BSK
Phosphorus, Dissolved Total	HACH 8190	mg/L	**0.06**	0.03	6/4/2015	LRH
Potassium	EPA200.7	mg/L	**5.1**	0.5	5/22/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**4.6**	0.5	5/22/2015	MW
QC Ratio TDS/SEC	Calculation		**0.56**		5/28/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E	6/1/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**45**	0.5	5/22/2015	MW
Sodium	EPA200.7	mg/L	**148**	0.5	5/22/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**135**	0.5	5/22/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**1045**	1	5/22/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**1113**	1	5/21/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**470**	5	5/28/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**32**	1	5/21/2015	MW
Temperature (Field)	SM2550	° C	**21.2**		5/21/2015	MS
Total Diss. Solids	SM2540C	mg/L	**583**	10	5/26/2015	HM
Turbidity	EPA180.1	NTU	**0.55**	0.05	5/21/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**2.48**	0.05	5/21/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E	5/31/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**	10	5/22/2015	MW

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL
H = Analyzed ouside 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 **30918-Total**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	148	0.04350	6.44
Potassium	5.1	0.02558	0.13
Calcium	64	0.04990	3.19
Magnesium	25	0.08229	2.06
NH3-N	0	0.07143	0.00
		SUM	11.82

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	152	0.02000	3.04
Sulfate	32	0.02082	0.67
Chloride	220	0.02821	6.21
Nitrate-Nitrogen	0.4	0.07138	0.03
Phosphate-P	0.09	0.01031	0.00
Bromide	0.6	0.01252	0.01
		SUM	9.95

ANION-CATION BALANCE **9** (% 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	1045	
Cation Sum X 100	1182	**113%**
Anion Sum X 100	995	**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.

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Monterey CA, 93940

SAMPLE ID **30918-Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	135	0.04350	5.87
Potassium	4.6	0.02558	0.12
Calcium	59	0.04990	2.94
Magnesium	23	0.08229	1.89
NH3-N	0	0.07143	0.00
		SUM	10.83

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	152	0.02000	3.04
Sulfate	32	0.02082	0.67
Chloride	220	0.02821	6.21
Nitrate-Nitrogen	0.4	0.07138	0.03
Phosphate-P	0.09	0.01031	0.00
Bromide	0.6	0.01252	0.01
		SUM	9.95

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	1045	
Cation Sum X 100	1083	**104%**
Anion Sum X 100	995	**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.

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http://www.MBASinc.com

Color QC Summary (SM 2120B)

Date Analyzed: 5/21/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	16:03
ICV	5	6	120.0	80-120	16:03

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB30911	Not Detected	Not Detected	NA	10	16:03
AB30918	11	11	0	10	16:03

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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Specific Conductance QC Summary (SM 2510B)

Date Analyzed: 5/22/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1412	100.0%	95-105	1330
ICV	24800	24880	100.3%	95-105	1340

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB30939	405	403	0.5%	10	1330
AB30940	38810	38990	0.5%	10	1340

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 AB31032 **20x Dilution**

Date Analyzed Thursday, May 28, 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	96.5	-0.06	107.7	103.6	3.83	132.3	500	73.4	70.1	4.7	94.6	74.7	23.47	0.03
Aluminum	-0.1	108.9	1.33	105.4	105.9	0.52	291.5	500	65.7	66.9	1.9	98.2	87.8	11.18	-0.26
Copper	0.0	98.7	0.16	102.5	100.1	2.29	87.8	500	84.5	85.7	1.4	98.3	98.1	0.24	0.08
Zinc	0.0	134.6	0.42	109.2	106.0	2.96	647.9	500	33.5	34.2	1.9	96.5	89.6	7.40	-0.31
Arsenic	0.0	99.0	-0.33	100.4	96.8	3.67	28.1	500	90.0	89.6	0.5	101.2	95.3	6.06	-0.13
Strontium	0.0	101.9	0.01	99.9	98.7	1.23	8278.8	500	-2.9	28.6	244.3	98.0	100.4	2.36	0.00
Barium	0.0	101.8	0.01	99.3	99.9	0.60	153.1	500	97.1	99.4	2.4	99.5	105.7	6.05	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

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Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 5/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.03	---	<0.05	1100
ICVL	0.050	0.05	100.00%	90-110	1100
ICV	0.500	0.490	98.00%	90-110	1100
CCVB2	---	0.02	---	<0.05	1200
CCV2	0.500	0.460	92.00%	90-110	1200

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	
AB30965	1.17	0.50	1.66	1.71	98	108	3.0	85-120	10	1130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 5/28/2015
Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.213	---	<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
AB30913	1.2	5.0	5.9	5.8	94	92	1.7	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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Phosphorus QC Summary (Hach 8190)

Date: 6/4/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	ND	---	< 0.03	1623
LCSL	0.03	0.04	133	50-150	1625
ICV	0.50	0.51	102	90-110	1631
QCS	0.50	0.51	102	80-120	1633
CCV	0.50	0.52	104	80-120	1715

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		
AB30921 D	0.13	0.50	0.63	0.61	100	96	3.2	70-130	10	1713	1714

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCSL = Laboratory Control Standard Low; QCS = Quality Control Standar;

ICV= Initial Calibration Verification, CCV= Continuing Calibration Verification, RPD = Relative Percent Difference; Rec = Recovery

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Orthophosphate QC Summary (Hach 8048)

Date: 5/22/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.03	---	< 0.03	13:57
LCSL	0.03	0.03	100	50-150	13:57
ICV	0.30	0.30	100	90-110	13:57
QCS	0.30	0.33	110	80-120	13:57
CCV	0.30	0.30	100	90-110	13:57

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		
AB30920	0.23	0.30	0.54	0.53	103	100	2	70-130	10	13:57	13:57

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: 5/21/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.87	100.1	95-105	1625

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB30921	7.63	7.64	0	10	1625

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150522

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.00	0.01	1.08	108.1%	1.08	107.8%	0.4%	1	1.03	103.3%	1	1.0	96.3%
B 249.772	0.05-5ppm	0.00	0.01	1.08	107.6%	1.08	107.9%	0.2%	1	1.02	101.5%	1	1.0	95.7%
Ca 317.933	50-300ppm	-7.22	-7.26	51.1	102.3%	51.4	102.8%	0.5%	50	48.7	97.5%	50	45.9	91.8%
Ca 396.847	0.5-50ppm	-0.01	-0.05	53.4	106.7%	53.4	106.7%	0.0%	50	51.0	102.0%	50	48.1	96.2%
Cu 324.754	10ppb-100ppm	-2.72	-0.27	1073	107.3%	1079	107.9%	0.6%	1000	1018	101.8%	1000	972.1	97.2%
Cu 327.395	10ppb-100ppm	0.40	0.89	1074	107.4%	1078	107.8%	0.4%	1000	1007	100.7%	1000	966.1	96.6%
Fe 238.204	10ppb-100ppm	0.73	0.56	1047	104.7%	1050	105.0%	0.3%	1000	1002	100.2%	1000	980.2	98.0%
Fe 259.940	10ppb-100ppm	1.17	-0.11	1048	104.8%	1054	105.4%	0.6%	1000	998	99.8%	1000	974.2	97.4%
K 766.491	0.5-750ppm	-0.08	-0.11	10.8	108.1%	10.8	108.2%	0.1%	10	10.3	102.8%	10	9.8	98.3%
Mg 202.582	50-1000ppm	-6.63	-6.65	51.6	103.2%	52.0	103.9%	0.7%	50	48.8	97.6%	50	47.0	94.1%
Mg 279.078	0.5-50ppm	0.01	-0.02	52.7	105.5%	52.9	105.8%	0.3%	50	50.3	100.6%	50	48.4	96.8%
Mn 257.610	10ppb-11ppm	-0.01	0.06	1053	105.3%	1056	105.6%	0.2%	1000	1002	100.2%	1000	979.8	98.0%
Mn 260.568	10ppb-11ppm	-0.01	0.68	1054	105.4%	1054	105.4%	0.1%	1000	1007	100.7%	1000	980.5	98.1%
Na 568.821	50-1000ppm	-0.45	-0.52	48.4	96.8%	50.9	101.9%	5.1%	50	46.3	92.7%	50	45.0	90.0%
Na 589.592	0.5-50ppm	0.15	0.11	53.0	106.1%	53.2	106.5%	0.3%	50	50.3	100.5%	50	48.4	96.9%
Si 251.611	0.5-200ppm	0.04	0.04	51.8	103.7%	51.8	103.7%	0.0%	50	50.0	100.1%	50	48.8	97.7%
Si 252.411	0.5-200ppm	0.05	0.06	52.1	104.1%	51.9	103.7%	0.4%	50	50.5	100.9%	50	49.2	98.4%
Zn 213.857	10ppb-50ppm	-3.79	-4.88	1013	101.3%	1007	100.7%	0.6%	1000	994	99.4%	1000	944.6	94.5%

Sample ID AB30909

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.02	1.00	98.3%	1.01	99.1%	0.8%	1	1.05	104.7%	1.3%	0.00
B 249.772	0.01	1.01	99.7%	1.03	101.7%	2.0%	1	1.06	105.9%	4.3%	0.00
Ca 317.933	150.7	200.7	100.0%	200.6	100.0%	0.0%	50	51.6	103.2%	5.7%	-7.12
Ca 396.847	121.2	153.3	64.3%	154.2	66.0%	0.6%	50	52.8	105.5%	3.4%	0.09
Cu 324.754	-6	978	98.4%	991	99.7%	1.3%	1000	1056	105.6%	3.7%	0.33
Cu 327.395	1	993	99.2%	1003	100.2%	1.0%	1000	1061	106.1%	5.2%	1.42
Fe 238.204	38	1022	98.4%	1033	99.5%	1.0%	1000	1046	104.6%	4.3%	2.82
Fe 259.940	40	1020	98.1%	1036	99.6%	1.5%	1000	1046	104.6%	4.7%	3.20
K 766.491	4.4	15.0	106.5%	14.9	105.0%	1.0%	10	10.8	107.9%	4.9%	-0.09
Mg 202.582	57.5	110.4	105.8%	111.4	107.8%	0.9%	50	51.8	103.7%	6.0%	-6.51
Mg 279.078	56.9	104.6	95.4%	105.6	97.4%	1.0%	50	52.2	104.4%	3.8%	0.08
Mn 257.610	22	1011	98.9%	1021	99.9%	1.0%	1000	1051	105.1%	4.7%	2.20
Mn 260.568	25	1020	99.5%	1033	100.8%	1.3%	1000	1057	105.7%	4.8%	1.75
Na 568.821	131.7	182.3	101.2%	185.8	108.3%	1.9%	50	51.2	102.4%	10.0%	-1.81
Na 589.592	124.8	173.4	97.1%	172.2	94.9%	0.7%	50	53.2	106.5%	5.8%	0.50
Si 251.611	39.3	87.2	95.9%	87.9	97.3%	0.8%	50	52.5	105.0%	4.8%	0.11
Si 252.411	39.0	86.6	95.3%	87.3	96.6%	0.7%	50	52.0	104.0%	3.0%	0.09
Zn 213.857	-4	961	96.5%	961	96.6%	0.0%	1000	1049	104.9%	5%	-2.68

MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY
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: 5/27/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	42	105	95-105	9:01
CCV	40	41	103	95-105	10:38

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB30909	56	56	0	5	10:38
AB30904	108	110	2	5	11:32

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; 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: **20150521**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.04	0.00	0.03	0.00	0.00	0.00
	ICV	1.95	20.26	2.05	20.32	1.84	1.92
	Rec 90-110%	97.51	101.31	102.61	101.58	92.03	96.05
	ICVL	0.19	1.81	0.20	1.14	0.23	0.21
	Rec 50-150%	95.07	90.61	99.02	56.76	113.13	105.93
Sample ID	**AB30916**	0.18	113.58	0.22	39.98	0.09	13.72
	MS	2.04	133.18	2.13	57.90	1.78	15.31
	Rec 80-120%	92.59	97.99	95.43	89.61	84.35	79.74
	MSD	2.03	133.31	2.13	57.90	1.78	15.32
	Rec 80-120%	92.46	98.66	95.67	89.59	84.74	80.36
	Diff 10%	0.13	0.10	0.22	0.01	0.44	0.08
	CCV	1.94	20.34	2.06	20.33	1.85	1.92
	Rec 90-110%	96.79	101.69	103.12	101.63	92.71	96.24
	Diff 10%	0.74	0.37	0.49	0.05	0.73	0.19
	CCVB	0.03	0.00	0.03	0.00	0.00	0.00

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831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

MBAS QC Summary (SM 5540C)

Date Analyzed: 5/23/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<0.05	818
ICVL	0.050	0.057	114	80-120	830
ICV	0.250	0.233	93.2	80-120	1051

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	
AB30921	0	0.250	0.235	0.234	94	93.6	0.4	80/120	10	1015

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

TDS QC Summary (SM 2540C)

Date Analyzed: 5/21/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0	---	<10	1330
ICVL	100	86	86	80-120	1330
ICV	500	471	94.2	90-110	1330

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB30911	2452	2540	3.5	10	1330

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5E1979
6/04/2015
Invoice: A511460

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5E1979 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 5/22/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	Cal Am	**Project PO#:**	-
Received:	5/22/2015 - 10:00		
Report Due:	6/08/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 2.4

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet Ice
Received On Blue Ice
Packing Material - Bubble Wrap
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: A5E1979-01
Sampled By: Matan Salmon
Sample Description: MW-8D (monitoring) // AB30918

Sample Date - Time: 05/21/15 - 11:05
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A505817	05/27/15	05/29/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A505817	05/27/15	05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	97 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A505873	05/28/15	05/29/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A505873	05/28/15	05/29/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A505873	05/28/15	05/29/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A505873	05/28/15	05/29/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A505873	05/28/15	05/29/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A505873	05/28/15	05/29/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A505873	05/28/15	05/29/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A505873	05/28/15	05/29/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A505873	05/28/15	05/29/15	
Surrogate: DCPAA	EPA 515.3	104 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A505976	05/31/15	05/31/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A505976	05/31/15	05/31/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A505976	05/31/15	05/31/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A505976	05/31/15	05/31/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A505976	05/31/15	05/31/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	

Certificate of Analysis

Sample ID: A5E1979-01
Sampled By: Matan Salmon
Sample Description: MW-8D (monitoring) // AB30918

Sample Date - Time: 05/21/15 - 11:05
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	A505976	05/31/15	05/31/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A505976	05/31/15	05/31/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A505976	05/31/15	05/31/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A505976	05/31/15	05/31/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Toluene	EPA 524.2	**8.8**	0.50	ug/L	1	A505976	05/31/15	05/31/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A505976	05/31/15	05/31/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A505976	05/31/15	05/31/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	94 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	96 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5E1979-01
Sampled By: Matan Salmon
Sample Description: MW-8D (monitoring) // AB30918

Sample Date - Time: 05/21/15 - 11:05
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A505971	05/29/15	06/01/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A505971	05/29/15	06/01/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A505971	05/29/15	06/01/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A505971	05/29/15	06/01/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A505971	05/29/15	06/01/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A505971	05/29/15	06/01/15	
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A505971	05/29/15	06/01/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A505971	05/29/15	06/01/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A505971	05/29/15	06/01/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A505971	05/29/15	06/01/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A505971	05/29/15	06/01/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A505971	05/29/15	06/01/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A505971	05/29/15	06/01/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A505971	05/29/15	06/01/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A505971	05/29/15	06/01/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A505971	05/29/15	06/01/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	97 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A505859	05/27/15	05/28/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A505859	05/27/15	05/28/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A505859	05/27/15	05/28/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A505859	05/27/15	05/28/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A505859	05/27/15	05/28/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A505859	05/27/15	05/28/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A505859	05/27/15	05/28/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A505859	05/27/15	05/28/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A505859	05/27/15	05/28/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A505859	05/27/15	05/28/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A505989	06/01/15	06/01/15	
Surrogate: AMPA	EPA 547	98 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A505858	05/27/15	05/28/15	BS1.0
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A505793	05/26/15	05/29/15	CV0.0

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A505817										Prepared: 05/27/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A505817-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							05/29/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.49*			*0.46*		*107*	*70-130*			05/29/15	
Blank Spike (A505817-BS1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		95	70-130			05/29/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		89	70-130			05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.46*		*95*	*70-130*			05/29/15	
Blank Spike Dup (A505817-BSD1)											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20		101	70-130	5	20	05/29/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20		96	70-130	7	20	05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.46*		*96*	*70-130*			05/29/15	
Matrix Spike (A505817-MS1), Source: A5E2012-16											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	99	65-135			05/29/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20	ND	95	65-135			05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.46*		*96*	*70-130*			05/29/15	
Matrix Spike Dup (A505817-MSD1), Source: A5E2012-16											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	98	65-135	1	20	05/29/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20	ND	94	65-135	1	20	05/29/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*101*	*70-130*			05/29/15	
EPA 515.3 - Quality Control											
Batch: A505873										Prepared: 05/28/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A505873-BLK1)											
2,4,5-T	ND	1.0	ug/L							05/28/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							05/28/15	
2,4-D	ND	10	ug/L							05/28/15	
Bentazon	ND	2.0	ug/L							05/28/15	
Dalapon	ND	10	ug/L							05/28/15	
Dicamba	ND	1.5	ug/L							05/28/15	
Dinoseb	ND	2.0	ug/L							05/28/15	
Pentachlorophenol	ND	0.20	ug/L							05/28/15	
Picloram	ND	1.0	ug/L							05/28/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			05/28/15	
Blank Spike (A505873-BS1)											
2,4,5-T	4.2	1.0	ug/L	4.0		105	70-130			05/28/15	
2,4,5-TP (Silvex)	0.88	1.0	ug/L	0.80		110	70-130			05/28/15	
2,4-D	0.42	10	ug/L	0.40		106	70-130			05/28/15	
Bentazon	7.9	2.0	ug/L	8.0		98	70-130			05/28/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A505873										Prepared: 05/28/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A505873-BS1)											
Dalapon	4.0	10	ug/L	4.0		101	70-130			05/28/15	
Dicamba	6.2	1.5	ug/L	6.0		104	70-130			05/28/15	
Dinoseb	0.81	2.0	ug/L	0.80		101	70-130			05/28/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		94	70-130			05/28/15	
Picloram	0.41	1.0	ug/L	0.40		102	70-130			05/28/15	
Surrogate: DCPAA	*58*			*58*		*100*	*70-130*			05/28/15	
Blank Spike Dup (A505873-BSD1)											
2,4,5-T	4.2	1.0	ug/L	4.0		105	70-130	0	20	05/29/15	
2,4,5-TP (Silvex)	0.86	1.0	ug/L	0.80		107	70-130	3	20	05/29/15	
2,4-D	0.42	10	ug/L	0.40		105	70-130	1	20	05/29/15	
Bentazon	7.7	2.0	ug/L	8.0		96	70-130	2	20	05/29/15	
Dalapon	3.9	10	ug/L	4.0		98	70-130	3	20	05/29/15	
Dicamba	6.1	1.5	ug/L	6.0		102	70-130	2	20	05/29/15	
Dinoseb	0.80	2.0	ug/L	0.80		100	70-130	0	20	05/29/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16		94	70-130	1	20	05/29/15	
Picloram	0.44	1.0	ug/L	0.40		109	70-130	7	20	05/29/15	
Surrogate: DCPAA	*58*			*58*		*100*	*70-130*			05/29/15	
Matrix Spike (A505873-MS1), Source: A5E1869-04											
2,4,5-T	3.9	1.0	ug/L	4.0	ND	98	70-130			05/28/15	
2,4,5-TP (Silvex)	0.92	1.0	ug/L	0.80	ND	114	70-130			05/28/15	
2,4-D	0.34	10	ug/L	0.40	ND	84	70-130			05/28/15	
Bentazon	7.7	2.0	ug/L	8.0	ND	96	70-130			05/28/15	
Dalapon	3.6	10	ug/L	4.0	ND	91	70-130			05/28/15	
Dicamba	5.9	1.5	ug/L	6.0	ND	98	70-130			05/28/15	
Dinoseb	0.77	2.0	ug/L	0.80	ND	96	70-130			05/28/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	95	70-130			05/28/15	
Picloram	0.34	1.0	ug/L	0.40	ND	85	70-130			05/28/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			05/28/15	
Matrix Spike Dup (A505873-MSD1), Source: A5E1869-04											
2,4,5-T	4.1	1.0	ug/L	4.0	ND	104	70-130	6	20	05/29/15	
2,4,5-TP (Silvex)	0.91	1.0	ug/L	0.80	ND	114	70-130	1	20	05/29/15	
2,4-D	0.41	10	ug/L	0.40	ND	103	70-130	19	20	05/29/15	
Bentazon	7.8	2.0	ug/L	8.0	ND	98	70-130	1	20	05/29/15	
Dalapon	4.0	10	ug/L	4.0	ND	101	70-130	10	20	05/29/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130	4	20	05/29/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	100	70-130	4	20	05/29/15	
Pentachlorophenol	0.15	0.20	ug/L	0.16	ND	96	70-130	0	20	05/29/15	
Picloram	0.38	1.0	ug/L	0.40	ND	96	70-130	11	20	05/29/15	
Surrogate: DCPAA	*58*			*58*		*100*	*70-130*			05/29/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505976										Prepared: 05/31/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A505976-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							05/31/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							05/31/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							05/31/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							05/31/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							05/31/15	
1,1-Dichloroethane	ND	0.50	ug/L							05/31/15	
1,1-Dichloroethene	ND	0.50	ug/L							05/31/15	
1,1-Dichloropropene	ND	0.50	ug/L							05/31/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							05/31/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							05/31/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							05/31/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							05/31/15	
1,2-Dichloroethane	ND	0.50	ug/L							05/31/15	
1,2-Dichloropropane	ND	0.50	ug/L							05/31/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							05/31/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							05/31/15	
1,3-Dichloropropane	ND	0.50	ug/L							05/31/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							05/31/15	
2,2-Dichloropropane	ND	0.50	ug/L							05/31/15	
2-Butanone	ND	5.0	ug/L							05/31/15	
2-Chlorotoluene	ND	0.50	ug/L							05/31/15	
2-Hexanone	ND	10	ug/L							05/31/15	
4-Chlorotoluene	ND	0.50	ug/L							05/31/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							05/31/15	
Acetone	ND	10	ug/L							05/31/15	
Benzene	ND	0.50	ug/L							05/31/15	
Bromobenzene	ND	0.50	ug/L							05/31/15	
Bromochloromethane	ND	0.50	ug/L							05/31/15	
Bromodichloromethane	ND	0.50	ug/L							05/31/15	
Bromoform	ND	0.50	ug/L							05/31/15	
Bromomethane	ND	0.50	ug/L							05/31/15	
Carbon Tetrachloride	ND	0.50	ug/L							05/31/15	
Chlorobenzene	ND	0.50	ug/L							05/31/15	
Chloroethane	ND	0.50	ug/L							05/31/15	
Chloroform	ND	0.50	ug/L							05/31/15	
Chloromethane	ND	0.50	ug/L							05/31/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							05/31/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							05/31/15	
Dibromochloromethane	ND	0.50	ug/L							05/31/15	
Dibromomethane	ND	0.50	ug/L							05/31/15	
Dichlorodifluoromethane	ND	0.50	ug/L							05/31/15	
Dichloromethane	ND	0.50	ug/L							05/31/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							05/31/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							05/31/15	
Ethylbenzene	ND	0.50	ug/L							05/31/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505976										Prepared: 05/31/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank (A505976-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							05/31/15	
Isopropylbenzene	ND	0.50	ug/L							05/31/15	
m,p-Xylenes	ND	0.50	ug/L							05/31/15	
Methyl-t-butyl ether	ND	0.50	ug/L							05/31/15	
Naphthalene	ND	0.50	ug/L							05/31/15	
n-Butylbenzene	ND	0.50	ug/L							05/31/15	
n-Propylbenzene	ND	0.50	ug/L							05/31/15	
o-Xylene	ND	0.50	ug/L							05/31/15	
p-Isopropyltoluene	ND	0.50	ug/L							05/31/15	
sec-Butylbenzene	ND	0.50	ug/L							05/31/15	
Styrene	ND	0.50	ug/L							05/31/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							05/31/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							05/31/15	
tert-Butylbenzene	ND	0.50	ug/L							05/31/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							05/31/15	
Toluene	ND	0.50	ug/L							05/31/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							05/31/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							05/31/15	
Trichloroethene (TCE)	ND	0.50	ug/L							05/31/15	
Trichlorofluoromethane	ND	5.0	ug/L							05/31/15	
Vinyl Chloride	ND	0.50	ug/L							05/31/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.9*			*5.0*		*97*	*70-130*			05/31/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*100*	*70-130*			05/31/15	
Blank Spike (A505976-BS1)											
1,1,1,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		100	70-130			05/31/15	
1,1,2,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		102	70-130			05/31/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
1,1-Dichloroethane	10	0.50	ug/L	10		100	70-130			05/31/15	
1,1-Dichloroethene	10	0.50	ug/L	10		101	70-130			05/31/15	
1,1-Dichloropropene	10	0.50	ug/L	10		102	70-130			05/31/15	
1,2,3-Trichlorobenzene	9.9	0.50	ug/L	10		99	70-130			05/31/15	
1,2,4-Trichlorobenzene	9.8	0.50	ug/L	10		98	70-130			05/31/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130			05/31/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			05/31/15	
1,2-Dichloroethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
1,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			05/31/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		100	70-130			05/31/15	
1,3-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			05/31/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130			05/31/15	
1,4-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			05/31/15	
2,2-Dichloropropane	10	0.50	ug/L	10		102	70-130			05/31/15	
2-Butanone	9.7	5.0	ug/L	10		97	70-130			05/31/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505976										Prepared: 05/31/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A505976-BS1)											
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			05/31/15	
2-Hexanone	9.8	10	ug/L	10		98	70-130			05/31/15	
4-Chlorotoluene	9.9	0.50	ug/L	10		99	70-130			05/31/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130			05/31/15	
Acetone	9.3	10	ug/L	10		93	70-130			05/31/15	
Benzene	10	0.50	ug/L	10		100	70-130			05/31/15	
Bromobenzene	10	0.50	ug/L	10		100	70-130			05/31/15	
Bromochloromethane	9.6	0.50	ug/L	10		96	70-130			05/31/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
Bromoform	9.6	0.50	ug/L	10		96	70-130			05/31/15	
Bromomethane	11	0.50	ug/L	10		112	70-130			05/31/15	
Carbon disulfide	10	10	ug/L	10		102	70-130			05/31/15	
Carbon Tetrachloride	10	0.50	ug/L	10		100	70-130			05/31/15	
Chlorobenzene	10	0.50	ug/L	10		101	70-130			05/31/15	
Chloroethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
Chloroform	9.9	0.50	ug/L	10		99	70-130			05/31/15	
Chloromethane	10	0.50	ug/L	10		100	70-130			05/31/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130			05/31/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		102	70-130			05/31/15	
Dibromochloromethane	9.7	0.50	ug/L	10		97	70-130			05/31/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130			05/31/15	
Dichlorodifluoromethane	9.5	0.50	ug/L	10		95	70-130			05/31/15	
Dichloromethane	9.6	0.50	ug/L	10		96	70-130			05/31/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		100	70-130			05/31/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		101	70-130			05/31/15	
Ethylbenzene	10	0.50	ug/L	10		101	70-130			05/31/15	
Hexachlorobutadiene	10	0.50	ug/L	10		102	70-130			05/31/15	
Isopropylbenzene	10	0.50	ug/L	10		102	70-130			05/31/15	
m,p-Xylenes	20	0.50	ug/L	20		101	70-130			05/31/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		100	70-130			05/31/15	
Naphthalene	9.8	0.50	ug/L	10		98	70-130			05/31/15	
n-Butylbenzene	10	0.50	ug/L	10		102	70-130			05/31/15	
n-Propylbenzene	10	0.50	ug/L	10		100	70-130			05/31/15	
o-Xylene	10	0.50	ug/L	10		100	70-130			05/31/15	
p-Isopropyltoluene	10	0.50	ug/L	10		101	70-130			05/31/15	
sec-Butylbenzene	10	0.50	ug/L	10		102	70-130			05/31/15	
Styrene	9.8	0.50	ug/L	10		98	70-130			05/31/15	
tert-Amyl Methyl Ether (TAME)	9.6	3.0	ug/L	10		96	70-130			05/31/15	
tert-Butyl alcohol (TBA)	9.2	2.0	ug/L	10		92	70-130			05/31/15	
tert-Butylbenzene	10	0.50	ug/L	10		101	70-130			05/31/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		101	70-130			05/31/15	
Toluene	10	0.50	ug/L	10		100	70-130			05/31/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			05/31/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		103	70-130			05/31/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			05/31/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505976										Prepared: 05/31/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike (A505976-BS1)											
Trichlorofluoromethane	9.8	5.0	ug/L	10		98	70-130			05/31/15	
Vinyl Chloride	9.7	0.50	ug/L	10		97	70-130			05/31/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.7*			*5.0*		*94*	*70-130*			05/31/15	
Surrogate: Bromofluorobenzene	*47*			*50*		*95*	*70-130*			05/31/15	
Blank Spike Dup (A505976-BSD1)											
1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
1,1,1-Trichloroethane	9.7	0.50	ug/L	10		97	70-130	3	30	05/31/15	
1,1,2,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130	1	30	05/31/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		101	70-130	1	30	05/31/15	
1,1,2-Trichloroethane	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
1,1-Dichloroethane	9.7	0.50	ug/L	10		97	70-130	3	30	05/31/15	
1,1-Dichloroethene	9.6	0.50	ug/L	10		96	70-130	4	30	05/31/15	
1,1-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	3	30	05/31/15	
1,2,3-Trichlorobenzene	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
1,2,4-Trimethylbenzene	9.7	0.50	ug/L	10		97	70-130	3	30	05/31/15	
1,2-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	05/31/15	
1,2-Dichloroethane	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
1,2-Dichloropropane	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
1,3,5-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
1,3-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
1,3-Dichloropropane	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
1,4-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
2,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	3	30	05/31/15	
2-Butanone	9.7	5.0	ug/L	10		97	70-130	0	30	05/31/15	
2-Chlorotoluene	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
2-Hexanone	9.8	10	ug/L	10		98	70-130	0	30	05/31/15	
4-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
4-Methyl-2-pentanone	9.8	5.0	ug/L	10		98	70-130	0	30	05/31/15	
Acetone	9.3	10	ug/L	10		93	70-130	0	30	05/31/15	
Benzene	9.7	0.50	ug/L	10		97	70-130	3	30	05/31/15	
Bromobenzene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
Bromochloromethane	9.4	0.50	ug/L	10		94	70-130	3	30	05/31/15	
Bromodichloromethane	9.6	0.50	ug/L	10		96	70-130	3	30	05/31/15	
Bromoform	9.4	0.50	ug/L	10		94	70-130	1	30	05/31/15	
Bromomethane	10	0.50	ug/L	10		103	70-130	9	30	05/31/15	
Carbon disulfide	9.8	10	ug/L	10		98	70-130	4	30	05/31/15	
Carbon Tetrachloride	9.7	0.50	ug/L	10		97	70-130	3	30	05/31/15	
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
Chloroethane	9.5	0.50	ug/L	10		95	70-130	3	30	05/31/15	
Chloroform	9.7	0.50	ug/L	10		97	70-130	2	30	05/31/15	
Chloromethane	9.6	0.50	ug/L	10		96	70-130	4	30	05/31/15	
cis-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	2	30	05/31/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A505976										Prepared: 05/31/2015	
Prep Method: EPA 524.2										Analyst: JGB	
Blank Spike Dup (A505976-BSD1)											
Dibromochloromethane	9.4	0.50	ug/L	10		94	70-130	3	30	05/31/15	
Dibromomethane	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
Dichlorodifluoromethane	9.3	0.50	ug/L	10		93	70-130	3	30	05/31/15	
Dichloromethane	9.3	0.50	ug/L	10		93	70-130	3	30	05/31/15	
Di-isopropyl ether (DIPE)	9.8	3.0	ug/L	10		98	70-130	2	30	05/31/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		100	70-130	2	30	05/31/15	
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
Hexachlorobutadiene	9.9	0.50	ug/L	10		99	70-130	2	30	05/31/15	
Isopropylbenzene	9.9	0.50	ug/L	10		99	70-130	3	30	05/31/15	
m,p-Xylenes	20	0.50	ug/L	20		98	70-130	3	30	05/31/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	2	30	05/31/15	
Naphthalene	9.6	0.50	ug/L	10		96	70-130	2	30	05/31/15	
n-Butylbenzene	10	0.50	ug/L	10		101	70-130	2	30	05/31/15	
n-Propylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
o-Xylene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
sec-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	2	30	05/31/15	
Styrene	9.4	0.50	ug/L	10		94	70-130	3	30	05/31/15	
tert-Amyl Methyl Ether (TAME)	9.4	3.0	ug/L	10		94	70-130	2	30	05/31/15	
tert-Butyl alcohol (TBA)	9.1	2.0	ug/L	10		91	70-130	1	30	05/31/15	
tert-Butylbenzene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	2	30	05/31/15	
trans-1,2-Dichloroethene	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130	2	30	05/31/15	
Trichloroethene (TCE)	9.8	0.50	ug/L	10		98	70-130	3	30	05/31/15	
Trichlorofluoromethane	9.4	5.0	ug/L	10		94	70-130	4	30	05/31/15	
Vinyl Chloride	9.2	0.50	ug/L	10		92	70-130	5	30	05/31/15	
Surrogate: 1,2-Dichlorobenzene-d4	*4.8*			*5.0*		*96*	*70-130*			05/31/15	
Surrogate: Bromofluorobenzene	*47*			*50*		*94*	*70-130*			05/31/15	
Matrix Spike (A505976-MS1), Source: A5E1915-01											
Di-isopropyl ether (DIPE)	8.7	3.0	ug/L	10	ND	87	70-130			05/31/15	
Surrogate: 1,2-Dichlorobenzene-d4	*5.1*			*5.0*		*102*	*70-130*			05/31/15	
Surrogate: Bromofluorobenzene	*51*			*50*		*101*	*70-130*			05/31/15	
EPA 525.2 - Quality Control											
Batch: A505971										Prepared: 05/29/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A505971-BLK1)											
Alachlor	ND	1.0	ug/L							05/31/15	
Atrazine	ND	0.50	ug/L							05/31/15	
Benzo(a)pyrene	ND	0.10	ug/L							05/31/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							05/31/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A505971										Prepared: 05/29/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank (A505971-BLK1)											
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							05/31/15	
Bromacil	ND	10	ug/L							05/31/15	
Butachlor	ND	0.38	ug/L							05/31/15	
Diazinon	ND	0.25	ug/L							05/31/15	
Dimethoate	ND	10	ug/L							05/31/15	
Metolachlor	ND	0.50	ug/L							05/31/15	
Metribuzin	ND	0.50	ug/L							05/31/15	
Molinate	ND	2.0	ug/L							05/31/15	
Prometryn	ND	2.0	ug/L							05/31/15	
Propachlor	ND	0.50	ug/L							05/31/15	
Simazine	ND	1.0	ug/L							05/31/15	
Thiobencarb	ND	1.0	ug/L							05/31/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.0*			*5.0*		*101*	*70-130*			05/31/15	
Blank Spike (A505971-BS1)											
Alachlor	0.97	1.0	ug/L	1.0		97	70-130			05/31/15	
Atrazine	0.50	0.50	ug/L	0.50		100	70-130			05/31/15	
Benzo(a)pyrene	0.10	0.10	ug/L	0.10		104	70-130			05/31/15	
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		110	70-130			05/31/15	
Bis(2-ethylhexyl) phthalate	1.8	3.0	ug/L	1.5		118	70-130			05/31/15	
Bromacil	1.2	10	ug/L	1.0		117	70-130			05/31/15	
Butachlor	0.94	0.38	ug/L	1.0		94	70-130			05/31/15	
Diazinon	0.16	0.25	ug/L	0.20		78	70-130			05/31/15	
Dimethoate	1.0	10	ug/L	1.0		100	70-130			05/31/15	
Metolachlor	2.0	0.50	ug/L	2.0		102	70-130			05/31/15	
Metribuzin	1.2	0.50	ug/L	1.0		117	70-130			05/31/15	
Molinate	1.0	2.0	ug/L	1.0		103	70-130			05/31/15	
Prometryn	1.8	2.0	ug/L	2.0		91	70-130			05/31/15	
Propachlor	0.54	0.50	ug/L	0.50		108	70-130			05/31/15	
Simazine	0.35	1.0	ug/L	0.35		100	70-130			05/31/15	
Thiobencarb	0.52	1.0	ug/L	0.50		104	70-130			05/31/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.0*			*5.0*		*101*	*70-130*			05/31/15	
Blank Spike Dup (A505971-BSD1)											
Alachlor	1.0	1.0	ug/L	1.0		100	70-130	3	30	05/31/15	
Atrazine	0.52	0.50	ug/L	0.50		103	70-130	3	30	05/31/15	
Benzo(a)pyrene	0.13	0.10	ug/L	0.10		130	70-130	22	30	05/31/15	
Bis(2-ethylhexyl) adipate	2.3	3.0	ug/L	2.0		116	70-130	6	30	05/31/15	
Bis(2-ethylhexyl) phthalate	1.8	3.0	ug/L	1.5		119	70-130	1	30	05/31/15	
Bromacil	1.2	10	ug/L	1.0		118	70-130	1	30	05/31/15	
Butachlor	1.0	0.38	ug/L	1.0		101	70-130	7	30	05/31/15	
Diazinon	0.17	0.25	ug/L	0.20		84	70-130	7	30	05/31/15	
Dimethoate	1.1	10	ug/L	1.0		106	70-130	6	30	05/31/15	
Metolachlor	2.1	0.50	ug/L	2.0		103	70-130	0	30	05/31/15	
Metribuzin	1.1	0.50	ug/L	1.0		110	70-130	6	30	05/31/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A505971										Prepared: 05/29/2015	
Prep Method: EPA 525.2										Analyst: KHH	
Blank Spike Dup (A505971-BSD1)											
Molinate	1.1	2.0	ug/L	1.0		107	70-130	4	30	05/31/15	
Prometryn	1.8	2.0	ug/L	2.0		92	70-130	1	30	05/31/15	
Propachlor	0.53	0.50	ug/L	0.50		106	70-130	2	30	05/31/15	
Simazine	0.36	1.0	ug/L	0.35		102	70-130	2	30	05/31/15	
Thiobencarb	0.49	1.0	ug/L	0.50		99	70-130	6	30	05/31/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.0*			*5.0*		*99*	*70-130*			05/31/15	
Matrix Spike (A505971-MS1), Source: A5E1972-01											
Alachlor	1.0	1.0	ug/L	0.98	ND	107	70-130			05/31/15	
Atrazine	0.53	0.50	ug/L	0.49	ND	109	70-130			05/31/15	
Benzo(a)pyrene	0.12	0.10	ug/L	0.098	ND	113	70-130			05/31/15	
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0	ND	108	70-130			05/31/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5	ND	114	70-130			05/31/15	
Bromacil	1.2	10	ug/L	0.98	ND	125	70-130			05/31/15	
Butachlor	0.98	0.38	ug/L	0.98	ND	100	70-130			05/31/15	
Diazinon	0.18	0.25	ug/L	0.20	ND	90	70-130			05/31/15	
Dimethoate	1.1	10	ug/L	0.98	ND	101	70-130			05/31/15	
Metolachlor	2.1	0.50	ug/L	2.0	ND	107	70-130			05/31/15	
Metribuzin	1.1	0.50	ug/L	0.98	ND	112	70-130			05/31/15	
Molinate	1.1	2.0	ug/L	0.98	ND	108	70-130			05/31/15	
Prometryn	2.1	2.0	ug/L	2.0	ND	106	70-130			05/31/15	
Propachlor	0.55	0.50	ug/L	0.49	ND	113	70-130			05/31/15	
Simazine	0.33	1.0	ug/L	0.34	ND	97	70-130			05/31/15	
Thiobencarb	0.49	1.0	ug/L	0.49	ND	101	70-130			05/31/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.9*			*4.9*		*101*	*70-130*			05/31/15	
EPA 531.1 - Quality Control											
Batch: A505859										Prepared: 05/27/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank (A505859-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							05/27/15	
Aldicarb	ND	3.0	ug/L							05/27/15	
Aldicarb Sulfone	ND	2.0	ug/L							05/27/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							05/27/15	
Carbaryl	ND	5.0	ug/L							05/27/15	
Carbofuran	ND	5.0	ug/L							05/27/15	
Methiocarb	ND	2.0	ug/L							05/27/15	
Methomyl	ND	2.0	ug/L							05/27/15	
Oxamyl	ND	20	ug/L							05/27/15	
Propoxur	ND	2.0	ug/L							05/27/15	
Blank Spike (A505859-BS1)											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0		105	80-120			05/27/15	
Aldicarb	4.1	3.0	ug/L	4.0		102	80-120			05/27/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A505859										Prepared: 05/27/2015	
Prep Method: EPA 531.1										Analyst: AAR	
Blank Spike (A505859-BS1)											
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			05/27/15	
Aldicarb Sulfoxide	4.2	3.0	ug/L	4.0		104	80-120			05/27/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120			05/27/15	
Carbofuran	4.1	5.0	ug/L	4.0		102	80-120			05/27/15	
Methiocarb	4.1	2.0	ug/L	4.0		102	80-120			05/27/15	
Methomyl	4.1	2.0	ug/L	4.0		101	80-120			05/27/15	
Oxamyl	4.2	20	ug/L	4.0		105	80-120			05/27/15	
Propoxur	4.0	2.0	ug/L	4.0		100	80-120			05/27/15	
Blank Spike Dup (A505859-BSD1)											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0		106	80-120	1	20	05/27/15	
Aldicarb	3.9	3.0	ug/L	4.0		99	80-120	3	20	05/27/15	
Aldicarb Sulfone	4.2	2.0	ug/L	4.0		104	80-120	4	20	05/27/15	
Aldicarb Sulfoxide	4.3	3.0	ug/L	4.0		107	80-120	3	20	05/27/15	
Carbaryl	4.2	5.0	ug/L	4.0		104	80-120	2	20	05/27/15	
Carbofuran	4.0	5.0	ug/L	4.0		100	80-120	2	20	05/27/15	
Methiocarb	4.1	2.0	ug/L	4.0		104	80-120	1	20	05/27/15	
Methomyl	4.3	2.0	ug/L	4.0		106	80-120	5	20	05/27/15	
Oxamyl	4.1	20	ug/L	4.0		104	80-120	1	20	05/27/15	
Propoxur	4.1	2.0	ug/L	4.0		103	80-120	4	20	05/27/15	
Matrix Spike (A505859-MS1), Source: A5E1869-04											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0	ND	99	65-135			05/27/15	
Aldicarb	4.5	3.0	ug/L	4.0	ND	111	65-135			05/27/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0	ND	103	65-135			05/27/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0	ND	103	65-135			05/27/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	104	65-135			05/27/15	
Carbofuran	4.1	5.0	ug/L	4.0	ND	103	65-135			05/27/15	
Methiocarb	3.9	2.0	ug/L	4.0	ND	98	65-135			05/27/15	
Methomyl	4.6	2.0	ug/L	4.0	ND	115	65-135			05/27/15	
Oxamyl	4.1	20	ug/L	4.0	ND	103	65-135			05/27/15	
Propoxur	4.1	2.0	ug/L	4.0	ND	103	65-135			05/27/15	
EPA 547 - Quality Control											
Batch: A505989										Prepared: 06/01/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A505989-BLK1)											
Glyphosate	ND	25	ug/L							06/01/15	
Surrogate: AMPA	*120*			*100*		*119*	*70-130*			06/01/15	
Blank Spike (A505989-BS1)											
Glyphosate	98	25	ug/L	100		98	70-130			06/01/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			06/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 547 - Quality Control											
Batch: A505989										Prepared: 06/01/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank Spike Dup (A505989-BSD1)											
Glyphosate	96	25	ug/L	100		96	70-130	2	30	06/01/15	
Surrogate: AMPA	*96*			*100*		*96*	*70-130*			06/01/15	
Matrix Spike (A505989-MS1), Source: A5E2327-01											
Glyphosate	90	25	ug/L	100	ND	88	70-130			06/01/15	
Surrogate: AMPA	*110*			*100*		*108*	*70-130*			06/01/15	
Matrix Spike Dup (A505989-MSD1), Source: A5E2327-01											
Glyphosate	100	25	ug/L	100	ND	101	70-130	14	30	06/01/15	
Surrogate: AMPA	*110*			*100*		*112*	*70-130*			06/01/15	
EPA 548.1 - Quality Control											
Batch: A505858										Prepared: 05/27/2015	
Prep Method: EPA 548.1										Analyst: KHH	
Blank (A505858-BLK1)											
Endothall	ND	45	ug/L							05/28/15	
Blank Spike (A505858-BS1)											
Endothall	23	45	ug/L	20		114	46-116			05/28/15	
Blank Spike Dup (A505858-BSD1)											
Endothall	25	45	ug/L	20		126	46-116	10	30	05/28/15	BS ***High***
Matrix Spike (A505858-MS1), Source: A5E1985-01											
Endothall	3.4	45	ug/L	20	ND	17	46-116			05/28/15	MS1.0 ***Low***
Matrix Spike Dup (A505858-MSD1), Source: A5E1985-01											
Endothall	3.2	45	ug/L	20	ND	16	46-116	6	30	05/28/15	MS1.0 ***Low***
EPA 549.2 - Quality Control											
Batch: A505793										Prepared: 05/26/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A505793-BLK1)											
Diquat	ND	4.0	ug/L							05/29/15	
Blank Spike (A505793-BS1)											
Diquat	5.0	4.0	ug/L	4.0		124	70-130			05/29/15	
Blank Spike Dup (A505793-BSD1)											
Diquat	5.1	4.0	ug/L	4.0		128	70-130	3	30	05/29/15	
Matrix Spike (A505793-MS1), Source: A5E1869-02											
Diquat	4.8	4.0	ug/L	4.0	ND	121	70-130			05/29/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 549.2 - Quality Control											
Batch: A505793										Prepared: 05/26/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Matrix Spike (A505793-MS2), Source: A5E1869-03											
Diquat	4.8	4.0	ug/L	4.0	ND	119	70-130			05/29/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5E1979

05222015

Monte6227

Turnaround: Standard

Due Date: 6/8/2015

Monterey Bay Analytical

Printed: 5/22/2

BSK Associates Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- Date needed:

A5E1979
Monte6227
05/22/2015
10

*Required Fields

Temp: 2.4

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am

Project #:

How would you like to receive your completed results?*
- [X] E-Mail
- [ ] Fax
- [ ] Mail

Reporting Options:
- [ ] Trace (J-Flag)
- [ ] Swamp
- [ ] EDD Type: _____

Sampler Name (Printed/Signature)*: Matan Salmon

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
1	MW-8D (monitoring)	5/21/15	1105	GW	AB30918	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	5/21/15	1600		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Received for Lab by: (Signature and Printed Name) John Hew		Date 5/22/15	Time 1000	Payment Received at Delivery: Date: Amount: PIA#:	Check / Cash Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____

Cooling Method: Wet Blue None

Custody Seal: Y / N

Chilling Process Begun: Y / N BW

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

BSK Associates SR-FL-0002-13

A5E1979 05/22/2015
Monte6227 10

Sample Integrity

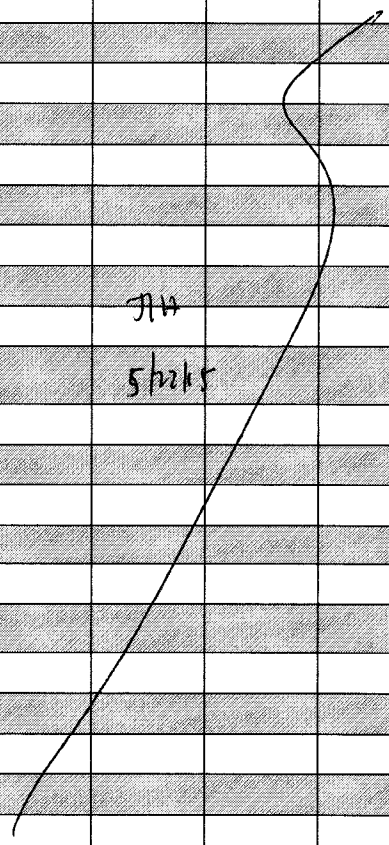
BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°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?	1					
Bacti $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, 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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	1V,2A					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	3V					
$Na_2S_2O_3$ + 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

Labeled by: MW @ 12:26 Labels checked by: CCH @ 1348 RUSH Paged by:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

May 28, 2015 Ceres ID: 10667

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 May 22, 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 # AB30918.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10667-001	MW-8D (monitoring)	5/22/2015	5/21/2015	11:05

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB30918

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1321
ZB-5 MS Analysis Date: 27-May-15
Date Received: NA
Date Extracted: 26-May-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.24		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	98.3	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	95.4	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB30918	Sample Size:	1.000 L	QC Batch #:	1321	Date Extracted:	26-May-15
				ZB-5 MS Analysis Date:	27-May-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	8.96	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	93.3	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	9.48	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-8D (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10667-001	Date Received:	22-May-15
Project:	AB30918	Sample Size:	1.013 L	QC Batch #:	1321	Date Extracted:	26-May-15
Date Collected:	21-May-15			ZB-5 MS Analysis Date:	27-May-15		
Time Collected:	11:05						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.30		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	84.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	105	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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: 1667

Temperature: 2.3 °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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)___ Results by 4/13/15
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-8D (monitoring)	5/21/2015	1105 0:00	Aq	2	X							AB30918
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
D. Holland	5/21/2015	16:00	James M Hodin	5/22/15	09:48

Client understands that all terms desribed 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: 10667	Date/Time: 5/22/15 09:48
Client Project ID: AB30918	Received Temperature: 2.3°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies: 5/22/15	
List Damaged Samples: 5/22/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10667 PB: 1321 Sample #s: 1 Due Date: 6/8/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle 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 Cl_4-Cl_8 ☐ 8290 Cl_4-Cl_8

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

Sample Volume = (Sample + Bottle Wt) – Empty Bottle Wt

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10667-1	1534.20g	520.94g	1.013L

Chemist J Date 5/26/15

Method: 1613B
SOP #: 302.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1321-MB001	Method Blank		1.000L	[A] 5/26/15 MH	5/27/15 MH	NA	5/27/15	NA	5/27/15 MH
0-1321-OPR001	OPR		1.000L	↓	↓	↓	↓	↓	↓
10667-1321-001	MW-8D (monitoring)	✓	1.013L	↓	↓	↓	↓	↓	↓

Comments : [A] OPR spiked with NSS.

Soxhlet Start: 15:15 5/26/15

Soxhlet Stop: 07:30 5/27/15

Samples Logged out by: 11:00 5/26/15

Samples Returned by: NA

Note samples Depleted: NA

Sample Extracts Storage Location: Box 15

Extracts to Instrument: 10:22 5/27/15

Extracts returned to Storage Location: _____

Form M1.0 rev5

Chemist: _____

Effective Date: 8/7/14

Method: 1613B
SOP #: 3814

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	S021115A	10	2/11/20
NSS	B	0.1	
CSS	C	1	
RSS	D	20	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	143616	2/5/16
Hexanes	30,30,100,20ml	147232	4/3/16
Sigel	4g	P031615A	9/16/15
Basic Sigel	4g	P021915A	8/19/15
Acid Sigel	8g	P021915B	8/19/15
Acid Al	6g	P042015A	10/20/15
Na_2SO_4	1.5g	P041515A	10/15/15
20% DCM:Hex	30ml	L040115A	10/1/15

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

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5E22048

Report Date: 06/12/15 09:18

Received Date: 05/22/15 13:10

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

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Dear David Holland :

Enclosed are the results of analyses for samples received 05/22/15 13:10 with the Chain of Custody document. The samples were received in good condition, at 2.7 °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: 05/22/15 13:10
Date Reported: 06/12/15 09:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-8D (monitoring) (AB30918)	Matan Solomon	5E22048-01	Water	05/21/15 11:05

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

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Date Received: 05/22/15 13:10
Date Reported: 06/12/15 09:18

5E22048-01 MW-8D (monitoring)

Sampled: 05/21/15 11:05 **Sampled By:** Matan Solomon **Matrix:** Water

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5E1657 Prepared: 05/29/15 11:30 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	10	ug/l	1	05/29/15 20:22	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5E1460 Prepared: 05/27/15 09:04 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	06/10/15 01:44	
4,4´-DDE	ND		0.010	ug/l	1	06/10/15 01:44	
4,4´-DDT	ND		0.010	ug/l	1	06/10/15 01:44	
Aldrin	ND		0.010	ug/l	1	06/10/15 01:44	
alpha-BHC	ND		0.010	ug/l	1	06/10/15 01:44	
Aroclor 1016	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1221	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1232	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1242	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1248	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1254	ND		0.10	ug/l	1	06/10/15 01:44	
Aroclor 1260	ND		0.10	ug/l	1	06/10/15 01:44	
beta-BHC	ND		0.010	ug/l	1	06/10/15 01:44	
Chlordane (tech)	ND		0.10	ug/l	1	06/10/15 01:44	
Chlorothalonil	ND		0.050	ug/l	1	06/10/15 01:44	
delta-BHC	ND		0.010	ug/l	1	06/10/15 01:44	
Dieldrin	ND		0.010	ug/l	1	06/10/15 01:44	
Endosulfan I	ND		0.010	ug/l	1	06/10/15 01:44	
Endosulfan II	ND		0.010	ug/l	1	06/10/15 01:44	
Endosulfan sulfate	ND		0.010	ug/l	1	06/10/15 01:44	
Endrin	ND		0.010	ug/l	1	06/10/15 01:44	
Endrin aldehyde	ND		0.010	ug/l	1	06/10/15 01:44	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	06/10/15 01:44	
Heptachlor	ND		0.010	ug/l	1	06/10/15 01:44	
Heptachlor epoxide	ND		0.010	ug/l	1	06/10/15 01:44	
Hexachlorobenzene	ND		0.050	ug/l	1	06/10/15 01:44	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	06/10/15 01:44	
Methoxychlor	ND		0.010	ug/l	1	06/10/15 01:44	
PCBs, Total	ND		0.50	ug/l	1	06/10/15 01:44	
Propachlor	ND		0.050	ug/l	1	06/10/15 01:44	
Toxaphene	ND		1.0	ug/l	1	06/10/15 01:44	
Trifluralin	ND		0.010	ug/l	1	06/10/15 01:44	
Surr: Decachlorobiphenyl	*100 %*	Conc:*0.100*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*90 %*	Conc:*0.0904*	*70-130*	%			

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Date Received: 05/22/15 13:10
Date Reported: 06/12/15 09:18

5E22048-01 MW-8D (monitoring)

Sampled: 05/21/15 11:05 **Sampled By:** Matan Solomon **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W5E1349 Prepared: 05/23/15 09:37 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.050	ug/l	1	06/06/15 07:07	
4,4´-DDE	ND		0.050	ug/l	1	06/06/15 07:07	
4,4´-DDT	ND		0.010	ug/l	1	06/06/15 07:07	
Aldrin	ND		0.0050	ug/l	1	06/06/15 07:07	
alpha-BHC	ND		0.010	ug/l	1	06/06/15 07:07	
Aroclor 1016	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1221	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1232	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1242	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1248	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1254	ND		0.50	ug/l	1	06/06/15 07:07	
Aroclor 1260	ND		0.50	ug/l	1	06/06/15 07:07	
beta-BHC	ND		0.0050	ug/l	1	06/06/15 07:07	
Chlordane (tech)	ND		0.10	ug/l	1	06/06/15 07:07	
delta-BHC	ND		0.0050	ug/l	1	06/06/15 07:07	
Dieldrin	ND		0.010	ug/l	1	06/06/15 07:07	
Endosulfan I	ND		0.020	ug/l	1	06/06/15 07:07	
Endosulfan II	ND		0.010	ug/l	1	06/06/15 07:07	
Endosulfan sulfate	ND		0.050	ug/l	1	06/06/15 07:07	
Endrin	ND		0.010	ug/l	1	06/06/15 07:07	
Endrin aldehyde	ND		0.010	ug/l	1	06/06/15 07:07	
gamma-BHC (Lindane)	ND		0.020	ug/l	1	06/06/15 07:07	
Heptachlor	ND		0.010	ug/l	1	06/06/15 07:07	
Heptachlor epoxide	ND		0.010	ug/l	1	06/06/15 07:07	
Toxaphene	ND		0.50	ug/l	1	06/06/15 07:07	
Surr: Decachlorobiphenyl	*83 %*	Conc:*0.0827*	*0.1-118*	%			
Surr: Tetrachloro-meta-xylene	*78 %*	Conc:*0.0775*	*12-117*	%			

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QUALITY CONTROL SECTION

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Anions by IC, EPA Method 9056 - Quality Control

Batch W5E1657 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1657-BLK1)				Analyzed: 05/29/15 12:31						
Iodide	ND	10	ug/l							
LCS (W5E1657-BS1)				Analyzed: 05/29/15 13:18						
Iodide	41.8	10	ug/l	40.0		104	85-115			
Matrix Spike (W5E1657-MS1)		**Source: 5E22049-01**		Analyzed: 05/29/15 19:22						
Iodide	146	25	ug/l	100	42.6	103	80-120			
Matrix Spike (W5E1657-MS2)		**Source: 5E22050-01**		Analyzed: 05/29/15 19:52						
Iodide	146	25	ug/l	100	48.4	98	80-120			
Matrix Spike Dup (W5E1657-MSD1)		**Source: 5E22049-01**		Analyzed: 05/29/15 19:38						
Iodide	137	25	ug/l	100	42.6	94	80-120	7	20	
Matrix Spike Dup (W5E1657-MSD2)		**Source: 5E22050-01**		Analyzed: 05/29/15 20:08						
Iodide	150	25	ug/l	100	48.4	102	80-120	3	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1349 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1349-BLK1)				Analyzed: 06/05/15 20:54						
4,4´-DDD	ND	0.050	ug/l							
4,4´-DDE	ND	0.050	ug/l							
4,4´-DDT	ND	0.010	ug/l							
Aldrin	ND	0.0050	ug/l							
alpha-BHC	ND	0.010	ug/l							
Aroclor 1016	ND	0.50	ug/l							
Aroclor 1221	ND	0.50	ug/l							
Aroclor 1232	ND	0.50	ug/l							
Aroclor 1242	ND	0.50	ug/l							
Aroclor 1248	ND	0.50	ug/l							
Aroclor 1254	ND	0.50	ug/l							
Aroclor 1260	ND	0.50	ug/l							
beta-BHC	ND	0.0050	ug/l							
Chlordane (tech)	ND	0.10	ug/l							
delta-BHC	ND	0.0050	ug/l							
Dieldrin	ND	0.010	ug/l							
Endosulfan I	ND	0.020	ug/l							
Endosulfan II	ND	0.010	ug/l							
Endosulfan sulfate	ND	0.050	ug/l							
Endrin	ND	0.010	ug/l							
Endrin aldehyde	ND	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.020	ug/l							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1349 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1349-BLK1)				Analyzed: 06/05/15 20:54						
Heptachlor	ND	0.010	ug/l							
Heptachlor epoxide	ND	0.010	ug/l							
Toxaphene	ND	0.50	ug/l							
Surr: Decachlorobiphenyl	*0.0942*		*ug/l*	*0.100*		*94*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*0.0803*		*ug/l*	*0.100*		*80*	*12-117*			
LCS (W5E1349-BS1)				Analyzed: 06/05/15 21:25						
4,4´-DDD	0.0882	0.050	ug/l	0.100		88	42-133			
4,4´-DDE	0.0862	0.050	ug/l	0.100		86	33-126			
4,4´-DDT	0.0691	0.010	ug/l	0.100		69	35-147			
Aldrin	0.0762	0.0050	ug/l	0.100		76	18-117			
alpha-BHC	0.0835	0.010	ug/l	0.100		83	47-119			
beta-BHC	0.0951	0.0050	ug/l	0.100		95	53-123			
delta-BHC	0.102	0.0050	ug/l	0.100		102	51-123			
Dieldrin	0.0832	0.010	ug/l	0.100		83	48-123			
Endosulfan I	0.0684	0.020	ug/l	0.100		68	14-131			
Endosulfan II	0.0661	0.010	ug/l	0.100		66	40-121			
Endosulfan sulfate	0.0793	0.050	ug/l	0.100		79	44-140			
Endrin	0.0855	0.010	ug/l	0.100		86	40-143			
Endrin aldehyde	0.0929	0.010	ug/l	0.100		93	18-136			
gamma-BHC (Lindane)	0.0840	0.020	ug/l	0.100		84	49-117			
Heptachlor	0.0834	0.010	ug/l	0.100		83	31-130			
Heptachlor epoxide	0.0840	0.010	ug/l	0.100		84	49-122			
Surr: Decachlorobiphenyl	*0.0912*		*ug/l*	*0.100*		*91*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*0.0758*		*ug/l*	*0.100*		*76*	*12-117*			
Matrix Spike (W5E1349-MS1)		**Source: 5E21066-01**		Analyzed: 06/05/15 21:56						
4,4´-DDD	0.0738	0.050	ug/l	0.100	ND	74	23-124			
4,4´-DDE	0.0778	0.050	ug/l	0.100	ND	78	30-114			
4,4´-DDT	0.0808	0.010	ug/l	0.100	ND	81	11-151			
Aldrin	0.0643	0.0050	ug/l	0.100	ND	64	18-110			
alpha-BHC	0.0740	0.010	ug/l	0.100	ND	74	43-114			
beta-BHC	0.0713	0.0050	ug/l	0.100	ND	71	24-135			
delta-BHC	0.0840	0.0050	ug/l	0.100	ND	84	37-122			
Dieldrin	0.0715	0.010	ug/l	0.100	ND	71	27-132			
Endosulfan I	0.0579	0.020	ug/l	0.100	ND	58	0.1-140			
Endosulfan II	0.0655	0.010	ug/l	0.100	ND	66	17-122			
Endosulfan sulfate	0.0855	0.050	ug/l	0.100	ND	85	37-131			
Endrin	0.0813	0.010	ug/l	0.100	ND	81	42-144			
Endrin aldehyde	0.0796	0.010	ug/l	0.100	ND	80	11-113			
gamma-BHC (Lindane)	0.0736	0.020	ug/l	0.100	ND	74	33-112			
Heptachlor	0.0721	0.010	ug/l	0.100	ND	72	28-131			

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Date Received: 05/22/15 13:10
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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1349 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5E1349-MS1)		**Source: 5E21066-01**		Analyzed: 06/05/15 21:56						
Heptachlor epoxide	0.0692	0.010	ug/l	0.100	ND	69	36-117			
Surr: Decachlorobiphenyl	*0.0766*		*ug/l*	*0.100*		*77*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*0.0656*		*ug/l*	*0.100*		*66*	*12-117*			
Matrix Spike Dup (W5E1349-MSD1)		**Source: 5E21066-01**		Analyzed: 06/05/15 22:26						
4,4´-DDD	0.0622	0.050	ug/l	0.100	ND	62	23-124	17	30	
4,4´-DDE	0.0664	0.050	ug/l	0.100	ND	66	30-114	16	30	
4,4´-DDT	0.0688	0.010	ug/l	0.100	ND	69	11-151	16	30	
Aldrin	0.0577	0.0050	ug/l	0.100	ND	58	18-110	11	30	
alpha-BHC	0.0629	0.010	ug/l	0.100	ND	63	43-114	16	30	
beta-BHC	0.0586	0.0050	ug/l	0.100	ND	59	24-135	20	30	
delta-BHC	0.0694	0.0050	ug/l	0.100	ND	69	37-122	19	30	
Dieldrin	0.0610	0.010	ug/l	0.100	ND	61	27-132	16	30	
Endosulfan I	0.0501	0.020	ug/l	0.100	ND	50	0.1-140	14	30	
Endosulfan II	0.0539	0.010	ug/l	0.100	ND	54	17-122	20	30	
Endosulfan sulfate	0.0716	0.050	ug/l	0.100	ND	72	37-131	18	30	
Endrin	0.0692	0.010	ug/l	0.100	ND	69	42-144	16	30	
Endrin aldehyde	0.0656	0.010	ug/l	0.100	ND	66	11-113	19	30	
gamma-BHC (Lindane)	0.0632	0.020	ug/l	0.100	ND	63	33-112	15	30	
Heptachlor	0.0615	0.010	ug/l	0.100	ND	61	28-131	16	30	
Heptachlor epoxide	0.0594	0.010	ug/l	0.100	ND	59	36-117	15	30	
Surr: Decachlorobiphenyl	*0.0796*		*ug/l*	*0.100*		*80*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*0.0544*		*ug/l*	*0.100*		*54*	*12-117*			

Batch W5E1460 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1460-BLK1)				Analyzed: 06/10/15 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							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1460 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1460-BLK1)				Analyzed: 06/10/15 00:12						
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							
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	*0.107*		*ug/l*	*0.100*		*107*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0911*		*ug/l*	*0.100*		*91*	*70-130*			
LCS (W5E1460-BS1)				Analyzed: 06/10/15 00:42						
4,4´-DDD	0.101	0.010	ug/l	0.100		101	55-142			
4,4´-DDE	0.101	0.010	ug/l	0.100		101	49-129			
4,4´-DDT	0.114	0.010	ug/l	0.100		114	54-160			
Aldrin	0.0917	0.010	ug/l	0.100		92	29-115			
alpha-BHC	0.105	0.010	ug/l	0.100		105	59-131			
beta-BHC	0.115	0.010	ug/l	0.100		115	63-136			
delta-BHC	0.120	0.010	ug/l	0.100		120	59-137			
Dieldrin	0.101	0.010	ug/l	0.100		101	59-135			
Endosulfan I	0.0826	0.010	ug/l	0.100		83	28-138			
Endosulfan II	0.0867	0.010	ug/l	0.100		87	53-133			
Endosulfan sulfate	0.0985	0.010	ug/l	0.100		99	58-155			
Endrin	0.102	0.010	ug/l	0.100		102	57-148			
Endrin aldehyde	0.0892	0.010	ug/l	0.100		89	45-139			
gamma-BHC (Lindane)	0.106	0.010	ug/l	0.100		106	59-129			
Heptachlor	0.0980	0.010	ug/l	0.100		98	42-136			
Heptachlor epoxide	0.100	0.010	ug/l	0.100		100	59-134			
Methoxychlor	0.0879	0.010	ug/l	0.100		88	56-167			
Surr: Decachlorobiphenyl	*0.110*		*ug/l*	*0.100*		*110*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 05/22/15 13:10
Date Reported: 06/12/15 09:18

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1460 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5E1460-BS1)				Analyzed: 06/10/15 00:42						
Surr: Tetrachloro-meta-xylene	*0.102*		*ug/l*	*0.100*		*102*	*70-130*			
LCS Dup (W5E1460-BSD1)				Analyzed: 06/10/15 01:13						
4,4´-DDD	0.109	0.010	ug/l	0.100		109	55-142	7	25	
4,4´-DDE	0.111	0.010	ug/l	0.100		111	49-129	9	25	
4,4´-DDT	0.124	0.010	ug/l	0.100		124	54-160	9	25	
Aldrin	0.100	0.010	ug/l	0.100		100	29-115	9	25	
alpha-BHC	0.113	0.010	ug/l	0.100		113	59-131	7	25	
beta-BHC	0.127	0.010	ug/l	0.100		127	63-136	9	25	
delta-BHC	0.130	0.010	ug/l	0.100		130	59-137	8	25	
Dieldrin	0.108	0.010	ug/l	0.100		108	59-135	7	25	
Endosulfan I	0.0891	0.010	ug/l	0.100		89	28-138	7	25	
Endosulfan II	0.0951	0.010	ug/l	0.100		95	53-133	9	25	
Endosulfan sulfate	0.110	0.010	ug/l	0.100		110	58-155	11	25	
Endrin	0.111	0.010	ug/l	0.100		111	57-148	8	25	
Endrin aldehyde	0.109	0.010	ug/l	0.100		109	45-139	20	25	
gamma-BHC (Lindane)	0.113	0.010	ug/l	0.100		113	59-129	7	25	
Heptachlor	0.107	0.010	ug/l	0.100		107	42-136	9	25	
Heptachlor epoxide	0.108	0.010	ug/l	0.100		108	59-134	7	25	
Methoxychlor	0.105	0.010	ug/l	0.100		105	56-167	18	25	
Surr: Decachlorobiphenyl	*0.119*		*ug/l*	*0.100*		*119*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.103*		*ug/l*	*0.100*		*103*	*70-130*			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 05/22/15 13:10
Date Reported: 06/12/15 09:18

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.

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Chain of Custody / Analysis Request

MBAS
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4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
30918		MW-8D (monitoring) Full Monitoring Panel	5/21/15	11:05am	19.7								

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:	21.2°C		
		pH:	7.33		
		Sp Cond:	Cond. 1113 µS/cm		
		Turb:	2.48		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon / GSSI		5/21/15	12:00pm	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Matan Salmon		5/21/15	1408	
Received by:	Monterey Bay Analytical Services		5/21/15	1413	1 40mL VOA not filled
Relinquished by:					
Received by:					

[ ] Payment received | Check # | Amount: | Receipt # | Date:

Cal Am DW - Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°C	YES	(NO)	NA	(<2 Hr)
Did bottles arrive intact?	(YES)	NO	NA	
Did bottle labels agree with COC?	(YES)	NO	NA	

Is there evidence of chilling? (YES) NO NA

Discrepency 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 0.45µ + divide 1L → 500mL diss. NH_3 /TKN + H_2SO_4 + $Na_2S_2O_3$

5/2·/15 → 250mL diss. total P + H_2SO_4

LJ / HM → 250mL diss. ortho phosphate (NP)

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Tuesday, August 11, 2015

Lab Number: AB32527

Collection Date/Time: 6/30/2015 15:00 Sample Collector: SALMON M

Submittal Date/Time: 6/30/2015 16:26 Sample ID

Sample Description: MW-9S

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**1051**		2	7/8/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**11**		10	7/2/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**2.83**		0.05	7/9/2015	TC
Arsenic, Total	EPA200.8	µg/L	**11**		1	7/2/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**315**		10	7/2/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**1282**		10	7/9/2015	LJ
Boron, Dissolved	EPA200.7	mg/L	**0.69**		0.5	7/1/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**4.2**		1	7/1/2015	HM
Calcium	EPA200.7	mg/L	**209**		5	7/1/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**242**		5	7/1/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		7/10/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	7/9/2015	LJ
Chloride, Dissolved	EPA300.0	mg/L	**1199**		10	7/1/2015	HM
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		7/6/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**175**		75.0	7/2/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		100	7/1/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		7/8/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		7/8/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		7/9/2015	BSK
Dissolved Phosphorus	EPA 365.1	mg/L	**1.4**	E	0.040	7/22/2015	MCCAM
Endothall	EPA548.1	µg/L	**Not Detected**	E		7/5/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**Not Detected**		1	7/1/2015	HM
Glyphosate	EPA547	µg/L	**Not Detected**	E		7/6/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**1218**		10	7/6/2015	TC
Hydroxide	SM2320B	mg/L	**Not Detected**		5	7/9/2015	LJ
Iodide	EPA9056M	µg/L	**500**		50	7/2/2015	WECK
Iron	EPA200.7	µg/L	**6964**		100	7/1/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**6300**		100	7/1/2015	MW
Kjeldahl Nitrogen, Dissolved	SM 4500 B, D	mg/L	**6.12**		0.10	7/9/2015	TC
Lithium	EPA200.8	µg/L	**23**		1	7/2/2015	SM
Magnesium	EPA200.7	mg/L	**169**		5	7/1/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

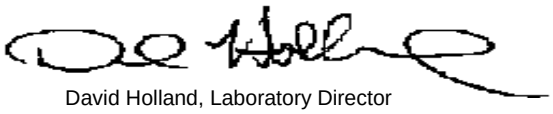
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Magnesium, Dissolved	EPA200.7	mg/L	**161**		5	7/1/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**4920**		100	7/1/2015	MW
Manganese, Total	EPA200.7	µg/L	**5140**		100	7/1/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	7/2/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**Not Detected**		10	7/1/2015	HM
Nitrate+Nitrite as N	EPA300.0	mg/L	**2.5**		1.00	7/1/2015	HM
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**2.5**		1	7/1/2015	HM
Odor Threshold at 60 C	SM2150B	TON	**2**		1	7/2/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**1.34**		0.02	7/2/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.06**			6/30/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**7.1**		0.1	6/30/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		7/10/2015	BSK
Potassium	EPA200.7	mg/L	**14**		5	7/1/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**12.8**		5	7/1/2015	MW
QC Ratio TDS/SEC	Calculation		**0.60**			7/7/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		7/10/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**43**		5	7/1/2015	MW
Sodium	EPA200.7	mg/L	**732**		5	7/1/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**698**		5	7/1/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**5330**		1	7/1/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**5384**		1	6/30/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**3064**		5	7/2/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**210**		10	7/1/2015	HM
Temperature (Field)	SM2550	° C	**17.3**			6/30/2015	MS
Total Diss. Solids	SM2540C	mg/L	**3204**		10	7/1/2015	HM
Turbidity	EPA180.1	NTU	**55**		0.1	7/2/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.82**		0.05	6/30/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Attached**	E		7/7/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**		100	7/1/2015	MW

Sample Comments: Odor: Earthy

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**32527 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	732	0.04350	31.84
Potassium	14	0.02558	0.36
Calcium	209	0.04990	10.43
Magnesium	169	0.08229	13.91
NH3-N	2.83	0.07143	0.20
		SUM	56.74

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	1051	0.02000	21.02
Sulfate	210	0.02082	4.37
Chloride	1199	0.02821	33.82
Nitrate-Nitrogen	0	0.07138	0.00
Phosphate-P	1.40	0.01031	0.01
Bromide	4.2	0.01252	0.05
		SUM	59.28

ANION-CATION BALANC **-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	5330	
Cation Sum X 100	5674	**106%**
Anion Sum X 100	5928	**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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	698	0.04350	30.36
Potassium	12.8	0.02558	0.33
Calcium	242	0.04990	12.08
Magnesium	161	0.08229	13.25
NH3-N	2.83	0.07143	0.20
		SUM	56.22

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	1051	0.02000	21.02
Sulfate	210	0.02082	4.37
Chloride	1199	0.02821	33.82
Nitrate-Nitrogen	0	0.07138	0.00
Phosphate-P	1.40	0.01031	0.01
Bromide	4.2	0.01252	0.05
		SUM	59.28

ANION-CATION BA **-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	5330	
Cation Sum X 100	5622	**105%**
Anion Sum X 100	5928	**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.

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4 Justin Court Ste D, Monterey, CA 93940
831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

Color QC Summary (SM 2120B)

Date Analyzed: 7/2/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	10:40
ICV	5	5	100	80-120	10:40
CCV	5	5	100	80-120	10:40
CCVB	---	<3	---	<3	10:40

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB32527	175	175	0.0	10	14:32

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 7/2/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.003	---	<0.05	856
ICVL	0.050	0.046	92	80-120	858
ICV	0.250	0.243	97.2	80-120	1005

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	
AB32611	0.008	0.250	0.226	0.241	87.2	93.2	6.4	80/120	10	938

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: 7/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	
ICVL	0.050	0.05	100.00%	90-110	
ICV	0.500	0.460	92.00%	90-110	
CCVB1	---	0.04	---	<0.05	
CCV1	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 %		Time
								MS/MSD	RPD	
AB32250	0.140	0.500	0.620	0.620	96	96	0.0	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: 7/2/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.01	---	< 0.01	11:34
LCSL	0.01	0.01	100	50-150	11:34
ICV	0.30	0.30	100	90-110	11:34
QCS	0.30	0.30	100	80-120	11:34
CCV	0.30	0.29	96.7	80-120	11:34
CCVB	---	<0.001	---	< 0.01	11:34

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		
AB32527	0.68	0.30	0.96	0.96	93	93	0	70-130	10	11:34	11:34

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: 6/30/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.88	100.3	95-105	1650

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB32527	7.1	7.1	0	10	1650

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: 7/1/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1411	99.9%	95-105	1115

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB32534	1889	1875	0.7%	10	1140

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

TDS QC Summary (SM 2540C)

Date Analyzed: 7/1/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1350
ICVL	100	114	114	80-120	1350
ICV	500	500	100	90-110	1350

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB32540	16700	16300	2.4	10	1515

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; SS = Second Source; RPD = Relative Percent Difference; Rec = Recovery

MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY
4 Justin Court Ste D, Monterey, CA 93940
831.375.MBAS (6227), 831.641.0734 (Fax)
MontereyBayAnalytical@usa.net
http://www.MBASinc.com

Kjehldahl Nitrogen by Electrode QC Summary (SM 4500-NH3 B,D)

Date: 7/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	1100
ICVL	0.050	0.05	100.00%	90-110	1100
ICV	0.500	0.460	92.00%	90-110	1100

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	
AB32250	0.140	0.500	0.620	0.620	96	96	0.0	85-120	10	1130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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MontereyBayAnalytical@usa.net
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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 7/2/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	9:16
ICV	1.00	1.0	101%	95-105	9:16
CCVB	---	<0.05	---	<0.05	9:16
CCV	1.00	0.96	96.0%	95-105	9:16

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB32611	0.300	0.300	0.00%	10	9:16

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample
AB32527 D

Date Analyzed
Thursday, July 02, 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%	
Beryllium	0.0	101.2	0.02	121.1	138.2	0.13	0.0	50	91.0	86.1	5.5	96.7	96.2	0.60	0.00
Aluminum	0.0	96.9	6.19	119.2	134.9	0.12	5.2	50	83.6	79.1	5.5	94.6	96.2	1.60	0.18
Arsenic	0.1	97.6	-0.30	99.7	113.1	0.13	14.2	50	144.7	134.0	7.7	99.0	95.5	3.60	0.03
Strontium	0.0	99.5	0.02	102.1	115.1	0.12	2064.4	50	290.8	29.5	163.2	96.9	97.6	0.63	0.00
Barium	0.0	98.9	0.03	99.7	112.2	0.12	314.7	50	122.6	85.0	36.2	95.3	96.3	1.03	0.01

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

4 Justin Court Ste D, Monterey, CA 93940

831.375.MBAS (6227), 831.641.0734 (Fax)

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http://www.MBASinc.com

300.0 QC Report

All units expressed in mg/L

Batch ID: **20150701**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.00	0.01	0.04	0.00	0.09	0.00
	ICV	1.95	20.24	2.03	20.45	1.84	1.92
	Rec 90-110%	97.28	101.21	101.26	102.27	91.90	95.82
	ICVL	0.19	1.78	0.20	1.13	0.23	0.21
	Rec 50-150%	95.34	89.18	97.81	56.73	112.69	105.17
Sample ID	**AB32532**	0.15	111.48	0.35	41.05	0.32	0.00
	MS	2.00	130.77	2.34	59.10	2.17	1.85
	Rec 80-120%	92.75	96.43	99.28	90.22	92.48	92.52
	MSD	1.99	130.85	2.34	59.01	2.17	1.83
	Rec 80-120%	92.09	96.83	99.12	89.81	92.44	91.73
	Diff 10%	0.66	0.06	0.14	0.14	0.04	0.86
	CCV	1.96	20.23	2.03	20.46	1.85	1.92
	Rec 90-110%	98.02	101.14	101.59	102.32	92.26	96.22
	Diff 10%	0.76	0.07	0.32	0.05	0.40	0.42
	CCVB	0.00	0.02	0.04	0.00	0.00	0.00

Batch # 20150701b

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	1.02	101.6%	1.04	104.0%	2.4%	1	1.00	100.0%	1	1.0	99.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.2%	1.04	104.4%	3.2%	1	1.00	100.4%	1	1.0	99.5%
Ca 317.933	50-300ppm	-5.93	-5.98	49.8	99.6%	50.2	100.4%	0.8%	50	48.1	96.2%	50	47.1	94.2%
Ca 396.847	0.5-50ppm	-0.36	-0.41	50.3	100.6%	46.6	93.2%	7.7%	50	49.7	99.4%	50	49.2	98.4%
Cu 324.754	10ppb-100ppm	2.20	1.43	1021	102.1%	1046	104.6%	2.5%	1000	1000	100.0%	1000	988.1	98.8%
Cu 327.395	10ppb-100ppm	3.47	4.69	1027	102.7%	1047	104.7%	1.9%	1000	996	99.6%	1000	985.3	98.5%
Fe 238.204	10ppb-100ppm	2.22	1.05	1010	101.0%	1029	102.9%	2.0%	1000	1004	100.4%	1000	995.1	99.5%
Fe 259.940	10ppb-100ppm	3.07	6.13	997	99.7%	1017	101.7%	2.0%	1000	992	99.2%	1000	988.1	98.8%
K 766.491	0.5-750ppm	-0.07	-0.08	10.0	100.1%	10.3	103.1%	2.9%	10	9.9	98.7%	10	9.8	97.8%
Mg 202.582	50-1000ppm	-2.15	-2.19	50.7	101.3%	51.7	103.3%	2.0%	50	49.9	99.8%	50	49.4	98.9%
Mg 279.078	0.5-50ppm	0.24	0.18	50.4	100.9%	51.7	103.3%	2.4%	50	49.9	99.7%	50	49.4	98.8%
Mn 257.610	10ppb-11ppm	2.97	1.96	1012	101.2%	1027	102.7%	1.5%	1000	995	99.5%	1000	996.9	99.7%
Mn 260.568	10ppb-11ppm	2.02	1.43	1009	100.9%	1029	102.9%	1.9%	1000	994	99.4%	1000	995.0	99.5%
Na 568.821	50-1000ppm	0.53	0.59	49.6	99.1%	50.4	100.8%	1.7%	50	48.9	97.8%	50	48.9	97.8%
Na 589.592	0.5-50ppm	0.27	0.23	49.8	99.5%	51.8	103.5%	3.9%	50	49.5	98.9%	50	49.3	98.5%
Si 251.611	0.5-200ppm	0.30	0.12	50.4	100.9%	51.4	102.7%	1.8%	50	50.0	100.0%	50	50.1	100.3%
Si 252.411	0.5-200ppm	0.33	0.15	50.3	100.6%	51.2	102.4%	1.8%	50	50.1	100.2%	50	50.2	100.4%
Zn 213.857	10ppb-50ppm	-4.67	-5.37	1005	100.5%	1013	101.3%	0.8%	1000	988	98.8%	1000	989.3	98.9%

Sample ID AB32495

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.14	1.12	97.6%	1.11	96.7%	0.8%	1	0.98	98.4%	1.6%	0.01
B 249.772	0.14	1.11	96.5%	1.11	97.2%	0.6%	1	0.98	98.4%	2.1%	0.00
Ca 317.933	22.7	74.2	103.1%	73.5	101.6%	1.0%	50	47.4	94.9%	1.4%	-5.96
Ca 396.847	27.3	71.1	87.6%	70.6	86.7%	0.6%	50	49.2	98.3%	1.1%	-0.39
Cu 324.754	4	967	96.3%	968	96.4%	0.1%	1000	980	98.0%	2.0%	1.60
Cu 327.395	7	973	96.7%	965	95.9%	0.9%	1000	974	97.4%	2.2%	4.74
Fe 238.204	16	981	96.5%	978	96.2%	0.3%	1000	983	98.3%	2.1%	1.47
Fe 259.940	18	978	96.1%	982	96.4%	0.3%	1000	984	98.4%	0.8%	2.60
K 766.491	1.1	10.8	97.4%	10.8	97.6%	0.3%	10	9.9	98.6%	0.1%	-0.07
Mg 202.582	6.4	56.3	99.8%	56.4	100.1%	0.2%	50	48.6	97.3%	2.5%	-2.18
Mg 279.078	8.5	56.5	95.9%	56.3	95.5%	0.4%	50	49.4	98.7%	1.0%	0.18
Mn 257.610	10	966	95.6%	967	95.7%	0.1%	1000	978	97.8%	1.8%	2.27
Mn 260.568	10	969	95.9%	967	95.6%	0.3%	1000	977	97.7%	1.7%	1.62
Na 568.821	43.6	91.7	96.2%	91.3	95.4%	0.4%	50	47.8	95.6%	2.3%	0.26
Na 589.592	45.2	91.4	92.4%	90.6	90.8%	0.9%	50	48.9	97.8%	1.1%	0.25
Si 251.611	9.3	57.1	95.6%	56.8	95.0%	0.5%	50	49.4	98.9%	1.1%	0.13
Si 252.411	9.4	57.1	95.3%	56.9	94.9%	0.3%	50	49.4	98.9%	1.3%	0.16
Zn 213.857	620	1527	90.7%	1523	90.3%	0.2%	1000	974	97.4%	1%	-6.23

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5G0181
7/17/2015
Invoice: A514607

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5G0181 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 7/2/2015. 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 fias receivedfl basis.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

Kijuana Hartshorn, Project Coordinator

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	7/02/2015 - 08:00		
Report Due:	7/17/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 3.1

Containers Intact
COC/Labels Agree
Preservation Confirmed
Received On Wet 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.
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
MS1.5	Matrix spike recovery exceeds upper control limit. No material impact as sample results are Non-Detected.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5G0181-01
Sampled By: Matan Salmon
Sample Description: MW-9S (monitoring) // AB32527

Sample Date - Time: 06/30/15 - 15:00
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A507410	07/06/15	07/08/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A507410	07/06/15	07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	101 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A507601	07/08/15	07/10/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A507601	07/08/15	07/10/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A507601	07/08/15	07/10/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A507601	07/08/15	07/10/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A507601	07/08/15	07/10/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A507601	07/08/15	07/10/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A507601	07/08/15	07/10/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A507601	07/08/15	07/10/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A507601	07/08/15	07/10/15	
Surrogate: DCPAA	EPA 515.3	105 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A507414	07/06/15	07/07/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A507414	07/06/15	07/07/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A507414	07/06/15	07/07/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A507414	07/06/15	07/07/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A507414	07/06/15	07/07/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	

Certificate of Analysis

Sample ID: A5G0181-01
Sampled By: Matan Salmon
Sample Description: MW-9S (monitoring) // AB32527

Sample Date - Time: 06/30/15 - 15:00
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	A507414	07/06/15	07/07/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A507414	07/06/15	07/07/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A507414	07/06/15	07/07/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A507414	07/06/15	07/07/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Toluene	EPA 524.2	**1.6**	0.50	ug/L	1	A507414	07/06/15	07/07/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A507414	07/06/15	07/07/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A507414	07/06/15	07/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	97 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	95 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5G0181-01
Sampled By: Matan Salmon
Sample Description: MW-9S (monitoring) // AB32527

Sample Date - Time: 06/30/15 - 15:00
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A507524	07/08/15	07/10/15	MS1.2
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A507524	07/08/15	07/10/15	MS1.2
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A507524	07/08/15	07/10/15	
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A507524	07/08/15	07/10/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A507524	07/08/15	07/10/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A507524	07/08/15	07/10/15	BS1.0, MS1.5
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A507524	07/08/15	07/10/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A507524	07/08/15	07/10/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A507524	07/08/15	07/10/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A507524	07/08/15	07/10/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A507524	07/08/15	07/10/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A507524	07/08/15	07/10/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A507524	07/08/15	07/10/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A507524	07/08/15	07/10/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A507524	07/08/15	07/10/15	MS1.2
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A507524	07/08/15	07/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	90 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A507340	07/01/15	07/10/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A507340	07/01/15	07/10/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A507340	07/01/15	07/10/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A507340	07/01/15	07/10/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A507340	07/01/15	07/10/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A507340	07/01/15	07/10/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A507340	07/01/15	07/10/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A507340	07/01/15	07/10/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A507340	07/01/15	07/10/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A507340	07/01/15	07/10/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A507422	07/06/15	07/06/15	
Surrogate: AMPA	EPA 547	88 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A507403	07/02/15	07/05/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A507404	07/02/15	07/09/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A507410										Prepared: 7/6/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A507410-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							07/08/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.46*		*100*	*70-130*			07/08/15	
Blank Spike (A507410-BS1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		96	70-130			07/08/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		91	70-130			07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.44*			*0.46*		*97*	*70-130*			07/08/15	
Blank Spike Dup (A507410-BSD1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		97	70-130	1	20	07/08/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		89	70-130	2	20	07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.45*			*0.46*		*98*	*70-130*			07/08/15	
Matrix Spike (A507410-MS1), Source: A5G0173-01											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20	ND	93	65-135			07/08/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20	ND	92	65-135			07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.41*			*0.46*		*90*	*70-130*			07/08/15	
Matrix Spike Dup (A507410-MSD1), Source: A5G0173-01											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20	ND	93	65-135	3	20	07/08/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	99	65-135	9	20	07/08/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.43*			*0.47*		*92*	*70-130*			07/08/15	
EPA 515.3 - Quality Control											
Batch: A507601										Prepared: 7/8/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A507601-BLK1)											
2,4,5-T	ND	1.0	ug/L							07/10/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							07/10/15	
2,4-D	ND	10	ug/L							07/10/15	
Bentazon	ND	2.0	ug/L							07/10/15	
Dalapon	ND	10	ug/L							07/10/15	
Dicamba	ND	1.5	ug/L							07/10/15	
Dinoseb	ND	2.0	ug/L							07/10/15	
Pentachlorophenol	ND	0.20	ug/L							07/10/15	
Picloram	ND	1.0	ug/L							07/10/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			07/10/15	
Blank Spike (A507601-BS1)											
2,4,5-T	4.3	1.0	ug/L	4.0		109	70-130			07/10/15	
2,4,5-TP (Silvex)	0.82	1.0	ug/L	0.80		102	70-130			07/10/15	
2,4-D	0.45	10	ug/L	0.40		112	70-130			07/10/15	
Bentazon	8.3	2.0	ug/L	8.0		103	70-130			07/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A507601										Prepared: 7/8/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A507601-BS1)											
Dalapon	4.1	10	ug/L	4.0		102	70-130			07/10/15	
Dicamba	6.6	1.5	ug/L	6.0		110	70-130			07/10/15	
Dinoseb	0.82	2.0	ug/L	0.80		103	70-130			07/10/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16		106	70-130			07/10/15	
Picloram	0.40	1.0	ug/L	0.40		99	70-130			07/10/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			07/10/15	
Blank Spike Dup (A507601-BSD1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130	1	20	07/10/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80		104	70-130	2	20	07/10/15	
2,4-D	0.48	10	ug/L	0.40		120	70-130	8	20	07/10/15	
Bentazon	8.1	2.0	ug/L	8.0		102	70-130	2	20	07/10/15	
Dalapon	4.3	10	ug/L	4.0		108	70-130	6	20	07/10/15	
Dicamba	6.5	1.5	ug/L	6.0		108	70-130	2	20	07/10/15	
Dinoseb	0.83	2.0	ug/L	0.80		104	70-130	1	20	07/10/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16		104	70-130	2	20	07/10/15	
Picloram	0.45	1.0	ug/L	0.40		111	70-130	12	20	07/10/15	
Surrogate: DCPAA	*59*			*58*		*102*	*70-130*			07/10/15	
Matrix Spike (A507601-MS1), Source: A5G0173-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	107	70-130			07/10/15	
2,4,5-TP (Silvex)	0.83	1.0	ug/L	0.80	ND	104	70-130			07/10/15	
2,4-D	0.48	10	ug/L	0.40	ND	119	70-130			07/10/15	
Bentazon	7.6	2.0	ug/L	8.0	ND	95	70-130			07/10/15	
Dalapon	4.3	10	ug/L	4.0	ND	107	70-130			07/10/15	
Dicamba	6.5	1.5	ug/L	6.0	ND	108	70-130			07/10/15	
Dinoseb	0.82	2.0	ug/L	0.80	ND	102	70-130			07/10/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	103	70-130			07/10/15	
Picloram	0.43	1.0	ug/L	0.40	ND	108	70-130			07/10/15	
Surrogate: DCPAA	*58*			*58*		*100*	*70-130*			07/10/15	
Matrix Spike Dup (A507601-MSD1), Source: A5G0173-01											
2,4,5-T	4.3	1.0	ug/L	4.0	ND	107	70-130	0	20	07/10/15	
2,4,5-TP (Silvex)	0.78	1.0	ug/L	0.80	ND	98	70-130	6	20	07/10/15	
2,4-D	0.47	10	ug/L	0.40	ND	117	70-130	2	20	07/10/15	
Bentazon	8.2	2.0	ug/L	8.0	ND	103	70-130	8	20	07/10/15	
Dalapon	4.3	10	ug/L	4.0	ND	106	70-130	1	20	07/10/15	
Dicamba	6.5	1.5	ug/L	6.0	ND	109	70-130	0	20	07/10/15	
Dinoseb	0.80	2.0	ug/L	0.80	ND	101	70-130	1	20	07/10/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16	ND	102	70-130	1	20	07/10/15	
Picloram	0.43	1.0	ug/L	0.40	ND	109	70-130	0	20	07/10/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			07/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A507414-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							07/07/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							07/07/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							07/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							07/07/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							07/07/15	
1,1-Dichloroethane	ND	0.50	ug/L							07/07/15	
1,1-Dichloroethene	ND	0.50	ug/L							07/07/15	
1,1-Dichloropropene	ND	0.50	ug/L							07/07/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							07/07/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							07/07/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							07/07/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							07/07/15	
1,2-Dichloroethane	ND	0.50	ug/L							07/07/15	
1,2-Dichloropropane	ND	0.50	ug/L							07/07/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							07/07/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							07/07/15	
1,3-Dichloropropane	ND	0.50	ug/L							07/07/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							07/07/15	
2,2-Dichloropropane	ND	0.50	ug/L							07/07/15	
2-Butanone	ND	5.0	ug/L							07/07/15	
2-Chlorotoluene	ND	0.50	ug/L							07/07/15	
2-Hexanone	ND	10	ug/L							07/07/15	
4-Chlorotoluene	ND	0.50	ug/L							07/07/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							07/07/15	
Acetone	ND	10	ug/L							07/07/15	
Benzene	ND	0.50	ug/L							07/07/15	
Bromobenzene	ND	0.50	ug/L							07/07/15	
Bromochloromethane	ND	0.50	ug/L							07/07/15	
Bromodichloromethane	ND	0.50	ug/L							07/07/15	
Bromoform	ND	0.50	ug/L							07/07/15	
Bromomethane	ND	0.50	ug/L							07/07/15	
Carbon Tetrachloride	ND	0.50	ug/L							07/07/15	
Chlorobenzene	ND	0.50	ug/L							07/07/15	
Chloroethane	ND	0.50	ug/L							07/07/15	
Chloroform	ND	0.50	ug/L							07/07/15	
Chloromethane	ND	0.50	ug/L							07/07/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							07/07/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							07/07/15	
Dibromochloromethane	ND	0.50	ug/L							07/07/15	
Dibromomethane	ND	0.50	ug/L							07/07/15	
Dichlorodifluoromethane	ND	0.50	ug/L							07/07/15	
Dichloromethane	ND	0.50	ug/L							07/07/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							07/07/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							07/07/15	
Ethylbenzene	ND	0.50	ug/L							07/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A507414-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							07/07/15	
Isopropylbenzene	ND	0.50	ug/L							07/07/15	
m,p-Xylenes	ND	0.50	ug/L							07/07/15	
Methyl-t-butyl ether	ND	0.50	ug/L							07/07/15	
Naphthalene	ND	0.50	ug/L							07/07/15	
n-Butylbenzene	ND	0.50	ug/L							07/07/15	
n-Propylbenzene	ND	0.50	ug/L							07/07/15	
o-Xylene	ND	0.50	ug/L							07/07/15	
p-Isopropyltoluene	ND	0.50	ug/L							07/07/15	
sec-Butylbenzene	ND	0.50	ug/L							07/07/15	
Styrene	ND	0.50	ug/L							07/07/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							07/07/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							07/07/15	
tert-Butylbenzene	ND	0.50	ug/L							07/07/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							07/07/15	
Toluene	ND	0.50	ug/L							07/07/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							07/07/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							07/07/15	
Trichloroethene (TCE)	ND	0.50	ug/L							07/07/15	
Trichlorofluoromethane	ND	5.0	ug/L							07/07/15	
Vinyl Chloride	ND	0.50	ug/L							07/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*47*			*50*		*94*	*70-130*			07/07/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*95*	*70-130*			07/07/15	
Blank Spike (A507414-BS1)											
1,1,1,2-Tetrachloroethane	9.9	0.50	ug/L	10		99	70-130			07/07/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		104	70-130			07/07/15	
1,1,2,2-Tetrachloroethane	9.9	0.50	ug/L	10		99	70-130			07/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		104	70-130			07/07/15	
1,1,2-Trichloroethane	10	0.50	ug/L	10		100	70-130			07/07/15	
1,1-Dichloroethane	10	0.50	ug/L	10		100	70-130			07/07/15	
1,1-Dichloroethene	10	0.50	ug/L	10		105	70-130			07/07/15	
1,1-Dichloropropene	10	0.50	ug/L	10		104	70-130			07/07/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		103	70-130			07/07/15	
1,2,4-Trichlorobenzene	9.8	0.50	ug/L	10		98	70-130			07/07/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		100	70-130			07/07/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			07/07/15	
1,2-Dichloroethane	10	0.50	ug/L	10		101	70-130			07/07/15	
1,2-Dichloropropane	10	0.50	ug/L	10		101	70-130			07/07/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		101	70-130			07/07/15	
1,3-Dichlorobenzene	9.9	0.50	ug/L	10		99	70-130			07/07/15	
1,3-Dichloropropane	10	0.50	ug/L	10		101	70-130			07/07/15	
1,4-Dichlorobenzene	10	0.50	ug/L	10		100	70-130			07/07/15	
2,2-Dichloropropane	10	0.50	ug/L	10		103	70-130			07/07/15	
2-Butanone	10	5.0	ug/L	10		104	70-130			07/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A507414-BS1)											
2-Chlorotoluene	10	0.50	ug/L	10		100	70-130			07/07/15	
2-Hexanone	10	10	ug/L	10		100	70-130			07/07/15	
4-Chlorotoluene	10	0.50	ug/L	10		100	70-130			07/07/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		101	70-130			07/07/15	
Acetone	10	10	ug/L	10		100	70-130			07/07/15	
Benzene	10	0.50	ug/L	10		101	70-130			07/07/15	
Bromobenzene	9.9	0.50	ug/L	10		99	70-130			07/07/15	
Bromochloromethane	9.3	0.50	ug/L	10		93	70-130			07/07/15	
Bromodichloromethane	9.9	0.50	ug/L	10		99	70-130			07/07/15	
Bromoform	9.8	0.50	ug/L	10		98	70-130			07/07/15	
Bromomethane	12	0.50	ug/L	10		119	70-130			07/07/15	
Carbon disulfide	11	10	ug/L	10		106	70-130			07/07/15	
Carbon Tetrachloride	11	0.50	ug/L	10		107	70-130			07/07/15	
Chlorobenzene	9.9	0.50	ug/L	10		99	70-130			07/07/15	
Chloroethane	10	0.50	ug/L	10		100	70-130			07/07/15	
Chloroform	10	0.50	ug/L	10		100	70-130			07/07/15	
Chloromethane	9.9	0.50	ug/L	10		99	70-130			07/07/15	
cis-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130			07/07/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/07/15	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130			07/07/15	
Dibromomethane	10	0.50	ug/L	10		100	70-130			07/07/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		114	70-130			07/07/15	
Dichloromethane	11	0.50	ug/L	10		110	70-130			07/07/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		101	70-130			07/07/15	
Ethyl tert-Butyl Ether (ETBE)	10	0.50	ug/L	10		102	70-130			07/07/15	
Ethylbenzene	9.9	0.50	ug/L	10		99	70-130			07/07/15	
Hexachlorobutadiene	10	0.50	ug/L	10		104	70-130			07/07/15	
Isopropylbenzene	10	0.50	ug/L	10		101	70-130			07/07/15	
m,p-Xylenes	20	0.50	ug/L	20		101	70-130			07/07/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		101	70-130			07/07/15	
Naphthalene	10	0.50	ug/L	10		102	70-130			07/07/15	
n-Butylbenzene	9.7	0.50	ug/L	10		97	70-130			07/07/15	
n-Propylbenzene	10	0.50	ug/L	10		100	70-130			07/07/15	
o-Xylene	10	0.50	ug/L	10		101	70-130			07/07/15	
p-Isopropyltoluene	10	0.50	ug/L	10		102	70-130			07/07/15	
sec-Butylbenzene	10	0.50	ug/L	10		104	70-130			07/07/15	
Styrene	10	0.50	ug/L	10		100	70-130			07/07/15	
tert-Amyl Methyl Ether (TAME)	9.9	3.0	ug/L	10		99	70-130			07/07/15	
tert-Butyl alcohol (TBA)	9.5	2.0	ug/L	10		95	70-130			07/07/15	
tert-Butylbenzene	10	0.50	ug/L	10		102	70-130			07/07/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		101	70-130			07/07/15	
Toluene	10	0.50	ug/L	10		100	70-130			07/07/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		102	70-130			07/07/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/07/15	
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			07/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike (A507414-BS1)											
Trichlorofluoromethane	9.7	5.0	ug/L	10		97	70-130			07/07/15	
Vinyl Chloride	11	0.50	ug/L	10		110	70-130			07/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*50*			*50*		*99*	*70-130*			07/07/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*98*	*70-130*			07/07/15	
Blank Spike Dup (A507414-BSD1)											
1,1,1,2-Tetrachloroethane	9.8	0.50	ug/L	10		98	70-130	1	30	07/07/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		103	70-130	1	30	07/07/15	
1,1,2,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	2	30	07/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10		105	70-130	1	30	07/07/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	2	30	07/07/15	
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
1,1-Dichloroethene	10	0.50	ug/L	10		102	70-130	3	30	07/07/15	
1,1-Dichloropropene	10	0.50	ug/L	10		103	70-130	1	30	07/07/15	
1,2,3-Trichlorobenzene	10	0.50	ug/L	10		100	70-130	3	30	07/07/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	2	30	07/07/15	
1,2,4-Trimethylbenzene	9.7	0.50	ug/L	10		97	70-130	3	30	07/07/15	
1,2-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130	3	30	07/07/15	
1,2-Dichloroethane	9.8	0.50	ug/L	10		98	70-130	2	30	07/07/15	
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	2	30	07/07/15	
1,3,5-Trimethylbenzene	9.7	0.50	ug/L	10		97	70-130	4	30	07/07/15	
1,3-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	3	30	07/07/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	2	30	07/07/15	
1,4-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130	3	30	07/07/15	
2,2-Dichloropropane	10	0.50	ug/L	10		102	70-130	1	30	07/07/15	
2-Butanone	10	5.0	ug/L	10		102	70-130	3	30	07/07/15	
2-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	3	30	07/07/15	
2-Hexanone	9.8	10	ug/L	10		98	70-130	2	30	07/07/15	
4-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130	3	30	07/07/15	
4-Methyl-2-pentanone	9.9	5.0	ug/L	10		99	70-130	2	30	07/07/15	
Acetone	9.8	10	ug/L	10		98	70-130	2	30	07/07/15	
Benzene	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
Bromobenzene	9.7	0.50	ug/L	10		97	70-130	2	30	07/07/15	
Bromochloromethane	9.0	0.50	ug/L	10		90	70-130	3	30	07/07/15	
Bromodichloromethane	9.8	0.50	ug/L	10		98	70-130	1	30	07/07/15	
Bromoform	9.3	0.50	ug/L	10		93	70-130	5	30	07/07/15	
Bromomethane	11	0.50	ug/L	10		113	70-130	5	30	07/07/15	
Carbon disulfide	10	10	ug/L	10		105	70-130	2	30	07/07/15	
Carbon Tetrachloride	11	0.50	ug/L	10		107	70-130	1	30	07/07/15	
Chlorobenzene	9.8	0.50	ug/L	10		98	70-130	1	30	07/07/15	
Chloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
Chloroform	9.8	0.50	ug/L	10		98	70-130	2	30	07/07/15	
Chloromethane	9.6	0.50	ug/L	10		96	70-130	3	30	07/07/15	
cis-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
cis-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	2	30	07/07/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A507414-BSD1)											
Dibromochloromethane	9.6	0.50	ug/L	10		96	70-130	3	30	07/07/15	
Dibromomethane	9.7	0.50	ug/L	10		97	70-130	3	30	07/07/15	
Dichlorodifluoromethane	11	0.50	ug/L	10		110	70-130	4	30	07/07/15	
Dichloromethane	10	0.50	ug/L	10		104	70-130	5	30	07/07/15	
Di-isopropyl ether (DIPE)	9.9	3.0	ug/L	10		99	70-130	2	30	07/07/15	
Ethyl tert-Butyl Ether (ETBE)	9.9	0.50	ug/L	10		99	70-130	2	30	07/07/15	
Ethylbenzene	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
Hexachlorobutadiene	10	0.50	ug/L	10		101	70-130	2	30	07/07/15	
Isopropylbenzene	10	0.50	ug/L	10		100	70-130	1	30	07/07/15	
m,p-Xylenes	20	0.50	ug/L	20		99	70-130	2	30	07/07/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		99	70-130	3	30	07/07/15	
Naphthalene	10	0.50	ug/L	10		100	70-130	2	30	07/07/15	
n-Butylbenzene	9.4	0.50	ug/L	10		94	70-130	3	30	07/07/15	
n-Propylbenzene	9.9	0.50	ug/L	10		99	70-130	2	30	07/07/15	
o-Xylene	9.8	0.50	ug/L	10		98	70-130	3	30	07/07/15	
p-Isopropyltoluene	9.9	0.50	ug/L	10		99	70-130	3	30	07/07/15	
sec-Butylbenzene	10	0.50	ug/L	10		100	70-130	4	30	07/07/15	
Styrene	9.6	0.50	ug/L	10		96	70-130	4	30	07/07/15	
tert-Amyl Methyl Ether (TAME)	9.8	3.0	ug/L	10		98	70-130	2	30	07/07/15	
tert-Butyl alcohol (TBA)	9.2	2.0	ug/L	10		92	70-130	3	30	07/07/15	
tert-Butylbenzene	9.9	0.50	ug/L	10		99	70-130	3	30	07/07/15	
Tetrachloroethene (PCE)	10	0.50	ug/L	10		100	70-130	1	30	07/07/15	
Toluene	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130	1	30	07/07/15	
trans-1,3-Dichloropropene	9.9	0.50	ug/L	10		99	70-130	3	30	07/07/15	
Trichloroethene (TCE)	9.9	0.50	ug/L	10		99	70-130	1	30	07/07/15	
Trichlorofluoromethane	9.7	5.0	ug/L	10		97	70-130	0	30	07/07/15	
Vinyl Chloride	11	0.50	ug/L	10		109	70-130	1	30	07/07/15	
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*97*	*70-130*			07/07/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*97*	*70-130*			07/07/15	
Matrix Spike (A507414-MS1), Source: A5G0177-01											
1,1,1,2-Tetrachloroethane	8.4	0.50	ug/L	10	ND	84	70-130			07/07/15	
1,1,1-Trichloroethane	9.3	0.50	ug/L	10	ND	93	70-130			07/07/15	
1,1,2,2-Tetrachloroethane	8.3	0.50	ug/L	10	ND	83	70-130			07/07/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.0	10	ug/L	10	ND	90	70-130			07/07/15	
1,1,2-Trichloroethane	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
1,1-Dichloroethane	8.9	0.50	ug/L	10	ND	89	70-130			07/07/15	
1,1-Dichloroethene	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
1,1-Dichloropropene	7.8	0.50	ug/L	10	ND	78	70-130			07/07/15	
1,2,3-Trichlorobenzene	8.2	0.50	ug/L	10	ND	82	70-130			07/07/15	
1,2,4-Trichlorobenzene	7.8	0.50	ug/L	10	ND	78	70-130			07/07/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	10	ND	0	70-130			07/07/15	MS1.0 ***Low***
1,2-Dichlorobenzene	8.1	0.50	ug/L	10	ND	81	70-130			07/07/15	
1,2-Dichloroethane	8.7	0.50	ug/L	10	ND	87	70-130			07/07/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507414-MS1), Source: A5G0177-01											
1,2-Dichloropropane	8.8	0.50	ug/L	10	ND	88	70-130			07/07/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	10	ND	0	70-130			07/07/15	MS1.0 ***Low***
1,3-Dichlorobenzene	8.0	0.50	ug/L	10	ND	80	70-130			07/07/15	
1,3-Dichloropropane	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
1,4-Dichlorobenzene	8.0	0.50	ug/L	10	ND	80	70-130			07/07/15	
2,2-Dichloropropane	9.0	0.50	ug/L	10	ND	90	70-130			07/07/15	
2-Butanone	15	5.0	ug/L	10	5.1	96	70-130			07/07/15	
2-Chlorotoluene	8.2	0.50	ug/L	10	ND	82	70-130			07/07/15	
2-Hexanone	8.0	10	ug/L	10	ND	80	70-130			07/07/15	
4-Chlorotoluene	7.1	0.50	ug/L	10	ND	71	70-130			07/07/15	
4-Methyl-2-pentanone	8.2	5.0	ug/L	10	ND	82	70-130			07/07/15	
Acetone	13	10	ug/L	10	ND	57	70-130			07/07/15	MS1.0 ***Low***
Benzene	8.8	0.50	ug/L	10	ND	88	70-130			07/07/15	
Bromobenzene	7.9	0.50	ug/L	10	ND	79	70-130			07/07/15	
Bromochloromethane	7.9	0.50	ug/L	10	ND	79	70-130			07/07/15	
Bromodichloromethane	8.8	0.50	ug/L	10	ND	88	70-130			07/07/15	
Bromoform	11	0.50	ug/L	10	2.9	77	70-130			07/07/15	
Bromomethane	5.4	0.50	ug/L	10	ND	54	70-130			07/07/15	MS1.0 ***Low***
Carbon disulfide	9.6	10	ug/L	10	ND	96	70-130			07/07/15	
Carbon Tetrachloride	9.6	0.50	ug/L	10	ND	96	70-130			07/07/15	
Chlorobenzene	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
Chloroethane	9.2	0.50	ug/L	10	ND	92	70-130			07/07/15	
Chloroform	8.8	0.50	ug/L	10	ND	88	70-130			07/07/15	
Chloromethane	10	0.50	ug/L	10	ND	102	70-130			07/07/15	
cis-1,2-Dichloroethene	8.9	0.50	ug/L	10	ND	89	70-130			07/07/15	
cis-1,3-Dichloropropene	6.5	0.50	ug/L	10	ND	65	70-130			07/07/15	MS1.0 ***Low***
Dibromochloromethane	9.4	0.50	ug/L	10	0.95	84	70-130			07/07/15	
Dibromomethane	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
Dichlorodifluoromethane	10	0.50	ug/L	10	ND	103	70-130			07/07/15	
Dichloromethane	9.5	0.50	ug/L	10	ND	95	70-130			07/07/15	
Di-isopropyl ether (DIPE)	8.6	3.0	ug/L	10	ND	86	70-130			07/07/15	
Ethyl tert-Butyl Ether (ETBE)	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
Ethylbenzene	6.1	0.50	ug/L	10	ND	61	70-130			07/07/15	MS1.0 ***Low***
Hexachlorobutadiene	8.5	0.50	ug/L	10	ND	85	70-130			07/07/15	
Isopropylbenzene	6.6	0.50	ug/L	10	ND	66	70-130			07/07/15	MS1.0 ***Low***
m,p-Xylenes	3.5	0.50	ug/L	20	ND	18	70-130			07/07/15	MS1.0 ***Low***
Methyl-t-butyl ether	17	0.50	ug/L	20	ND	84	70-130			07/07/15	
Naphthalene	1.7	0.50	ug/L	10	ND	17	70-130			07/07/15	MS1.0 ***Low***
n-Butylbenzene	5.7	0.50	ug/L	10	ND	57	70-130			07/07/15	MS1.0 ***Low***
n-Propylbenzene	5.8	0.50	ug/L	10	ND	58	70-130			07/07/15	MS1.0 ***Low***
o-Xylene	3.0	0.50	ug/L	10	ND	30	70-130			07/07/15	MS1.0 ***Low***
p-Isopropyltoluene	3.3	0.50	ug/L	10	ND	33	70-130			07/07/15	MS1.0 ***Low***
sec-Butylbenzene	6.3	0.50	ug/L	10	ND	63	70-130			07/07/15	MS1.0 ***Low***
Styrene	ND	0.50	ug/L	10	ND	0	70-130			07/07/15	MS1.0 ***Low***
tert-Amyl Methyl Ether (TAME)	8.5	3.0	ug/L	10	ND	85	70-130			07/07/15	

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507414										Prepared: 7/6/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507414-MS1), Source: A5G0177-01											
tert-Butyl alcohol (TBA)	7.7	2.0	ug/L	10	2.2	55	70-130			07/07/15	MS1.0 ***Low***
tert-Butylbenzene	6.8	0.50	ug/L	10	ND	68	70-130			07/07/15	MS1.0 ***Low***
Tetrachloroethene (PCE)	8.4	0.50	ug/L	10	ND	84	70-130			07/07/15	
Toluene	5.9	0.50	ug/L	10	ND	59	70-130			07/07/15	MS1.0 ***Low***
trans-1,2-Dichloroethene	9.0	0.50	ug/L	10	ND	90	70-130			07/07/15	
trans-1,3-Dichloropropene	6.5	0.50	ug/L	10	ND	65	70-130			07/07/15	MS1.0 ***Low***
Trichloroethene (TCE)	8.7	0.50	ug/L	10	ND	87	70-130			07/07/15	
Trichlorofluoromethane	9.7	5.0	ug/L	10	ND	97	70-130			07/07/15	
Vinyl Chloride	2.8	0.50	ug/L	10	ND	28	70-130			07/07/15	MS1.0 ***Low***
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*98*	*70-130*			07/07/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*97*	*70-130*			07/07/15	
EPA 525.2 - Quality Control											
Batch: A507524										Prepared: 7/8/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A507524-BLK1)											
Alachlor	ND	1.0	ug/L							07/10/15	
Atrazine	ND	0.50	ug/L							07/10/15	
Benzo(a)pyrene	ND	0.10	ug/L							07/10/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							07/10/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							07/10/15	
Bromacil	ND	10	ug/L							07/10/15	
Butachlor	ND	0.38	ug/L							07/10/15	
Diazinon	ND	0.25	ug/L							07/10/15	
Dimethoate	ND	10	ug/L							07/10/15	
Metolachlor	ND	0.50	ug/L							07/10/15	
Metribuzin	ND	0.50	ug/L							07/10/15	
Molinate	ND	2.0	ug/L							07/10/15	
Prometryn	ND	2.0	ug/L							07/10/15	
Propachlor	ND	0.50	ug/L							07/10/15	
Simazine	ND	1.0	ug/L							07/10/15	
Thiobencarb	ND	1.0	ug/L							07/10/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.3*			*5.0*		*105*	*70-130*			07/10/15	
Blank Spike (A507524-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		114	70-130			07/10/15	
Atrazine	0.60	0.50	ug/L	0.50		121	70-130			07/10/15	
Benzo(a)pyrene	0.099	0.10	ug/L	0.10		99	70-130			07/10/15	
Bis(2-ethylhexyl) adipate	2.5	3.0	ug/L	2.0		123	70-130			07/10/15	
Bis(2-ethylhexyl) phthalate	1.9	3.0	ug/L	1.5		124	70-130			07/10/15	
Bromacil	1.3	10	ug/L	1.0		128	70-130			07/10/15	
Butachlor	1.1	0.38	ug/L	1.0		112	70-130			07/10/15	
Diazinon	0.21	0.25	ug/L	0.20		104	70-130			07/10/15	
Dimethoate	1.1	10	ug/L	1.0		114	70-130			07/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 525.2 - Quality Control												
Batch: A507524										Prepared: 7/8/2015		
Prep Method: EPA 525.2										Analyst: MTM		
Blank Spike (A507524-BS1)												
Metolachlor	2.4	0.50	ug/L	2.0		119	70-130			07/10/15		
Metribuzin	1.2	0.50	ug/L	1.0		117	70-130			07/10/15		
Molinate	1.1	2.0	ug/L	1.0		110	70-130			07/10/15		
Prometryn	1.6	2.0	ug/L	2.0		79	70-130			07/10/15		
Propachlor	0.58	0.50	ug/L	0.50		116	70-130			07/10/15		
Simazine	0.41	1.0	ug/L	0.35		116	70-130			07/10/15		
Thiobencarb	0.60	1.0	ug/L	0.50		119	70-130			07/10/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*103*	*70-130*			07/10/15		
Blank Spike Dup (A507524-BSD1)												
Alachlor	1.2	1.0	ug/L	1.0		117	70-130	2	30	07/10/15		
Atrazine	0.60	0.50	ug/L	0.50		120	70-130	1	30	07/10/15		
Benzo(a)pyrene	0.10	0.10	ug/L	0.10		101	70-130	2	30	07/10/15		
Bis(2-ethylhexyl) adipate	2.4	3.0	ug/L	2.0		118	70-130	5	30	07/10/15		
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		113	70-130	9	30	07/10/15		
Bromacil	1.4	10	ug/L	1.0		137	70-130	7	30	07/10/15	BS	***High***
Butachlor	1.2	0.38	ug/L	1.0		117	70-130	5	30	07/10/15		
Diazinon	0.22	0.25	ug/L	0.20		108	70-130	4	30	07/10/15		
Dimethoate	1.2	10	ug/L	1.0		120	70-130	6	30	07/10/15		
Metolachlor	2.4	0.50	ug/L	2.0		121	70-130	2	30	07/10/15		
Metribuzin	1.3	0.50	ug/L	1.0		126	70-130	7	30	07/10/15		
Molinate	1.1	2.0	ug/L	1.0		114	70-130	3	30	07/10/15		
Prometryn	1.7	2.0	ug/L	2.0		87	70-130	10	30	07/10/15		
Propachlor	0.56	0.50	ug/L	0.50		112	70-130	4	30	07/10/15		
Simazine	0.38	1.0	ug/L	0.35		109	70-130	6	30	07/10/15		
Thiobencarb	0.61	1.0	ug/L	0.50		121	70-130	2	30	07/10/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.8*			*5.0*		*95*	*70-130*			07/10/15		
Matrix Spike (A507524-MS1), Source: A5G0181-01												
Alachlor	0.60	1.0	ug/L	0.97	ND	62	70-130			07/10/15	MS1.0	***Low***
Atrazine	0.27	0.50	ug/L	0.49	ND	56	70-130			07/10/15	MS1.0	***Low***
Benzo(a)pyrene	0.12	0.10	ug/L	0.097	ND	111	70-130			07/10/15		
Bis(2-ethylhexyl) adipate	2.3	3.0	ug/L	1.9	ND	118	70-130			07/10/15		
Bis(2-ethylhexyl) phthalate	1.9	3.0	ug/L	1.5	ND	128	70-130			07/10/15		
Bromacil	1.4	10	ug/L	0.97	ND	140	70-130			07/10/15	MS1.0	***High***
Butachlor	0.68	0.38	ug/L	0.97	ND	70	70-130			07/10/15		
Diazinon	0.14	0.25	ug/L	0.19	ND	74	70-130			07/10/15		
Dimethoate	1.0	10	ug/L	0.97	ND	102	70-130			07/10/15		
Metolachlor	1.9	0.50	ug/L	1.9	ND	96	70-130			07/10/15		
Metribuzin	1.0	0.50	ug/L	0.97	ND	104	70-130			07/10/15		
Molinate	1.1	2.0	ug/L	0.97	ND	118	70-130			07/10/15		
Prometryn	1.8	2.0	ug/L	1.9	ND	91	70-130			07/10/15		
Propachlor	0.56	0.50	ug/L	0.49	ND	116	70-130			07/10/15		
Simazine	0.18	1.0	ug/L	0.34	ND	52	70-130			07/10/15	MS1.0	***Low***
Thiobencarb	0.57	1.0	ug/L	0.49	ND	117	70-130			07/10/15		

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A507524										Prepared: 7/8/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A507524-MS1), Source: A5G0181-01											
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.5*			*4.9*		*92*	*70-130*			07/10/15	
EPA 531.1 - Quality Control											
Batch: A507340										Prepared: 7/1/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Blank (A507340-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							07/10/15	
Aldicarb	ND	3.0	ug/L							07/10/15	
Aldicarb Sulfone	ND	2.0	ug/L							07/10/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							07/10/15	
Carbaryl	ND	5.0	ug/L							07/10/15	
Carbofuran	ND	5.0	ug/L							07/10/15	
Methiocarb	ND	2.0	ug/L							07/10/15	
Methomyl	ND	2.0	ug/L							07/10/15	
Oxamyl	ND	20	ug/L							07/10/15	
Propoxur	ND	2.0	ug/L							07/10/15	
Blank Spike (A507340-BS1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		101	80-120			07/10/15	
Aldicarb	3.8	3.0	ug/L	4.0		96	80-120			07/10/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		100	80-120			07/10/15	
Aldicarb Sulfoxide	3.9	3.0	ug/L	4.0		98	80-120			07/10/15	
Carbaryl	4.0	5.0	ug/L	4.0		99	80-120			07/10/15	
Carbofuran	4.1	5.0	ug/L	4.0		101	80-120			07/10/15	
Methiocarb	4.1	2.0	ug/L	4.0		102	80-120			07/10/15	
Methomyl	4.4	2.0	ug/L	4.0		109	80-120			07/10/15	
Oxamyl	4.0	20	ug/L	4.0		99	80-120			07/10/15	
Propoxur	4.0	2.0	ug/L	4.0		100	80-120			07/10/15	
Blank Spike Dup (A507340-BSD1)											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0		104	80-120	3	20	07/10/15	
Aldicarb	3.7	3.0	ug/L	4.0		93	80-120	3	20	07/10/15	
Aldicarb Sulfone	4.1	2.0	ug/L	4.0		103	80-120	3	20	07/10/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		102	80-120	5	20	07/10/15	
Carbaryl	4.0	5.0	ug/L	4.0		101	80-120	2	20	07/10/15	
Carbofuran	4.1	5.0	ug/L	4.0		102	80-120	1	20	07/10/15	
Methiocarb	4.1	2.0	ug/L	4.0		102	80-120	0	20	07/10/15	
Methomyl	3.9	2.0	ug/L	4.0		97	80-120	12	20	07/10/15	
Oxamyl	4.1	20	ug/L	4.0		104	80-120	5	20	07/10/15	
Propoxur	4.2	2.0	ug/L	4.0		105	80-120	5	20	07/10/15	
Duplicate (A507340-DUP1), Source: A5G0053-01											
3-Hydroxycarbofuran	ND	3.0	ug/L		ND					07/10/15	
Aldicarb	ND	3.0	ug/L		ND					07/10/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A507340										Prepared: 7/1/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Duplicate (A507340-DUP1), Source: A5G0053-01											
Aldicarb Sulfone	ND	2.0	ug/L		ND					07/10/15	
Aldicarb Sulfoxide	ND	3.0	ug/L		ND					07/10/15	
Carbaryl	ND	5.0	ug/L		ND					07/10/15	
Carbofuran	ND	5.0	ug/L		ND					07/10/15	
Methiocarb	ND	2.0	ug/L		ND					07/10/15	
Methomyl	ND	2.0	ug/L		ND					07/10/15	
Oxamyl	ND	20	ug/L		ND					07/10/15	
Propoxur	ND	2.0	ug/L		ND					07/10/15	
EPA 547 - Quality Control											
Batch: A507422										Prepared: 7/6/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A507422-BLK1)											
Glyphosate	ND	25	ug/L							07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike (A507422-BS1)											
Glyphosate	91	25	ug/L	100		91	70-130			07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike Dup (A507422-BSD1)											
Glyphosate	120	25	ug/L	100		117	70-130	25	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
Matrix Spike (A507422-MS1), Source: A5F2424-01											
Glyphosate	88	25	ug/L	100	ND	87	70-130			07/06/15	
Surrogate: AMPA	*96*			*100*		*94*	*70-130*			07/06/15	
Matrix Spike Dup (A507422-MSD1), Source: A5F2424-01											
Glyphosate	120	25	ug/L	100	ND	114	70-130	27	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 7/2/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A507403-BLK1)											
Endothall	ND	45	ug/L							07/05/15	
Blank Spike (A507403-BS1)											
Endothall	18	45	ug/L	20		92	46-116			07/05/15	
Blank Spike Dup (A507403-BSD1)											
Endothall	22	45	ug/L	20		110	46-116	18	30	07/05/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 7/2/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Matrix Spike (A507403-MS1), Source: A5F2319-01											
Endothall	20	45	ug/L	20	ND	98	46-116			07/05/15	
EPA 549.2 - Quality Control											
Batch: A507404										Prepared: 7/2/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A507404-BLK1)											
Diquat	ND	0.40	ug/L							07/09/15	
Blank Spike (A507404-BS1)											
Diquat	3.6	0.40	ug/L	4.0		90	70-130			07/09/15	
Blank Spike Dup (A507404-BSD1)											
Diquat	3.5	0.40	ug/L	4.0		88	70-130	2	30	07/09/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5G0181

07022015

Monte6227

Turnaround: Standard

Due Date: 7/17/2015

Monterey Bay Analytical

Printed: 7/2

BSK Associates Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

3.1

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
  Date needed:

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*Required Fields Temp:

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am

Project #:

How would you like to receive your completed results?*
- [X] E-Mail
- [ ] Fax
- [ ] Mail

Reporting Options:
- [ ] Trace (J-Flag)
- [ ] Swamp
- [ ] EDD Type: _____

Sampler Name (Printed/Signature)*: Matan Salmon

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
1	MW-9S (monitoring)	6/30/15	1500	GW	AB32527	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	7/1/15	1600		
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: 7/2/15	Time: 0800	Payment Received at Delivery: Date:	Check / Cash Amount: PIA#: Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____
Custody Seal: Y / N
Cooling Method: Wet Blue None
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

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Sample Integrity

BSK Bottles: (Yes) No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°C 3.1	(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 $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N						
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C					
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C					
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2C					
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	4V					
$Na_2S_2O_3$ + 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

Labeled by: ____ @ 10:21 Labels checked by: MW @ 12:25 RUSH Paged by: ____

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

July 8, 2015 Ceres ID: 10716

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 July2, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

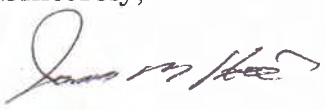
This work was authorized under M.B.A.'s Project # AB32527.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10716-001	MW-9S (monitoring)	7/2/2015	6/30/2015	15:00

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB32527

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1337
ZB-5 MS Analysis Date: 8-Jul-15
Date Received: NA
Date Extracted: 7-Jul-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	4.46		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	88.6	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	84.8	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB32527	Sample Size:	1.000 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
				ZB-5 MS Analysis Date:	8-Jul-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	9.44	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	90.7	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	9.23	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

EPA Method 1613B *Ceres Analytical Laboratory*

Sample ID:	**MW-9S (monitoring)**						
Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10716-001	Date Received:	2-Jul-15
Project:	AB32527	Sample Size:	1.010 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
Date Collected:	30-Jun-15			ZB-5 MS Analysis Date:	8-Jul-15		
Time Collected:	15:00						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	2.64		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	74.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	75.7	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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

Ceres Project ID: 10716

Temperature: 3.5 °C

Pg. ___ of ___

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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-9S (monitoring)	6/30/2015	1500	Aq	1	X							AB32527
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
D. Holland	7/1/2015	16:00	Jim Hatton	7/2/15	09:15

Client understands that all terms desribed 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: 10716	Date/Time: 7/2/15 09:15
Client Project ID: AB32527	Received Temperature: 3.5°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies: 7/2/15	
List Damaged Samples: 7/2/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10716 PB: 1337 Sample #s: 1 Due Date: 7/17/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one): (☐ 1613 2,3,7,8-TCDD)

☐ 1613 2,3,7,8-TCDD/F

☐ 1613 Cl_4-Cl_8

☐ 8290 2,3,7,8-TCDD

☐ 8290 2,3,7,8-TCDD/F

☐ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10716-1	1523.78g	514.14g	1.010L

Chemist: _____ Date: 7/7/15

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	AB/AC	FC	RSS chem/date/witness
0-1337-MB001	Method Blank		1.00 L	JH 7/7/15 DH	JH 7/8/15 DH	NA	JH 7/8/15	NA	JH 7/8/15 DH
0-1337-OPR001	OPR		1.000 L	(A) ↓ ↓	↓ ↓	↓	↓	↓	↓ ↓
10716-1337-001	MW-9S (monitoring)	✓	1.01 L	↓ ↓	↓ ↓	↓	↓	↓	↓ ↓

Comments (A) OPR spiked with NSS.

Soxhlet Start: 14:00 7/7/15

Soxhlet Stop: 07:00 7/8/15

Samples Logged out by: JH 7/7/15 10:27

Samples Returned by: NA

Note samples Depleted: I

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 09:49 7/8/15 JH

Extracts returned to Storage Location: 15:15 7/8/15 JH

Form M1.0 rev5

Chemist: JH

Effective Date: 8/7/14

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory
Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	SO21115A	100	2/11/20
NSS	B	↓	↓
CSS	C	↓	↓
RSS	D	200	↓

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	45ml	146339	7/1/16
Hexanes	30,30,100,20	150700	6/15/16
Si Gel	4g	P062315A	12/23/15
Basic Gel	4g	P061915A	12/19/15
Acid Gel	8g	P062415B	12/24/15
Acid Al	6g	P062415A	12/24/15
Na_2SO_4	1.5g	P040515A	10/15/15
20% DCM Hex	30ml	L070915A	1/5/16

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

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1507539

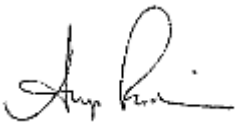
Report Created for: Monterey Bay Analytical

4 Justin Court, Suite D
Monterey, CA 93940

Project Contact: David Holland
Project P.O.:
Project Name: Geoscience

Project Received: 07/15/2015

Analytical Report reviewed & approved for release on 07/23/2015 by:



Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Monterey Bay Analytical
Project: Geoscience
WorkOrder: 1507539

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507539
Project:	Geoscience	**Extraction Method:**	E365.1
Date Received:	7/15/15 15:44	**Analytical Method:**	E365.1
Date Prepared:	7/21/15	**Unit:**	mg/L

Dissolved Phosphorous as P

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-9S (monitoring)	**1507539-001A**	**Water**	**06/30/2015 15:00**	**WC_SKALAR**	**R129675**

Analytes	Result	RL	DF	Date Analyzed
Phosphorous, Dissolved (as P)	**1.4**	0.040	1	07/22/2015 21:25

Analyst(s): JS

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507539
Date Prepared:	7/20/15	**BatchID:**	107793
Date Analyzed:	7/21/15	**Extraction Method:**	E365.1
Instrument:	WC_SKALAR	**Analytical Method:**	E365.1
Matrix:	Water	**Unit:**	mg/L
Project:	Geoscience	**Sample ID:**	MB/LCS-107793 1507453-001AMS/MSD

QC Summary Report for E365.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Phosphorous as P	ND	0.837	0.040	0.80	-	105	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Phosphorous as P	1.05	1.08	0.80	0.3645	86.2	89.3	80-120	2.36	20

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1507539 **ClientCode: MBAS**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
David Holland
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940
831-375-6227 FAX: 831-641-0734

Email: mweidner@mbasinc.com; Dholland@mbas
cc/3rd Party:
PO:
ProjectNo: Geoscience

Bill to:
Accounts Payable
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940

Requested TAT: 5 days

Date Received: **07/15/2015**
Date Printed: **07/15/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1507539-001	MW-9S (monitoring)	Water	6/30/2015 15:00	☐	A											

Test Legend:

1	TotalP_Diss	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: MONTEREY BAY ANALYTICAL
QC Level: LEVEL 2
Work Order: 1507539
Project: Geoscience
Client Contact: David Holland
Date Received: 7/15/2015
Comments:
Contact's Email: mweidner@mbasinc.com; Dholland@mbasinc.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1507539-001A	MW-9S (monitoring)	Water	E365.1 (Dissolved Phosphorous)	1	250mL HDPE w/ HS04	☐	6/30/2015 15:00	5 days	None	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1507539

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW)

Report To: David Holland Bill To:
Company: Monterey Bay Analytical Services
4 Justin Ct. Suite D
Monterey, Ca 93940 E-Mail: mweidner@mbasinc.com
Tele: (831) 375 - 6227 Fax: (831) 641-0734
Project #: Project Name: Geoscience
Project Location: CalAm
Sampler Signature: Matan Salmon

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request	Other	Comments
	MW-9S (monitoring)	6/30/15	1500	1	P	X					X			X		X	AB32527

Analysis Request: MTBE / BTEX & TPH as Gas (602 / 8021 + 8015); MTBE / BTEX ONLY (EPA 602 / 8021); TPH as Diesel / Motor Oil (8015); Total Petroleum Oil & Grease (1664 / 5520 E/B&F); Total Petroleum Hydrocarbons (418.1); EPA 502.2 / 601 / 8010 / 8021 (HVOCs); EPA 505/ 608 / 8081 (Cl Pesticides); EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners; EPA 507 / 8141 (NP Pesticides); EPA 515 / 8151 (Acidic Cl Herbicides); EPA 524.2 / 624 / 8260 (VOCs); EPA 525.2 / 625 / 8270 (SVOCs); EPA 8270 SIM / 8310 (PAHs / PNAs); CAM 17 Metals (200.7 / 200.8 / 6010 / 6020); LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020); Lead (200.7 / 200.8 / 6010 / 6020)

Other: Total Dissolved Phosphorous; (Samples filtered and preserved w/ H_2SO_4)

Comments: Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
David Holland	7/14/15	16:00	
Relinquished By:	Date: 7/15/15	Time: 0830	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 2.0
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

COMMENTS: SpCond=5384uS/cm

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **Monterey Bay Analytical**
Date and Time Received: **7/15/2015 3:44:24 PM**

Project Name: **Geoscience**
LogIn Reviewed by: Maria Venegas

WorkOrder №: **1507539** Matrix: Water
Carrier: Golden State Overnight

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET/BLU)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5G02020

Report Date: 07/14/15 13:07

Received Date: 07/02/15 10:15

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 07/02/15 10:15 with the Chain of Custody document. The samples were received in good condition, at 1.2 °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: 07/02/15 10:15
Date Reported: 07/14/15 13:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-9S (monitoring)	Matan Salmon	5G02020-01	Water	06/30/15 15:00
Comments: AB32527				

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/02/15 10:15
Date Reported: 07/14/15 13:07

5G02020-01 MW-9S (monitoring)

Sampled: 06/30/15 15:00 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32527

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5G0128 Prepared: 07/02/15 12:00 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	**500**	50	ug/l	5	07/02/15 16:40	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5G0076 Prepared: 07/02/15 12:50 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	07/06/15 23:53	
4,4´-DDE	ND		0.010	ug/l	1	07/06/15 23:53	
4,4´-DDT	ND		0.010	ug/l	1	07/06/15 23:53	
Aldrin	ND		0.010	ug/l	1	07/06/15 23:53	
alpha-BHC	ND		0.010	ug/l	1	07/06/15 23:53	
Aroclor 1016	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1221	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1232	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1242	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1248	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1254	ND		0.10	ug/l	1	07/06/15 23:53	
Aroclor 1260	ND		0.10	ug/l	1	07/06/15 23:53	
beta-BHC	ND		0.010	ug/l	1	07/06/15 23:53	
Chlordane (tech)	ND		0.10	ug/l	1	07/06/15 23:53	
Chlorothalonil	ND		0.050	ug/l	1	07/06/15 23:53	
delta-BHC	ND		0.010	ug/l	1	07/06/15 23:53	
Dieldrin	ND		0.010	ug/l	1	07/06/15 23:53	
Endosulfan I	ND		0.010	ug/l	1	07/06/15 23:53	
Endosulfan II	ND		0.010	ug/l	1	07/06/15 23:53	
Endosulfan sulfate	ND		0.010	ug/l	1	07/06/15 23:53	
Endrin	ND		0.010	ug/l	1	07/06/15 23:53	
Endrin aldehyde	ND		0.010	ug/l	1	07/06/15 23:53	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	07/06/15 23:53	
Heptachlor	ND		0.010	ug/l	1	07/06/15 23:53	
Heptachlor epoxide	ND		0.010	ug/l	1	07/06/15 23:53	
Hexachlorobenzene	ND		0.050	ug/l	1	07/06/15 23:53	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	07/06/15 23:53	
Methoxychlor	ND		0.010	ug/l	1	07/06/15 23:53	
PCBs, Total	ND		0.50	ug/l	1	07/06/15 23:53	
Propachlor	ND		0.050	ug/l	1	07/06/15 23:53	
Toxaphene	ND		1.0	ug/l	1	07/06/15 23:53	
Trifluralin	ND		0.010	ug/l	1	07/06/15 23:53	
Surr: Decachlorobiphenyl	*63 %*	Conc:*0.0633*	*70-130*	%			*S-GC*
Surr: Tetrachloro-meta-xylene	*88 %*	Conc:*0.0881*	*70-130*	%			

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/02/15 10:15
Date Reported: 07/14/15 13:07

5G02020-01 MW-9S (monitoring)

Sampled: 06/30/15 15:00 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32527

Chlorinated Pesticides and/or PCBs

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QUALITY CONTROL SECTION

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/02/15 10:15
Date Reported: 07/14/15 13:07

Anions by IC, EPA Method 9056 - Quality Control

Batch W5G0128 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0128-BLK1)				Analyzed: 07/02/15 11:27						
Iodide	ND	10	ug/l							
LCS (W5G0128-BS1)				Analyzed: 07/02/15 11:59						
Iodide	42.7	10	ug/l	40.0		107	85-115			
Matrix Spike (W5G0128-MS1)	**Source: 5G01016-01**			Analyzed: 07/02/15 16:57						
Iodide	41.9	10	ug/l	40.0	ND	105	80-120			
Matrix Spike (W5G0128-MS2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:26						
Iodide	54.2	10	ug/l	40.0	11.7	106	80-120			
Matrix Spike Dup (W5G0128-MSD1)	**Source: 5G01016-01**			Analyzed: 07/02/15 17:11						
Iodide	43.6	10	ug/l	40.0	ND	109	80-120	4	20	
Matrix Spike Dup (W5G0128-MSD2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:41						
Iodide	53.5	10	ug/l	40.0	11.7	104	80-120	1	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							
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	*0.108*		*ug/l*	*0.100*		*108*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0934*		*ug/l*	*0.100*		*93*	*70-130*			
LCS (W5G0076-BS1)				Analyzed: 07/06/15 20:48						
4,4´-DDD	0.0859	0.010	ug/l	0.100		86	55-142			
4,4´-DDE	0.0934	0.010	ug/l	0.100		93	49-129			
4,4´-DDT	0.100	0.010	ug/l	0.100		100	54-160			
Aldrin	0.0872	0.010	ug/l	0.100		87	29-115			
alpha-BHC	0.0936	0.010	ug/l	0.100		94	59-131			
beta-BHC	0.107	0.010	ug/l	0.100		107	63-136			
delta-BHC	0.109	0.010	ug/l	0.100		109	59-137			
Dieldrin	0.0909	0.010	ug/l	0.100		91	59-135			
Endosulfan I	0.0701	0.010	ug/l	0.100		70	28-138			
Endosulfan II	0.0741	0.010	ug/l	0.100		74	53-133			
Endosulfan sulfate	0.0783	0.010	ug/l	0.100		78	58-155			
Endrin	0.0882	0.010	ug/l	0.100		88	57-148			
Endrin aldehyde	0.0980	0.010	ug/l	0.100		98	45-139			
gamma-BHC (Lindane)	0.0908	0.010	ug/l	0.100		91	59-129			
Heptachlor	0.0912	0.010	ug/l	0.100		91	42-136			
Heptachlor epoxide	0.0934	0.010	ug/l	0.100		93	59-134			
Methoxychlor	0.0773	0.010	ug/l	0.100		77	56-167			
Surr: Decachlorobiphenyl	*0.100*		*ug/l*	*0.100*		*100*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0837*		*ug/l*	*0.100*		*84*	*70-130*			
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
4,4´-DDD	0.0966	0.010	ug/l	0.100		97	55-142	12	25	
4,4´-DDE	0.105	0.010	ug/l	0.100		105	49-129	11	25	
4,4´-DDT	0.112	0.010	ug/l	0.100		112	54-160	11	25	
Aldrin	0.0981	0.010	ug/l	0.100		98	29-115	12	25	
alpha-BHC	0.106	0.010	ug/l	0.100		106	59-131	13	25	
beta-BHC	0.121	0.010	ug/l	0.100		121	63-136	12	25	
delta-BHC	0.124	0.010	ug/l	0.100		124	59-137	13	25	

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Date Received: 07/02/15 10:15
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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
Dieldrin	0.102	0.010	ug/l	0.100		102	59-135	12	25	
Endosulfan I	0.0768	0.010	ug/l	0.100		77	28-138	9	25	
Endosulfan II	0.0832	0.010	ug/l	0.100		83	53-133	12	25	
Endosulfan sulfate	0.0895	0.010	ug/l	0.100		90	58-155	13	25	
Endrin	0.0988	0.010	ug/l	0.100		99	57-148	11	25	
Endrin aldehyde	0.111	0.010	ug/l	0.100		111	45-139	13	25	
gamma-BHC (Lindane)	0.104	0.010	ug/l	0.100		104	59-129	13	25	
Heptachlor	0.103	0.010	ug/l	0.100		103	42-136	13	25	
Heptachlor epoxide	0.104	0.010	ug/l	0.100		104	59-134	11	25	
Methoxychlor	0.0884	0.010	ug/l	0.100		88	56-167	13	25	
Surr: Decachlorobiphenyl	*0.105*		*ug/l*	*0.100*		*105*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0932*		*ug/l*	*0.100*		*93*	*70-130*			

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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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size	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
32527		MW-9S	6/30/15	1500	12.1						22			Field Parameters:					
																Temp:	17.3°C		
																pH:	7.06		
																Sp Cond:	5384		µS/cm
																Turb:	0.82		NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon		6/30/15	1500	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Matan Salmon		6/30/15	1626	
Received by:	MBAS		6/30/15	1626	
Relinquished by:					
Received by:					

[ ] Payment received Check # Amount: Receipt # Date:

Cal Am DW - Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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					

Discrepency 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 + divide 1L (0.45µ) → 500mL + H_2SO_4 + $Na_2S_2O_3$
250mL + H_2SO_4
TC 6/30/15 250mL NP
250mL + 2mL 1:1 to pH <2 LJ 6/30/15

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Tuesday, August 11, 2015

Lab Number: AB32387

Collection Date/Time: 6/28/2015 10:20 Sample Collector: SALMON M

Submittal Date/Time: 6/29/2015 8:21 Sample ID

Sample Description: MW-9M

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**127**		2	7/8/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		100	7/2/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**0.12**		0.05	6/30/2015	TC
Arsenic, Total	EPA200.8	µg/L	**39**		10	7/2/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**163**		100	7/2/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**155**		10	7/9/2015	LJ
Boron, Dissolved	EPA200.7	mg/L	**2.93**		1.0	7/1/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**49.6**		10	6/29/2015	MW
Calcium	EPA200.7	mg/L	**878**		10	7/1/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**869**		10	7/1/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		7/1/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	7/9/2015	LJ
Chloride, Dissolved	EPA300.0	mg/L	**16519**		100	6/29/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		7/6/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**6**		3	6/29/2015	LRH
Copper	EPA200.7	µg/L	**Not Detected**		200	7/1/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		7/2/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		7/8/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		7/9/2015	BSK
Dissolved Phosphorus	EPA 365.1	mg/L	**0.06**	E	0.040	7/22/2015	MCCAM
Endothall	EPA548.1	µg/L	**Not Detected**	E		7/5/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**Not Detected**		1	6/29/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		7/6/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**6718**		10	7/6/2015	TC
Hydroxide	SM2320B	mg/L	**Not Detected**		5	7/9/2015	LJ
Iodide	EPA9056M	µg/L	**Not Detected**	E	10	7/2/2015	WECK
Iron	EPA200.7	µg/L	**670**		200	7/1/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**667**		200	7/1/2015	MW
Kjeldahl Nitrogen, Dissolved	SM 4500 B, D	mg/L	**0.20**		0.10	7/9/2015	TC
Lithium	EPA200.8	µg/L	**289**		10	7/2/2015	SM
Magnesium	EPA200.7	mg/L	**1100**		10	7/1/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

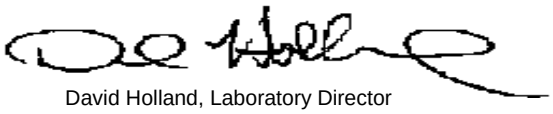
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Magnesium, Dissolved	EPA200.7	mg/L	**1090**		10	7/1/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**1120**		200	7/1/2015	MW
Manganese, Total	EPA200.7	µg/L	**1160**		200	7/1/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	6/30/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**5**	J	10	6/29/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**1.2**		1.00	6/29/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**Not Detected**		1	6/29/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**1**		1	6/29/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.06**		0.01	6/29/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**6.84**			6/28/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**6.9**		0.1	6/29/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		7/2/2015	BSK
Potassium	EPA200.7	mg/L	**197**		10	7/1/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**196**		10	7/1/2015	MW
QC Ratio TDS/SEC	Calculation		**0.66**			7/7/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		7/7/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**35**		10	7/1/2015	MW
Sodium	EPA200.7	mg/L	**8407**		10	7/1/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**8430**		10	7/1/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**44090**		1	7/1/2015	HM
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**44462**		1	6/28/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**8148**		50	7/2/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**2286**		10	6/29/2015	MW
Temperature (Field)	SM2550	° C	**17.2**			6/28/2015	MS
Total Diss. Solids	SM2540C	mg/L	**29000**		10	7/1/2015	HM
Turbidity	EPA180.1	NTU	**1.3**		0.05	6/29/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.29**		0.05	6/28/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		7/1/2015	BSK
Zinc	EPA200.7	µg/L	**Not Detected**		200	7/1/2015	MW

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**32387 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	8407	0.04350	365.70
Potassium	197	0.02558	5.04
Calcium	878	0.04990	43.81
Magnesium	1100	0.08229	90.52
NH3-N	0.12	0.07143	0.01
		SUM	505.08

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	127	0.02000	2.54
Sulfate	2286	0.02082	47.59
Chloride	16519	0.02821	466.00
Nitrate-Nitrogen	1.2	0.07138	0.09
Phosphate-P	0.06	0.01031	0.00
Bromide	49.6	0.01252	0.62
		SUM	516.84

ANION-CATION BALANCI **-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	44090	
Cation Sum X 100	50508	**115%**
Anion Sum X 100	51684	**117%**

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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	8430	0.04350	366.71
Potassium	196	0.02558	5.01
Calcium	869	0.04990	43.36
Magnesium	1090	0.08229	89.70
NH3-N	0.12	0.07143	0.01
		SUM	504.79

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	127	0.02000	2.54
Sulfate	2286	0.02082	47.59
Chloride	16519	0.02821	466.00
Nitrate-Nitrogen	1.2	0.07138	0.09
Phosphate-P	0.06	0.01031	0.00
Bromide	49.6	0.01252	0.62
		SUM	516.84

ANION-CATION BAI **-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	44090	
Cation Sum X 100	50479	**114%**
Anion Sum X 100	51684	**117%**

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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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 7/8/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	9:31
CCV	40	41	103	95-105	12:03

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB32393	294	295	0	5	9:31

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Color QC Summary (SM 2120B)

Date Analyzed: 6/29/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<3	1608
ICV	5	5	100.0	80-120	1608

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB32390	150	150	0.0	10	1608

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 6/30/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.014	---	<0.05	835
ICVL	0.050	0.057	114	80-120	837
ICV	0.250	0.263	105.2	80-120	931

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	
AB32387	0.029	0.250	0.298	0.303	107.6	109.6	1.7	80/120	10	846

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: 6/30/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.04	80.00%	90-110	1100
ICV	0.500	0.500	100.00%	90-110	1100
CCVB3	---	0.01	---	<0.05	1230
CCV3	0.500	0.520	104.00%	90-110	1230

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	
AB32397	ND	0.500	0.510	0.500	102	100	2.0	85-120	10	1230

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

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Orthophosphate QC Summary (Hach 8048)

Date: 6/29/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	ND	---	< 0.01	1124
LCSL	0.01	0.01	100.0	50-150	1129
ICV	0.30	0.29	96.7	90-110	1137
QCS	0.30	0.29	96.7	80-120	1131
CCV	0.30	0.29	96.7	80-120	1148
CCVB	---	ND	---	< 0.01	1150

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		
AB32387	0.06	0.30	0.36	0.34	100.0	93.3	5.7	70-130	10	1142	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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pH QC Summary (SM 4500 H+)

Date Analyzed: 6/29/2025

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.88	100.3	95-105	16:35

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB32463	7.5	7.5	0	10	16:35

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: 7/1/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1411	99.9%	95-105	1115

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB32467	1112	1115	0.3%	10	1115

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: 7/1/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	8	---	<10	1350
ICVL	100	114	114	80-120	1350
ICV	500	500	100	90-110	1350

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB32393	571	566	0.9	10	1350

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 by Electrode QC Summary (SM 4500-NH3 B,D)

Date: 7/9/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.02	---	<0.05	1100
ICVL	0.050	0.05	100.00%	90-110	1100
ICV	0.500	0.460	92.00%	90-110	1100

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	
AB32250	0.140	0.500	0.620	0.620	96	96	0.0	85-120	10	1130

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

RPD = Relative Percent Difference; Rec = Recovery

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Turbidity QC Summary (EPA 180.1)

Date Analyzed: 6/29/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	ND	---	<0.05	NR
ICV	1.00	1.00	100.0%	95-105	NR
CCVB	---	ND	---	<0.05	NR
CCV	1.00	1.00	100.0%	95-105	NR

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB32387	1.3	1.3	0.00%	10	NR

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Monterey Bay Analytical Services

QC Summary for 200.8

Spiked Sample AB32387 D **20x Dilution** **Date Analyzed** Thursday, July 02, 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	98.8	0.23	129.0	144.4	0.11	317.7	500	90.4	89.8	0.6	95.4	94.6	0.80	0.04
Aluminum	0.0	96.9	6.19	119.2	134.9	0.12	15.1	500	92.9	99.6	6.9	94.6	96.6	2.02	0.08
Arsenic	0.1	97.6	-0.30	99.7	113.1	0.13	42.6	500	93.1	100.2	7.3	99.0	97.6	1.50	0.03
Strontium	0.0	99.5	0.02	102.1	115.1	0.12	8148.6	500	16.0	94.1	141.9	96.9	97.9	0.98	0.00
Barium	0.0	98.9	0.03	99.7	112.2	0.12	162.6	500	91.6	99.2	8.0	95.3	95.8	0.50	0.01

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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300.0 QC Report

All units expressed in mg/L

Batch ID: **20150629**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.00	0.00	0.03	0.00	0.14	0.00
	ICV	1.99	19.82	2.16	20.37	1.92	1.97
	Rec 90-110%	99.63	99.09	108.16	101.85	96.02	98.35
	ICVL	0.19	1.76	0.21	1.17	0.23	0.22
	Rec 50-150%	97.07	87.96	105.08	58.27	116.66	108.35
Sample ID	**AB32397**	0.10	68.09	0.12	0.00	0.09	0.09
	MS	2.00	87.36	2.14	17.51	2.15	1.80
	Rec 80-120%	95.34	96.39	101.05	87.56	103.28	85.41
	MSD	2.03	87.15	2.15	17.56	2.15	1.80
	Rec 80-120%	96.51	95.34	101.18	87.79	103.40	85.50
	Diff 10%	1.16	0.24	0.12	0.26	0.12	0.10
	CCV	1.98	19.81	2.19	20.34	1.90	1.96
	Rec 90-110%	98.98	99.07	109.38	101.70	95.07	97.93
	Diff 10%	0.65	0.02	1.12	0.14	1.00	0.43
	CCVB	0.06	0.00	0.03	0.00	0.00	0.00

Batch # 20150701b

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	1.02	101.6%	1.04	104.0%	2.4%	1	1.00	100.0%	1	1.0	99.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.2%	1.04	104.4%	3.2%	1	1.00	100.4%	1	1.0	99.5%
Ca 317.933	50-300ppm	-5.93	-5.98	49.8	99.6%	50.2	100.4%	0.8%	50	48.1	96.2%	50	47.1	94.2%
Ca 396.847	0.5-50ppm	-0.36	-0.41	50.3	100.6%	46.6	93.2%	7.7%	50	49.7	99.4%	50	49.2	98.4%
Cu 324.754	10ppb-100ppm	2.20	1.43	1021	102.1%	1046	104.6%	2.5%	1000	1000	100.0%	1000	988.1	98.8%
Cu 327.395	10ppb-100ppm	3.47	4.69	1027	102.7%	1047	104.7%	1.9%	1000	996	99.6%	1000	985.3	98.5%
Fe 238.204	10ppb-100ppm	2.22	1.05	1010	101.0%	1029	102.9%	2.0%	1000	1004	100.4%	1000	995.1	99.5%
Fe 259.940	10ppb-100ppm	3.07	6.13	997	99.7%	1017	101.7%	2.0%	1000	992	99.2%	1000	988.1	98.8%
K 766.491	0.5-750ppm	-0.07	-0.08	10.0	100.1%	10.3	103.1%	2.9%	10	9.9	98.7%	10	9.8	97.8%
Mg 202.582	50-1000ppm	-2.15	-2.19	50.7	101.3%	51.7	103.3%	2.0%	50	49.9	99.8%	50	49.4	98.9%
Mg 279.078	0.5-50ppm	0.24	0.18	50.4	100.9%	51.7	103.3%	2.4%	50	49.9	99.7%	50	49.4	98.8%
Mn 257.610	10ppb-11ppm	2.97	1.96	1012	101.2%	1027	102.7%	1.5%	1000	995	99.5%	1000	996.9	99.7%
Mn 260.568	10ppb-11ppm	2.02	1.43	1009	100.9%	1029	102.9%	1.9%	1000	994	99.4%	1000	995.0	99.5%
Na 568.821	50-1000ppm	0.53	0.59	49.6	99.1%	50.4	100.8%	1.7%	50	48.9	97.8%	50	48.9	97.8%
Na 589.592	0.5-50ppm	0.27	0.23	49.8	99.5%	51.8	103.5%	3.9%	50	49.5	98.9%	50	49.3	98.5%
Si 251.611	0.5-200ppm	0.30	0.12	50.4	100.9%	51.4	102.7%	1.8%	50	50.0	100.0%	50	50.1	100.3%
Si 252.411	0.5-200ppm	0.33	0.15	50.3	100.6%	51.2	102.4%	1.8%	50	50.1	100.2%	50	50.2	100.4%
Zn 213.857	10ppb-50ppm	-4.67	-5.37	1005	100.5%	1013	101.3%	0.8%	1000	988	98.8%	1000	989.3	98.9%

Sample ID AB32495

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.14	1.12	97.6%	1.11	96.7%	0.8%	1	0.98	98.4%	1.6%	0.01
B 249.772	0.14	1.11	96.5%	1.11	97.2%	0.6%	1	0.98	98.4%	2.1%	0.00
Ca 317.933	22.7	74.2	103.1%	73.5	101.6%	1.0%	50	47.4	94.9%	1.4%	-5.96
Ca 396.847	27.3	71.1	87.6%	70.6	86.7%	0.6%	50	49.2	98.3%	1.1%	-0.39
Cu 324.754	4	967	96.3%	968	96.4%	0.1%	1000	980	98.0%	2.0%	1.60
Cu 327.395	7	973	96.7%	965	95.9%	0.9%	1000	974	97.4%	2.2%	4.74
Fe 238.204	16	981	96.5%	978	96.2%	0.3%	1000	983	98.3%	2.1%	1.47
Fe 259.940	18	978	96.1%	982	96.4%	0.3%	1000	984	98.4%	0.8%	2.60
K 766.491	1.1	10.8	97.4%	10.8	97.6%	0.3%	10	9.9	98.6%	0.1%	-0.07
Mg 202.582	6.4	56.3	99.8%	56.4	100.1%	0.2%	50	48.6	97.3%	2.5%	-2.18
Mg 279.078	8.5	56.5	95.9%	56.3	95.5%	0.4%	50	49.4	98.7%	1.0%	0.18
Mn 257.610	10	966	95.6%	967	95.7%	0.1%	1000	978	97.8%	1.8%	2.27
Mn 260.568	10	969	95.9%	967	95.6%	0.3%	1000	977	97.7%	1.7%	1.62
Na 568.821	43.6	91.7	96.2%	91.3	95.4%	0.4%	50	47.8	95.6%	2.3%	0.26
Na 589.592	45.2	91.4	92.4%	90.6	90.8%	0.9%	50	48.9	97.8%	1.1%	0.25
Si 251.611	9.3	57.1	95.6%	56.8	95.0%	0.5%	50	49.4	98.9%	1.1%	0.13
Si 252.411	9.4	57.1	95.3%	56.9	94.9%	0.3%	50	49.4	98.9%	1.3%	0.16
Zn 213.857	620	1527	90.7%	1523	90.3%	0.2%	1000	974	97.4%	1%	-6.23

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559-497-2888 (Main)
559-485-6935 (FAX)

A5F2584
7/10/2015
Invoice: A514221

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5F2584 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 6/30/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	6/30/2015 - 12:00		
Report Due:	7/15/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 1.4

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Cooler: New Cooler
Temperature on Receipt ºC: 5.9

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Bubble Wrap
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.
MS1.0	Matrix spike recoveries exceed control limits.
MS2.0	MS/MSD RPD exceeds control limit. No material impact as both sets of recovery data meet control criteria.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5F2584-01
Sampled By: Matan Salmon
Sample Description: MW-9M (monitoring) // AB32387

Sample Date - Time: 06/28/15 - 10:20
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A507286	07/01/15	07/02/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A507286	07/01/15	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	99 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A507269	06/30/15	07/02/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A507269	06/30/15	07/02/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A507269	06/30/15	07/02/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A507269	06/30/15	07/02/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A507269	06/30/15	07/02/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A507269	06/30/15	07/02/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
Surrogate: DCPAA	EPA 515.3	103 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	

Certificate of Analysis

Sample ID: A5F2584-01
Sampled By: Matan Salmon
Sample Description: MW-9M (monitoring) // AB32387

Sample Date - Time: 06/28/15 - 10:20
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	A507280	06/30/15	07/01/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	BS1.0
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A507280	06/30/15	07/01/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A507280	06/30/15	07/01/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A507280	06/30/15	07/01/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Toluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	92 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	95 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5F2584-01
Sampled By: Matan Salmon
Sample Description: MW-9M (monitoring) // AB32387

Sample Date - Time: 06/28/15 - 10:20
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A507341	07/02/15	07/07/15	BS1.0
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A507341	07/02/15	07/07/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A507341	07/02/15	07/07/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A507341	07/02/15	07/07/15	BS1.0
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A507341	07/02/15	07/07/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A507341	07/02/15	07/07/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A507341	07/02/15	07/07/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A507341	07/02/15	07/07/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A507341	07/02/15	07/07/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	94 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A507267	06/30/15	07/01/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A507267	06/30/15	07/01/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A507267	06/30/15	07/01/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A507422	07/06/15	07/06/15	
Surrogate: AMPA	EPA 547	99 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A507403	07/02/15	07/05/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A507404	07/02/15	07/09/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A507286										Prepared: 07/01/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A507286-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							07/02/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*103*	*70-130*			07/02/15	
Blank Spike (A507286-BS1)											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20		101	70-130			07/02/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20		94	70-130			07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*105*	*70-130*			07/02/15	
Blank Spike Dup (A507286-BSD1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		97	70-130	5	20	07/02/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		92	70-130	2	20	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*103*	*70-130*			07/02/15	
Matrix Spike (A507286-MS1), Source: A5F2509-01											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	97	65-135			07/02/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	96	65-135			07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*102*	*70-130*			07/02/15	
Matrix Spike Dup (A507286-MSD1), Source: A5F2509-01											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	97	65-135	1	20	07/02/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20	ND	95	65-135	1	20	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.47*		*99*	*70-130*			07/02/15	
EPA 515.3 - Quality Control											
Batch: A507269										Prepared: 06/30/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A507269-BLK1)											
2,4,5-T	ND	1.0	ug/L							07/02/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							07/02/15	
2,4-D	ND	10	ug/L							07/02/15	
Bentazon	ND	2.0	ug/L							07/02/15	
Dalapon	ND	10	ug/L							07/02/15	
Dicamba	ND	1.5	ug/L							07/02/15	
Dinoseb	ND	2.0	ug/L							07/02/15	
Pentachlorophenol	ND	0.20	ug/L							07/02/15	
Picloram	ND	1.0	ug/L							07/02/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			07/02/15	
Blank Spike (A507269-BS1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130			07/01/15	
2,4,5-TP (Silvex)	0.88	1.0	ug/L	0.80		111	70-130			07/01/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130			07/01/15	
Bentazon	8.1	2.0	ug/L	8.0		102	70-130			07/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A507269										Prepared: 06/30/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A507269-BS1)											
Dalapon	4.6	10	ug/L	4.0		115	70-130			07/01/15	
Dicamba	6.4	1.5	ug/L	6.0		107	70-130			07/01/15	
Dinoseb	0.83	2.0	ug/L	0.80		103	70-130			07/01/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		101	70-130			07/01/15	
Picloram	0.50	1.0	ug/L	0.40		124	70-130			07/01/15	
Surrogate: DCPAA	*58*			*58*		*99*	*70-130*			07/01/15	
Blank Spike Dup (A507269-BSD1)											
2,4,5-T	4.3	1.0	ug/L	4.0		107	70-130	3	20	07/02/15	
2,4,5-TP (Silvex)	0.89	1.0	ug/L	0.80		112	70-130	1	20	07/02/15	
2,4-D	0.44	10	ug/L	0.40		110	70-130	2	20	07/02/15	
Bentazon	8.4	2.0	ug/L	8.0		105	70-130	3	20	07/02/15	
Dalapon	4.6	10	ug/L	4.0		115	70-130	0	20	07/02/15	
Dicamba	6.4	1.5	ug/L	6.0		107	70-130	0	20	07/02/15	
Dinoseb	0.84	2.0	ug/L	0.80		105	70-130	1	20	07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16		103	70-130	2	20	07/02/15	
Picloram	0.40	1.0	ug/L	0.40		101	70-130	20	20	07/02/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			07/02/15	
Matrix Spike (A507269-MS1), Source: A5F2292-01											
2,4,5-T	4.7	1.0	ug/L	4.0	ND	117	70-130			07/02/15	
2,4,5-TP (Silvex)	0.87	1.0	ug/L	0.80	ND	108	70-130			07/02/15	
2,4-D	0.46	10	ug/L	0.40	ND	114	70-130			07/02/15	
Bentazon	8.1	2.0	ug/L	8.0	ND	101	70-130			07/02/15	
Dalapon	4.8	10	ug/L	4.0	ND	119	70-130			07/02/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130			07/02/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	102	70-130			07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	105	70-130			07/02/15	
Picloram	0.41	1.0	ug/L	0.40	ND	103	70-130			07/02/15	
Surrogate: DCPAA	*60*			*58*		*103*	*70-130*			07/02/15	
Matrix Spike Dup (A507269-MSD1), Source: A5F2292-01											
2,4,5-T	4.5	1.0	ug/L	4.0	ND	114	70-130	3	20	07/02/15	
2,4,5-TP (Silvex)	1.0	1.0	ug/L	0.80	ND	127	70-130	16	20	07/02/15	
2,4-D	0.44	10	ug/L	0.40	ND	111	70-130	3	20	07/02/15	
Bentazon	8.2	2.0	ug/L	8.0	ND	102	70-130	1	20	07/02/15	
Dalapon	5.0	10	ug/L	4.0	ND	126	70-130	6	20	07/02/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	106	70-130	3	20	07/02/15	
Dinoseb	0.84	2.0	ug/L	0.80	ND	105	70-130	3	20	07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	104	70-130	1	20	07/02/15	
Picloram	0.51	1.0	ug/L	0.40	ND	128	70-130	22	20	07/02/15	MS2.0
Surrogate: DCPAA	*60*			*58*		*103*	*70-130*			07/02/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual

EPA 524.2 - Quality Control

Batch: A507280 Prepared: 07/01/2015

Prep Method: no prep-volatiles Analyst: JGB

Blank (A507280-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							07/01/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							07/01/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							07/01/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							07/01/15	
1,1-Dichloroethane	ND	0.50	ug/L							07/01/15	
1,1-Dichloroethene	ND	0.50	ug/L							07/01/15	
1,1-Dichloropropene	ND	0.50	ug/L							07/01/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							07/01/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2-Dichloroethane	ND	0.50	ug/L							07/01/15	
1,2-Dichloropropane	ND	0.50	ug/L							07/01/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							07/01/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
1,3-Dichloropropane	ND	0.50	ug/L							07/01/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
2,2-Dichloropropane	ND	0.50	ug/L							07/01/15	
2-Butanone	ND	5.0	ug/L							07/01/15	
2-Chlorotoluene	ND	0.50	ug/L							07/01/15	
2-Hexanone	ND	10	ug/L							07/01/15	
4-Chlorotoluene	ND	0.50	ug/L							07/01/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							07/01/15	
Acetone	ND	10	ug/L							07/01/15	
Benzene	ND	0.50	ug/L							07/01/15	
Bromobenzene	ND	0.50	ug/L							07/01/15	
Bromochloromethane	ND	0.50	ug/L							07/01/15	
Bromodichloromethane	ND	0.50	ug/L							07/01/15	
Bromoform	ND	0.50	ug/L							07/01/15	
Bromomethane	ND	0.50	ug/L							07/01/15	
Carbon Tetrachloride	ND	0.50	ug/L							07/01/15	
Chlorobenzene	ND	0.50	ug/L							07/01/15	
Chloroethane	ND	0.50	ug/L							07/01/15	
Chloroform	ND	0.50	ug/L							07/01/15	
Chloromethane	ND	0.50	ug/L							07/01/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							07/01/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							07/01/15	
Dibromochloromethane	ND	0.50	ug/L							07/01/15	
Dibromomethane	ND	0.50	ug/L							07/01/15	
Dichlorodifluoromethane	ND	0.50	ug/L							07/01/15	
Dichloromethane	ND	0.50	ug/L							07/01/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							07/01/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							07/01/15	
Ethylbenzene	ND	0.50	ug/L							07/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A507280-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							07/01/15	
Isopropylbenzene	ND	0.50	ug/L							07/01/15	
m,p-Xylenes	ND	0.50	ug/L							07/01/15	
Methyl-t-butyl ether	ND	0.50	ug/L							07/01/15	
Naphthalene	ND	0.50	ug/L							07/01/15	
n-Butylbenzene	ND	0.50	ug/L							07/01/15	
n-Propylbenzene	ND	0.50	ug/L							07/01/15	
o-Xylene	ND	0.50	ug/L							07/01/15	
p-Isopropyltoluene	ND	0.50	ug/L							07/01/15	
sec-Butylbenzene	ND	0.50	ug/L							07/01/15	
Styrene	ND	0.50	ug/L							07/01/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							07/01/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							07/01/15	
tert-Butylbenzene	ND	0.50	ug/L							07/01/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							07/01/15	
Toluene	ND	0.50	ug/L							07/01/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							07/01/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							07/01/15	
Trichloroethene (TCE)	ND	0.50	ug/L							07/01/15	
Trichlorofluoromethane	ND	5.0	ug/L							07/01/15	
Vinyl Chloride	ND	0.50	ug/L							07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*98*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*101*	*70-130*			07/01/15	
Blank Spike (A507280-BS1)											
1,1,1,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		101	70-130			07/01/15	
1,1,2,2-Tetrachloroethane	9.3	0.50	ug/L	10		93	70-130			07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		100	70-130			07/01/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,1-Dichloroethane	10	0.50	ug/L	10		100	70-130			07/01/15	
1,1-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,1-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15	
1,2,3-Trichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,2,4-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,2-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,3,5-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,3-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,4-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
2,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			07/01/15	
2-Butanone	9.5	5.0	ug/L	10		95	70-130			07/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A507280										Prepared: 07/01/2015		
Prep Method: no prep-volatiles										Analyst: JGB		
Blank Spike (A507280-BS1)												
2-Chlorotoluene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
2-Hexanone	9.7	10	ug/L	10		97	70-130			07/01/15		
4-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
4-Methyl-2-pentanone	9.5	5.0	ug/L	10		95	70-130			07/01/15		
Acetone	9.7	10	ug/L	10		97	70-130			07/01/15		
Benzene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Bromobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
Bromochloromethane	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Bromodichloromethane	10	0.50	ug/L	10		100	70-130			07/01/15		
Bromoform	11	0.50	ug/L	10		110	70-130			07/01/15		
Bromomethane	14	0.50	ug/L	10		136	70-130			07/01/15	BS	***High***
Carbon disulfide	10	10	ug/L	10		103	70-130			07/01/15		
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			07/01/15		
Chlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15		
Chloroethane	9.6	0.50	ug/L	10		96	70-130			07/01/15		
Chloroform	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Chloromethane	9.9	0.50	ug/L	10		99	70-130			07/01/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130			07/01/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15		
Dibromochloromethane	10	0.50	ug/L	10		103	70-130			07/01/15		
Dibromomethane	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Dichlorodifluoromethane	10	0.50	ug/L	10		104	70-130			07/01/15		
Dichloromethane	10	0.50	ug/L	10		102	70-130			07/01/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		100	70-130			07/01/15		
Ethyl tert-Butyl Ether (ETBE)	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Hexachlorobutadiene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Isopropylbenzene	10	0.50	ug/L	10		100	70-130			07/01/15		
m,p-Xylenes	20	0.50	ug/L	20		99	70-130			07/01/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		99	70-130			07/01/15		
Naphthalene	9.2	0.50	ug/L	10		92	70-130			07/01/15		
n-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			07/01/15		
n-Propylbenzene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
o-Xylene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Styrene	9.6	0.50	ug/L	10		96	70-130			07/01/15		
tert-Amyl Methyl Ether (TAME)	9.3	3.0	ug/L	10		93	70-130			07/01/15		
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		101	70-130			07/01/15		
tert-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Toluene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			07/01/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			07/01/15		

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A507280										Prepared: 07/01/2015		
Prep Method: no prep-volatiles										Analyst: JGB		
Blank Spike (A507280-BS1)												
Trichlorofluoromethane	11	5.0	ug/L	10		109	70-130			07/01/15		
Vinyl Chloride	11	0.50	ug/L	10		107	70-130			07/01/15		
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*95*	*70-130*			07/01/15		
Surrogate: Bromofluorobenzene	*48*			*50*		*96*	*70-130*			07/01/15		
Blank Spike Dup (A507280-BSD1)												
1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		
1,1,2,2-Tetrachloroethane	9.5	0.50	ug/L	10		95	70-130	2	30	07/01/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	9.8	10	ug/L	10		98	70-130	2	30	07/01/15		
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15		
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
1,1-Dichloroethene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
1,1-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		
1,2,3-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
1,2,4-Trichlorobenzene	9.5	0.50	ug/L	10		95	70-130	1	30	07/01/15		
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130	3	30	07/01/15		
1,2-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	2	30	07/01/15		
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
1,3-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15		
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
1,4-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15		
2,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	2	30	07/01/15		
2-Butanone	9.3	5.0	ug/L	10		93	70-130	2	30	07/01/15		
2-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	2	30	07/01/15		
2-Hexanone	9.5	10	ug/L	10		95	70-130	2	30	07/01/15		
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
4-Methyl-2-pentanone	9.6	5.0	ug/L	10		96	70-130	1	30	07/01/15		
Acetone	9.3	10	ug/L	10		93	70-130	4	30	07/01/15		
Benzene	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15		
Bromobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
Bromochloromethane	9.5	0.50	ug/L	10		95	70-130	5	30	07/01/15		
Bromodichloromethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
Bromoform	11	0.50	ug/L	10		108	70-130	2	30	07/01/15		
Bromomethane	13	0.50	ug/L	10		135	70-130	1	30	07/01/15	BS	***High***
Carbon disulfide	10	10	ug/L	10		101	70-130	2	30	07/01/15		
Carbon Tetrachloride	10	0.50	ug/L	10		101	70-130	1	30	07/01/15		
Chlorobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
Chloroethane	9.4	0.50	ug/L	10		94	70-130	2	30	07/01/15		
Chloroform	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15		
Chloromethane	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
cis-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A507280-BSD1)											
Dibromochloromethane	10	0.50	ug/L	10		102	70-130	1	30	07/01/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15	
Dichlorodifluoromethane	10	0.50	ug/L	10		103	70-130	1	30	07/01/15	
Dichloromethane	9.7	0.50	ug/L	10		97	70-130	5	30	07/01/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		100	70-130	0	30	07/01/15	
Ethyl tert-Butyl Ether (ETBE)	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
Ethylbenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15	
Hexachlorobutadiene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15	
Isopropylbenzene	9.7	0.50	ug/L	10		97	70-130	3	30	07/01/15	
m,p-Xylenes	19	0.50	ug/L	20		97	70-130	3	30	07/01/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	1	30	07/01/15	
Naphthalene	9.6	0.50	ug/L	10		96	70-130	5	30	07/01/15	
n-Butylbenzene	9.4	0.50	ug/L	10		94	70-130	1	30	07/01/15	
n-Propylbenzene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
o-Xylene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
p-Isopropyltoluene	9.6	0.50	ug/L	10		96	70-130	2	30	07/01/15	
sec-Butylbenzene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
Styrene	9.2	0.50	ug/L	10		92	70-130	5	30	07/01/15	
tert-Amyl Methyl Ether (TAME)	9.5	3.0	ug/L	10		95	70-130	2	30	07/01/15	
tert-Butyl alcohol (TBA)	8.9	2.0	ug/L	10		89	70-130	12	30	07/01/15	
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	3	30	07/01/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130	2	30	07/01/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15	
Trichloroethene (TCE)	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15	
Trichlorofluoromethane	11	5.0	ug/L	10		107	70-130	2	30	07/01/15	
Vinyl Chloride	11	0.50	ug/L	10		106	70-130	1	30	07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*96*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*97*	*70-130*			07/01/15	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
1,1,1,2-Tetrachloroethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
1,1,1-Trichloroethane	12	0.50	ug/L	10	ND	119	70-130			07/01/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	ND	103	70-130			07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	12	10	ug/L	10	ND	121	70-130			07/01/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10	ND	110	70-130			07/01/15	
1,1-Dichloroethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
1,1-Dichloroethene	12	0.50	ug/L	10	ND	116	70-130			07/01/15	
1,1-Dichloropropene	12	0.50	ug/L	10	ND	119	70-130			07/01/15	
1,2,3-Trichlorobenzene	11	0.50	ug/L	10	ND	106	70-130			07/01/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10	ND	105	70-130			07/01/15	
1,2,4-Trimethylbenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
1,2-Dichlorobenzene	11	0.50	ug/L	10	ND	106	70-130			07/01/15	
1,2-Dichloroethane	11	0.50	ug/L	10	ND	113	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
1,2-Dichloropropane	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10	ND	114	70-130			07/01/15	
1,3-Dichlorobenzene	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
1,3-Dichloropropane	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
1,4-Dichlorobenzene	11	0.50	ug/L	10	ND	107	70-130			07/01/15	
2,2-Dichloropropane	12	0.50	ug/L	10	ND	115	70-130			07/01/15	
2-Butanone	10	5.0	ug/L	10	ND	102	70-130			07/01/15	
2-Chlorotoluene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
2-Hexanone	10	10	ug/L	10	ND	103	70-130			07/01/15	
4-Chlorotoluene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10	ND	102	70-130			07/01/15	
Acetone	8.9	10	ug/L	10	ND	89	70-130			07/01/15	
Benzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Bromobenzene	10	0.50	ug/L	10	ND	104	70-130			07/01/15	
Bromochloromethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
Bromodichloromethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
Bromoform	8.6	0.50	ug/L	10	ND	86	70-130			07/01/15	
Bromomethane	9.4	0.50	ug/L	10	ND	94	70-130			07/01/15	
Carbon disulfide	12	10	ug/L	10	ND	119	70-130			07/01/15	
Carbon Tetrachloride	12	0.50	ug/L	10	ND	118	70-130			07/01/15	
Chlorobenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
Chloroethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Chloroform	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
Chloromethane	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10	ND	114	70-130			07/01/15	
cis-1,3-Dichloropropene	9.5	0.50	ug/L	10	ND	95	70-130			07/01/15	
Dibromochloromethane	9.9	0.50	ug/L	10	ND	99	70-130			07/01/15	
Dibromomethane	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Dichlorodifluoromethane	13	0.50	ug/L	10	ND	134	70-130			07/01/15	MS1.0 ***High***
Dichloromethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10	ND	112	70-130			07/01/15	
Ethyl tert-Butyl Ether (ETBE)	12	0.50	ug/L	10	ND	115	70-130			07/01/15	
Ethylbenzene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
Hexachlorobutadiene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Isopropylbenzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
m,p-Xylenes	23	0.50	ug/L	20	ND	114	70-130			07/01/15	
Methyl-t-butyl ether	22	0.50	ug/L	20	ND	111	70-130			07/01/15	
Naphthalene	9.9	0.50	ug/L	10	ND	99	70-130			07/01/15	
n-Butylbenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
n-Propylbenzene	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
o-Xylene	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
p-Isopropyltoluene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
sec-Butylbenzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Styrene	14	0.50	ug/L	10	ND	142	70-130			07/01/15	MS1.0 ***High***
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10	ND	113	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10	ND	103	70-130			07/01/15	
tert-Butylbenzene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Tetrachloroethene (PCE)	12	0.50	ug/L	10	ND	120	70-130			07/01/15	
Toluene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
trans-1,2-Dichloroethene	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
trans-1,3-Dichloropropene	8.9	0.50	ug/L	10	ND	89	70-130			07/01/15	
Trichloroethene (TCE)	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
Trichlorofluoromethane	13	5.0	ug/L	10	ND	132	70-130			07/01/15	MS1.0 ***High***
Vinyl Chloride	13	0.50	ug/L	10	ND	132	70-130			07/01/15	MS1.0 ***High***
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*98*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*99*	*70-130*			07/01/15	
EPA 525.2 - Quality Control											
Batch: A507341										Prepared: 07/02/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A507341-BLK1)											
Alachlor	ND	1.0	ug/L							07/06/15	
Atrazine	ND	0.50	ug/L							07/06/15	
Benzo(a)pyrene	ND	0.10	ug/L							07/06/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							07/06/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							07/06/15	
Bromacil	ND	10	ug/L							07/06/15	
Butachlor	ND	0.38	ug/L							07/06/15	
Diazinon	ND	0.25	ug/L							07/06/15	
Dimethoate	ND	10	ug/L							07/06/15	
Metolachlor	ND	0.50	ug/L							07/06/15	
Metribuzin	ND	0.50	ug/L							07/06/15	
Molinate	ND	2.0	ug/L							07/06/15	
Prometryn	ND	2.0	ug/L							07/06/15	
Propachlor	ND	0.50	ug/L							07/06/15	
Simazine	ND	1.0	ug/L							07/06/15	
Thiobencarb	ND	1.0	ug/L							07/06/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*108*	*70-130*			07/06/15	
Blank Spike (A507341-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		106	70-130			07/06/15	
Atrazine	0.57	0.50	ug/L	0.50		115	70-130			07/06/15	
Benzo(a)pyrene	0.19	0.10	ug/L	0.10		193	70-130			07/06/15	BS ***High***
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		106	70-130			07/06/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		116	70-130			07/06/15	
Bromacil	1.4	10	ug/L	1.0		136	70-130			07/06/15	BS ***High***
Butachlor	1.1	0.38	ug/L	1.0		111	70-130			07/06/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130			07/06/15	
Dimethoate	1.2	10	ug/L	1.0		117	70-130			07/06/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 525.2 - Quality Control												
Batch: A507341										Prepared: 07/02/2015		
Prep Method: EPA 525.2										Analyst: MTM		
Blank Spike (A507341-BS1)												
Metolachlor	2.2	0.50	ug/L	2.0		110	70-130			07/06/15		
Metribuzin	1.2	0.50	ug/L	1.0		116	70-130			07/06/15		
Molinate	1.0	2.0	ug/L	1.0		103	70-130			07/06/15		
Prometryn	1.9	2.0	ug/L	2.0		93	70-130			07/06/15		
Propachlor	0.54	0.50	ug/L	0.50		107	70-130			07/06/15		
Simazine	0.36	1.0	ug/L	0.35		103	70-130			07/06/15		
Thiobencarb	0.56	1.0	ug/L	0.50		113	70-130			07/06/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*103*	*70-130*			07/06/15		
Blank Spike Dup (A507341-BSD1)												
Alachlor	1.1	1.0	ug/L	1.0		106	70-130	1	30	07/06/15		
Atrazine	0.49	0.50	ug/L	0.50		99	70-130	15	30	07/06/15		
Benzo(a)pyrene	0.19	0.10	ug/L	0.10		193	70-130	0	30	07/06/15	BS	***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		111	70-130	5	30	07/06/15		
Bis(2-ethylhexyl) phthalate	1.8	3.0	ug/L	1.5		117	70-130	1	30	07/06/15		
Bromacil	1.4	10	ug/L	1.0		137	70-130	1	30	07/06/15	BS	***High***
Butachlor	1.1	0.38	ug/L	1.0		107	70-130	4	30	07/06/15		
Diazinon	0.18	0.25	ug/L	0.20		90	70-130	9	30	07/06/15		
Dimethoate	1.1	10	ug/L	1.0		113	70-130	4	30	07/06/15		
Metolachlor	2.2	0.50	ug/L	2.0		109	70-130	1	30	07/06/15		
Metribuzin	1.2	0.50	ug/L	1.0		116	70-130	0	30	07/06/15		
Molinate	1.1	2.0	ug/L	1.0		109	70-130	5	30	07/06/15		
Prometryn	2.1	2.0	ug/L	2.0		104	70-130	11	30	07/06/15		
Propachlor	0.54	0.50	ug/L	0.50		108	70-130	1	30	07/06/15		
Simazine	0.35	1.0	ug/L	0.35		101	70-130	3	30	07/06/15		
Thiobencarb	0.55	1.0	ug/L	0.50		109	70-130	3	30	07/06/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*108*	*70-130*			07/06/15		
Matrix Spike (A507341-MS1), Source: A5F2610-01												
Alachlor	1.2	1.0	ug/L	0.97	ND	120	70-130			07/06/15		
Atrazine	0.57	0.50	ug/L	0.49	ND	118	70-130			07/06/15		
Benzo(a)pyrene	0.18	0.10	ug/L	0.097	ND	184	70-130			07/06/15	MS1.0	***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	1.9	ND	113	70-130			07/06/15		
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5	ND	112	70-130			07/06/15		
Bromacil	1.4	10	ug/L	0.97	ND	142	70-130			07/06/15	MS1.0	***High***
Butachlor	1.2	0.38	ug/L	0.97	ND	121	70-130			07/06/15		
Diazinon	0.19	0.25	ug/L	0.19	ND	99	70-130			07/06/15		
Dimethoate	1.2	10	ug/L	0.97	ND	120	70-130			07/06/15		
Metolachlor	2.2	0.50	ug/L	1.9	ND	113	70-130			07/06/15		
Metribuzin	1.2	0.50	ug/L	0.97	ND	124	70-130			07/06/15		
Molinate	1.0	2.0	ug/L	0.97	ND	104	70-130			07/06/15		
Prometryn	2.0	2.0	ug/L	1.9	ND	101	70-130			07/06/15		
Propachlor	0.54	0.50	ug/L	0.49	ND	112	70-130			07/06/15		
Simazine	0.38	1.0	ug/L	0.34	ND	112	70-130			07/06/15		
Thiobencarb	0.57	1.0	ug/L	0.49	ND	117	70-130			07/06/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A507341										Prepared: 07/02/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A507341-MS1), Source: A5F2610-01											
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.9*			*4.9*		*100*	*70-130*			07/06/15	
EPA 531.1 - Quality Control											
Batch: A507267										Prepared: 06/30/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Blank (A507267-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							07/01/15	
Aldicarb	ND	3.0	ug/L							07/01/15	
Aldicarb Sulfone	ND	2.0	ug/L							07/01/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							07/01/15	
Carbaryl	ND	5.0	ug/L							07/01/15	
Carbofuran	ND	5.0	ug/L							07/01/15	
Methiocarb	ND	2.0	ug/L							07/01/15	
Methomyl	ND	2.0	ug/L							07/01/15	
Oxamyl	ND	20	ug/L							07/01/15	
Propoxur	ND	2.0	ug/L							07/01/15	
Blank Spike (A507267-BS1)											
3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		102	80-120			07/01/15	
Aldicarb	3.6	3.0	ug/L	4.0		91	80-120			07/01/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			07/01/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		103	80-120			07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120			07/01/15	
Carbofuran	4.2	5.0	ug/L	4.0		106	80-120			07/01/15	
Methiocarb	4.1	2.0	ug/L	4.0		102	80-120			07/01/15	
Methomyl	3.9	2.0	ug/L	4.0		97	80-120			07/01/15	
Oxamyl	4.1	20	ug/L	4.0		102	80-120			07/01/15	
Propoxur	4.1	2.0	ug/L	4.0		102	80-120			07/01/15	
Blank Spike Dup (A507267-BSD1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120	2	20	07/01/15	
Aldicarb	3.6	3.0	ug/L	4.0		90	80-120	1	20	07/01/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		98	80-120	2	20	07/01/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		100	80-120	3	20	07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	1	20	07/01/15	
Carbofuran	4.0	5.0	ug/L	4.0		99	80-120	6	20	07/01/15	
Methiocarb	3.4	2.0	ug/L	4.0		85	80-120	17	20	07/01/15	
Methomyl	4.0	2.0	ug/L	4.0		100	80-120	4	20	07/01/15	
Oxamyl	4.0	20	ug/L	4.0		100	80-120	2	20	07/01/15	
Propoxur	3.9	2.0	ug/L	4.0		96	80-120	6	20	07/01/15	
Matrix Spike (A507267-MS1), Source: A5F2371-01											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0	ND	105	65-135			07/01/15	
Aldicarb	3.7	3.0	ug/L	4.0	ND	93	65-135			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A507267										Prepared: 06/30/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Matrix Spike (A507267-MS1), Source: A5F2371-01											
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			07/01/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0	ND	99	65-135			07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	102	65-135			07/01/15	
Carbofuran	4.2	5.0	ug/L	4.0	ND	105	65-135			07/01/15	
Methiocarb	4.2	2.0	ug/L	4.0	ND	89	65-135			07/01/15	
Methomyl	4.4	2.0	ug/L	4.0	ND	109	65-135			07/01/15	
Oxamyl	4.1	20	ug/L	4.0	ND	101	65-135			07/01/15	
Propoxur	4.0	2.0	ug/L	4.0	ND	100	65-135			07/01/15	
EPA 547 - Quality Control											
Batch: A507422										Prepared: 07/06/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A507422-BLK1)											
Glyphosate	ND	25	ug/L							07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike (A507422-BS1)											
Glyphosate	91	25	ug/L	100		91	70-130			07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike Dup (A507422-BSD1)											
Glyphosate	120	25	ug/L	100		117	70-130	25	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
Matrix Spike (A507422-MS1), Source: A5F2424-01											
Glyphosate	88	25	ug/L	100	ND	87	70-130			07/06/15	
Surrogate: AMPA	*96*			*100*		*94*	*70-130*			07/06/15	
Matrix Spike Dup (A507422-MSD1), Source: A5F2424-01											
Glyphosate	120	25	ug/L	100	ND	114	70-130	27	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 07/02/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A507403-BLK1)											
Endothall	ND	45	ug/L							07/05/15	
Blank Spike (A507403-BS1)											
Endothall	18	45	ug/L	20		92	46-116			07/05/15	
Blank Spike Dup (A507403-BSD1)											
Endothall	22	45	ug/L	20		110	46-116	18	30	07/05/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 07/02/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Matrix Spike (A507403-MS1), Source: A5F2319-01											
Endothall	20	45	ug/L	20	ND	98	46-116			07/05/15	
EPA 549.2 - Quality Control											
Batch: A507404										Prepared: 07/02/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A507404-BLK1)											
Diquat	ND	0.40	ug/L							07/09/15	
Blank Spike (A507404-BS1)											
Diquat	3.6	0.40	ug/L	4.0		90	70-130			07/09/15	
Blank Spike Dup (A507404-BSD1)											
Diquat	3.5	0.40	ug/L	4.0		88	70-130	2	30	07/09/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5F2584

06302015

Monte6227

Turnaround: Standard
Due Date: 7/15/2015

Monterey Bay Analytical

BSK Associates
Engineers & Laboratories
1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

1.4.55

Turnaround Time Request
- [x] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

A5F2584 06/30/2015
Monte6227 10

*Required Fields Temp:

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am
Project #:
How would you like to receive your completed results?* [x] 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)*: 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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
1	MW-9M (monitoring)	6/28/15	1020	GW	AB32387	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	6/29/15	1600		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
Received for Laboratory (Signature and Printed Name)		Date	Time	Payment Received at Delivery: Date:	Amount: Check / Cash PIA#: Init.

Shipping Method: ONTRAC UPS GSO WALK-IN FED EX Courier: _____
Custody Seal: Y / N
Cooling Method: Wet Blue None
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 ≤ 6°C Micro < 10°C 14.5.5	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 $Na_2S_2O_3$	—	—	1
None (P) White Cap	—	—	
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N	
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N	
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—	
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2C
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	7V
$Na_2S_2O_3$ + 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	—	—	

6/30/15

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JTH @ 16:21 Labels checked by: MR @ 1625 RUSH Paged by:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

July 8, 2015 Ceres ID: 10715

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 July2, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

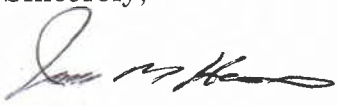
This work was authorized under M.B.A.'s Project # AB32387.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10715-001	MW-9M (monitoring)	7/2/2015	6/28/2015	10:20

Section II: Data Summary

Sample ID: **Method Blank**

Client Data
Name: Monterey Bay Analytical
Project: AB32387

Sample Data
Matrix: Aqueous
Sample Size: 1.000 L

Laboratory Data
Lab Sample ID: 0-MB001
QC Batch #: 1337
ZB-5 MS Analysis Date: 8-Jul-15
Date Received: NA
Date Extracted: 7-Jul-15

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	4.46		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	88.6	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	84.8	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB32387	Sample Size:	1.000 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
				ZB-5 MS Analysis Date:	8-Jul-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	9.44	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	90.7	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	9.23	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-9M (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10715-001	Date Received:	2-Jul-15
Project:	AB32387	Sample Size:	1.044 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
Date Collected:	28-Jun-15			ZB-5 MS Analysis Date:	8-Jul-15		
Time Collected:	10:20						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	1.51		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	83.1	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	82.1	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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

Ceres Project ID: 10715

Temperature: 3.5 °C

Pg. ___ of ___

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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other	Comments
1	MW-9M (monitoring)	6/28/2015	1020	Aq	1	X							AB32387
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
D. Holland	7/1/2015	16:00	JM Hodin	7/2/15	09:15

Client understands that all terms desribed 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: 10715	Date/Time: 7/2/15 09:15
Client Project ID: AB32387	Received Temperature: 3.5°C Acceptable: Y / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies:	
List Damaged Samples:	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10715 PB: 1337 Sample #s: 1 Due Date: 7/17/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one):

- ☐ 1613 2,3,7,8-TCDD
- ☐ 1613 2,3,7,8-TCDD/F
- ☐ 1613 Cl_4-Cl_8
- ☐ 8290 2,3,7,8-TCDD
- ☐ 8290 2,3,7,8-TCDD/F
- ☐ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
1071S-1	1562.01g	518.42g	1.044L

Chemist: _____ Date: 7/7/15

Method: 1613B
SOP #: 3021.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Ceres ID	Client ID	Ver.	wt/vol	ISS/PAR chem/date/witness	CSS chem/date/witness	AP	~~AB/AC~~	FC	RSS chem/date/witness
0-1337-MB001	Method Blank		1.000L	[illegible] 7/7/15 DH	[illegible] 7/8/15 DH	NA	7/8/15	NA	[illegible] 7/8/15 DH
0-1337-OPR001	OPR		1.000L	(A) ↓	↓	↓	↓	↓	↓
10715-1337-001	MW-9M (monitoring)	✓	1.044L	↓	↓	↓	↓	↓	↓

Comments (A) OPR spiked with NSS.

Soxhlet Start: 14:00 7/7/15

Soxhlet Stop: 07:00 7/8/15

Samples Logged out by: [illegible] 10:27 7/7/15

Samples Returned by: NA

Note samples Depleted: 1

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 09:49 7/8/15 [illegible]

Extracts returned to Storage Location: 15:15 7/8/15 [illegible]

Chemist: [illegible]

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	SO21115A	10l	2/11/20
NSS	B	↓	↓
CSS	C	↓	
RSS	D	2l	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	146339	7/1/16
Hexanes	30,30,100,20	150700	6/15/16
Si Gel	4g	P062315A	12/23/15
Basic Gel	4g	P061915A	12/19/15
Acid Gel	8g	P062415B	12/24/15
Acid Al	6g	P062415A	12/24/15
Na_2SO_4	1.5g	P040515A	10/15/15
20% Dcm Hex	30ml	L070915A	1/5/16

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

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1507538

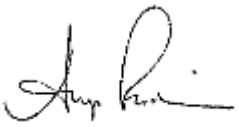
Report Created for: Monterey Bay Analytical

4 Justin Court, Suite D
Monterey, CA 93940

Project Contact: David Holland
Project P.O.:
Project Name: Geoscience

Project Received: 07/15/2015

Analytical Report reviewed & approved for release on 07/23/2015 by:



Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Monterey Bay Analytical
Project: Geoscience
WorkOrder: 1507538

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507538
Project:	Geoscience	**Extraction Method:**	E365.1
Date Received:	7/15/15 15:43	**Analytical Method:**	E365.1
Date Prepared:	7/21/15	**Unit:**	mg/L

Dissolved Phosphorous as P

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-9M (monitoring)	**1507538-001A**	**Water**	**06/28/2015 10:20**	**WC_SKALAR**	**107793**

Analytes	Result	RL	DF	Date Analyzed
Phosphorous, Dissolved (as P)	**0.062**	0.040	1	07/22/2015 21:21

Analyst(s): JS

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Quality Control Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507538
Date Prepared:	7/20/15	**BatchID:**	107793
Date Analyzed:	7/21/15	**Extraction Method:**	E365.1
Instrument:	WC_SKALAR	**Analytical Method:**	E365.1
Matrix:	Water	**Unit:**	mg/L
Project:	Geoscience	**Sample ID:**	MB/LCS-107793 1507453-001AMS/MSD

QC Summary Report for E365.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Phosphorous as P	ND	0.837	0.040	0.80	-	105	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Phosphorous as P	1.05	1.08	0.80	0.3645	86.2	89.3	80-120	2.36	20

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1507538 **ClientCode: MBAS**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
David Holland
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940
831-375-6227 FAX: 831-641-0734

Email: mweidner@mbasinc.com; Dholland@mbas
cc/3rd Party:
PO:
ProjectNo: Geoscience

Bill to:
Accounts Payable
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940

Requested TAT: 5 days

Date Received: **07/15/2015**
Date Printed: **07/15/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1507538-001	MW-9M (monitoring)	Water	6/28/2015 10:20	☐	A											

Test Legend:

1	TotalP_Diss	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: MONTEREY BAY ANALYTICAL
QC Level: LEVEL 2
Work Order: 1507538
Project: Geoscience
Client Contact: David Holland
Date Received: 7/15/2015
Comments:
Contact's Email: mweidner@mbasinc.com; Dholland@mbasinc.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1507538-001A	MW-9M (monitoring)	Water	E365.1 (Dissolved Phosphorous)	1	250mL HDPE w/ HS04	☐	6/28/2015 10:20	5 days	None	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1507538

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW)

Report To: David Holland Bill To:

Company: Monterey Bay Analytical Services

4 Justin Ct. Suite D

Monterey, Ca 93940 E-Mail: mweidner@mbasinc.com

Tele: (831) 375 - 6227 Fax: (831) 641-0734

Project #: Project Name: Geoscience

Project Location: CalAm

Sampler Signature: Matan Salmon

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other: Total Dissolved Phosphorous	Other: (Samples filtered and preserved w/ H2SO4)	Comments
																																Filter Samples for Metals analysis: Yes / No
	MW-9M (monitoring)	6/28/15	1020	1	P	X					X			X																X		AB32387

Relinquished By: David Holland/ Date: 7/14/15 Time: 16:00 Received By:

Relinquished By: Date: 7/15/15 Time: 0830 Received By:

Relinquished By: Date: Time: Received By:

ICE/t° 2.0

GOOD CONDITION_____

HEAD SPACE ABSENT_____

DECHLORINATED IN LAB_____

APPROPRIATE CONTAINERS_____

PRESERVED IN LAB_____

VOAS O&G METALS OTHER

PRESERVATION_____ pH<2_____

COMMENTS: SpCond=44462uS/cm

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Sample Receipt Checklist

Client Name: **Monterey Bay Analytical**
Date and Time Received: **7/15/2015 3:43:48 PM**

Project Name: **Geoscience**
LogIn Reviewed by: Maria Venegas

WorkOrder №: **1507538** Matrix: Water
Carrier: Golden State Overnight

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET/BLU)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5G01016

Report Date: 07/13/15 11:44

Received Date: 07/01/15 09:45

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 07/01/15 09:45 with the Chain of Custody document. The samples were received in good condition, at 2.3 °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: 07/01/15 09:45
Date Reported: 07/13/15 11:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-9M (monitoring)	Matan Salmon	5G01016-01	Water	06/28/15 10:20
Comments: AB32387				

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

5G01016-01 MW-9M (monitoring)

Sampled: 06/28/15 10:20 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32387

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5G0128 Prepared: 07/02/15 10:00 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	10	ug/l	1	07/02/15 13:53	

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5G0076 Prepared: 07/02/15 12:50 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	07/06/15 22:51	
4,4´-DDE	ND		0.010	ug/l	1	07/06/15 22:51	
4,4´-DDT	ND		0.010	ug/l	1	07/06/15 22:51	
Aldrin	ND		0.010	ug/l	1	07/06/15 22:51	
alpha-BHC	ND		0.010	ug/l	1	07/06/15 22:51	
Aroclor 1016	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1221	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1232	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1242	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1248	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1254	ND		0.10	ug/l	1	07/06/15 22:51	
Aroclor 1260	ND		0.10	ug/l	1	07/06/15 22:51	
beta-BHC	ND		0.010	ug/l	1	07/06/15 22:51	
Chlordane (tech)	ND		0.10	ug/l	1	07/06/15 22:51	
Chlorothalonil	ND		0.050	ug/l	1	07/06/15 22:51	
delta-BHC	ND		0.010	ug/l	1	07/06/15 22:51	
Dieldrin	ND		0.010	ug/l	1	07/06/15 22:51	
Endosulfan I	ND		0.010	ug/l	1	07/06/15 22:51	
Endosulfan II	ND		0.010	ug/l	1	07/06/15 22:51	
Endosulfan sulfate	ND		0.010	ug/l	1	07/06/15 22:51	
Endrin	ND		0.010	ug/l	1	07/06/15 22:51	
Endrin aldehyde	ND		0.010	ug/l	1	07/06/15 22:51	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	07/06/15 22:51	
Heptachlor	ND		0.010	ug/l	1	07/06/15 22:51	
Heptachlor epoxide	ND		0.010	ug/l	1	07/06/15 22:51	
Hexachlorobenzene	ND		0.050	ug/l	1	07/06/15 22:51	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	07/06/15 22:51	
Methoxychlor	ND		0.010	ug/l	1	07/06/15 22:51	
PCBs, Total	ND		0.50	ug/l	1	07/06/15 22:51	
Propachlor	ND		0.050	ug/l	1	07/06/15 22:51	
Toxaphene	ND		1.0	ug/l	1	07/06/15 22:51	
Trifluralin	ND		0.010	ug/l	1	07/06/15 22:51	
Surr: Decachlorobiphenyl	*92 %*	Conc:*0.0925*	*70-130*	%			
Surr: Tetrachloro-meta-xylene	*86 %*	Conc:*0.0858*	*70-130*	%			

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

5G01016-01 MW-9M (monitoring)

Sampled: 06/28/15 10:20 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32387

Chlorinated Pesticides and/or PCBs

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
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QUALITY CONTROL SECTION

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Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

Anions by IC, EPA Method 9056 - Quality Control

Batch W5G0128 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0128-BLK1)				Analyzed: 07/02/15 11:27						
Iodide	ND	10	ug/l							
LCS (W5G0128-BS1)				Analyzed: 07/02/15 11:59						
Iodide	42.7	10	ug/l	40.0		107	85-115			
Matrix Spike (W5G0128-MS1)	**Source: 5G01016-01**			Analyzed: 07/02/15 16:57						
Iodide	41.9	10	ug/l	40.0	ND	105	80-120			
Matrix Spike (W5G0128-MS2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:26						
Iodide	54.2	10	ug/l	40.0	11.7	106	80-120			
Matrix Spike Dup (W5G0128-MSD1)	**Source: 5G01016-01**			Analyzed: 07/02/15 17:11						
Iodide	43.6	10	ug/l	40.0	ND	109	80-120	4	20	
Matrix Spike Dup (W5G0128-MSD2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:41						
Iodide	53.5	10	ug/l	40.0	11.7	104	80-120	1	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							

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4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							
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	*0.108*		*ug/l*	*0.100*		*108*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0934*		*ug/l*	*0.100*		*93*	*70-130*			
LCS (W5G0076-BS1)				Analyzed: 07/06/15 20:48						
4,4´-DDD	0.0859	0.010	ug/l	0.100		86	55-142			
4,4´-DDE	0.0934	0.010	ug/l	0.100		93	49-129			
4,4´-DDT	0.100	0.010	ug/l	0.100		100	54-160			
Aldrin	0.0872	0.010	ug/l	0.100		87	29-115			
alpha-BHC	0.0936	0.010	ug/l	0.100		94	59-131			
beta-BHC	0.107	0.010	ug/l	0.100		107	63-136			
delta-BHC	0.109	0.010	ug/l	0.100		109	59-137			
Dieldrin	0.0909	0.010	ug/l	0.100		91	59-135			
Endosulfan I	0.0701	0.010	ug/l	0.100		70	28-138			
Endosulfan II	0.0741	0.010	ug/l	0.100		74	53-133			
Endosulfan sulfate	0.0783	0.010	ug/l	0.100		78	58-155			
Endrin	0.0882	0.010	ug/l	0.100		88	57-148			
Endrin aldehyde	0.0980	0.010	ug/l	0.100		98	45-139			
gamma-BHC (Lindane)	0.0908	0.010	ug/l	0.100		91	59-129			
Heptachlor	0.0912	0.010	ug/l	0.100		91	42-136			
Heptachlor epoxide	0.0934	0.010	ug/l	0.100		93	59-134			
Methoxychlor	0.0773	0.010	ug/l	0.100		77	56-167			
Surr: Decachlorobiphenyl	*0.100*		*ug/l*	*0.100*		*100*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0837*		*ug/l*	*0.100*		*84*	*70-130*			
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
4,4´-DDD	0.0966	0.010	ug/l	0.100		97	55-142	12	25	
4,4´-DDE	0.105	0.010	ug/l	0.100		105	49-129	11	25	
4,4´-DDT	0.112	0.010	ug/l	0.100		112	54-160	11	25	
Aldrin	0.0981	0.010	ug/l	0.100		98	29-115	12	25	
alpha-BHC	0.106	0.010	ug/l	0.100		106	59-131	13	25	
beta-BHC	0.121	0.010	ug/l	0.100		121	63-136	12	25	
delta-BHC	0.124	0.010	ug/l	0.100		124	59-137	13	25	

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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
Dieldrin	0.102	0.010	ug/l	0.100		102	59-135	12	25	
Endosulfan I	0.0768	0.010	ug/l	0.100		77	28-138	9	25	
Endosulfan II	0.0832	0.010	ug/l	0.100		83	53-133	12	25	
Endosulfan sulfate	0.0895	0.010	ug/l	0.100		90	58-155	13	25	
Endrin	0.0988	0.010	ug/l	0.100		99	57-148	11	25	
Endrin aldehyde	0.111	0.010	ug/l	0.100		111	45-139	13	25	
gamma-BHC (Lindane)	0.104	0.010	ug/l	0.100		104	59-129	13	25	
Heptachlor	0.103	0.010	ug/l	0.100		103	42-136	13	25	
Heptachlor epoxide	0.104	0.010	ug/l	0.100		104	59-134	11	25	
Methoxychlor	0.0884	0.010	ug/l	0.100		88	56-167	13	25	
Surr: Decachlorobiphenyl	*0.105*		*ug/l*	*0.100*		*105*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0932*		*ug/l*	*0.100*		*93*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
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Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

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.

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size
32387		~~AR~~ MW-9M	6/28/15	1020	4.6						22		

Analysis Requested	See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balanc	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter
Field Parameters:						
Temp:			17.2°C			
pH:			6.84			
Sp Cond:			44462			uS/cm
Turb:			0.29			NTU

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon		6/28/15	1020 am	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Matan Salmon		6/29/15	8:21	
Received by:					
Relinquished by:					
Received by:	Mollie Wooden		6/29/15	921	

[ ] Payment received Check # Amount: Receipt # Date:

CalAm DW - Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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 + divide 1L (0.45µ membrane filter) → 500mL H_2SO_4 + $Na_2S_2O_3$

250mL H_2SO_4

250mL NP

California American Water
P.O. Box 951, Monterey, CA 93942-0951
ph: 831-646-3259 / 831-646-3269
Susy Jacobson

Monterey Bay Analytical Services
4 Justin Court Suite D, Monterey, CA 93940
831.375.MBAS
www.MBASinc.com
ELAP Certification Number: 2385

Tuesday, August 11, 2015

Lab Number: AB32340

Collection Date/Time: 6/25/2015 14:40 Sample Collector: SALMON M

Submittal Date/Time: 6/25/2015 16:16 Sample ID

Sample Description: MW-9D

Analyte	Method	Unit	Result	Qual	PQL	Date Analyzed	Analyst:
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	**170**		2	7/7/2015	LRH
Aluminum, Total	EPA200.8	µg/L	**Not Detected**		10	7/2/2015	SM
Ammonia-N, Dissolved	SM4500NH3 D	mg/L	**Not Detected**		0.05	6/30/2015	TC
Arsenic, Total	EPA200.8	µg/L	**2**		1	7/2/2015	SM
Barium, Dissolved	EPA200.8	µg/L	**59**		10	7/2/2015	SM
Bicarbonate (as HCO3-)	SM2320B	mg/L	**207**		10	7/7/2015	LJ
Boron, Dissolved	EPA200.7	mg/L	**0.08**		0.05	7/1/2015	MW
Bromide, Dissolved	EPA300.0	mg/L	**0.2**		0.1	6/26/2015	MW
Calcium	EPA200.7	mg/L	**32**		0.5	7/1/2015	MW
Calcium, Dissolved	EPA200.7	mg/L	**35**		0.5	7/1/2015	MW
Carbamates by HPLC (EPA 531)	EPA531	µg/L	**Not Detected**	E		7/1/2015	BSK
Carbonate as CaCO3	SM2320B	mg/L	**Not Detected**		10	7/7/2015	LJ
Chloride, Dissolved	EPA300.0	mg/L	**74**		1	6/26/2015	MW
Chlorinated Pesticides and PCB (EPA 508)	EPA508	µg/L	**Not Detected**	E		7/6/2015	WECK
Color, Apparent (Unfiltered)	SM2120B	Color Units	**Not Detected**		3	6/26/2015	LRH
Copper	EPA200.7	µg/L	**10**		10	7/1/2015	MW
DBCP & EDB	EPA504.1	µg/L	**Not Detected**	E		7/2/2015	BSK
Dioxin	EPA 1613	pg/L	**Not Detected**	E		7/8/2015	CERES
Diquat (EPA 549)	EPA549	µg/L	**Not Detected**	E		7/9/2015	BSK
Dissolved Phosphorus	EPA 365.1	mg/L	**0.12**	E	0.040	7/22/2015	MCCAM
Endothall	EPA548.1	µg/L	**Not Detected**	E		7/5/2015	BSK
Fluoride, Dissolved	EPA300.0	mg/L	**0.3**		0.1	6/26/2015	MW
Glyphosate	EPA547	µg/L	**Not Detected**	E		7/6/2015	BSK
Hardness (as CaCO3)	SM2340B/Calc	mg/L	**133**		10	7/6/2015	TC
Hydroxide	SM2320B	mg/L	**Not Detected**		5	7/7/2015	LJ
Iodide	EPA9056M	µg/L	**Not Detected**	E	500	7/2/2015	WECK
Iron	EPA200.7	µg/L	**10**		10	7/1/2015	MW
Iron, Dissolved	EPA200.7	µg/L	**Not Detected**		10	7/1/2015	MW
Kjehldahl Nitrogen, Dissolved	SM4500-NH3 B,	mg/L	**Not Detected**		0.5	7/7/2015	TC
Lithium	EPA200.8	µg/L	**38**		1	7/2/2015	SM
Magnesium	EPA200.7	mg/L	**13**		0.5	7/1/2015	MW

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

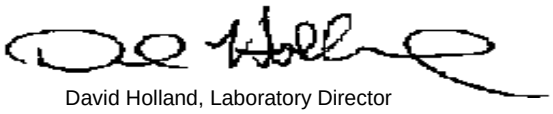
H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See Report attachments.

D = Method deviates from standard method due to insufficient sample for MS/MSD

Magnesium, Dissolved	EPA200.7	mg/L	**13**		0.5	7/1/2015	MW
Manganese, Dissolved	EPA200.7	µg/L	**247**		10	7/1/2015	MW
Manganese, Total	EPA200.7	µg/L	**254**		10	7/1/2015	MW
MBAS (Surfactants)	SM5540C	mg/L	**Not Detected**		0.05	6/26/2015	HM
Nitrate as NO3	EPA300.0	mg/L	**2**		1	6/26/2015	MW
Nitrate+Nitrite as N	EPA300.0	mg/L	**0.9**		0.1	6/26/2015	MW
Nitrite as NO2-N, Dissolved	EPA300.0	mg/L	**0.3**		0.1	6/26/2015	MW
Odor Threshold at 60 C	SM2150B	TON	**1**		1	6/26/2015	LRH
o-Phosphate-P	Hach 8048	mg/L	**0.06**		0.01	6/26/2015	LRH
pH (Field Test)	SM4500-H+B	pH	**7.44**			6/25/2015	MS
pH (Laboratory)	SM4500-H+B	pH (H)	**7.5**		0.1	6/25/2015	LRH
Phenoxy Acid Herbicides (515.3)	EPA515.3	µg/L	**Not Detected**	E		7/2/2015	BSK
Potassium	EPA200.7	mg/L	**3.5**		0.5	7/1/2015	MW
Potassium, Dissolved	EPA200.7	mg/L	**3.6**		0.5	7/1/2015	MW
QC Ratio TDS/SEC	Calculation		**0.59**			7/2/2015	HM
Reg. Org. Compounds (EPA 525)	EPA525	µg/L	**Not Detected**	E		7/7/2015	BSK
Silica as SiO2, Dissolved	EPA200.7	mg/L	**45**		0.5	7/1/2015	MW
Sodium	EPA200.7	mg/L	**68**		0.5	7/1/2015	MW
Sodium, Dissolved	EPA200.7	mg/L	**68**		0.5	7/1/2015	MW
Specific Conductance (E.C)	SM2510B	µmhos/cm	**624**		1	6/30/2015	LJ
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	**574**		1	6/25/2015	MS
Strontium, Dissolved	EPA200.8	µg/L	**273**		5	7/2/2015	SM
Sulfate, Dissolved	EPA300.0	mg/L	**25**		1	6/26/2015	MW
Temperature (Field)	SM2550	° C	**21.2**			6/25/2015	MS
Total Diss. Solids	SM2540C	mg/L	**366**		10	6/30/2015	HM
Turbidity	EPA180.1	NTU	**0.10**		0.05	6/26/2015	LRH
Turbidity (Field)	EPA180.1	NTU	**0.86**		0.05	6/25/2015	MS
Volatile Org. Compounds (524)	EPA524	µg/L	**Not Detected**	E		7/1/2015	BSK
Zinc	EPA200.7	µg/L	**22**		10	7/1/2015	MW

Sample Comments:

Report Approved by:



David Holland, Laboratory Director

mg/L: Milligrams per liter (=ppm) ug/L : Micrograms per liter (=ppb) PQL : Practical Quantitation Limit J = Result is less than PQL

H = Analyzed ouside 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	**32340 Total**		**Dissolved**

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	68	0.04350	2.96
Potassium	3.5	0.02558	0.09
Calcium	32	0.04990	1.60
Magnesium	13	0.08229	1.07
NH3-N	0	0.07143	0.00
		SUM	5.71

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	170	0.02000	3.40
Sulfate	25	0.02082	0.52
Chloride	74	0.02821	2.09
Nitrate-Nitrogen	0.6	0.07138	0.04
Phosphate-P	0.12	0.01031	0.00
Bromide	0.2	0.01252	0.00
		SUM	6.05

ANION-CATION BALANC **-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	624	
Cation Sum X 100	571	**92%**
Anion Sum X 100	605	**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.

CORRECTNESS OF ANALYSIS

CATION	MG/L	FACTOR	MEQ/L
Sodium	68	0.04350	2.96
Potassium	3.6	0.02558	0.09
Calcium	35	0.04990	1.75
Magnesium	13	0.08229	1.07
NH3-N	0	0.07143	0.00
		SUM	5.87

ANION	MG/L	FACTOR	MEQ/L
Total Alkalinity	170	0.02000	3.40
Sulfate	25	0.02082	0.52
Chloride	74	0.02821	2.09
Nitrate-Nitrogen	0.6	0.07138	0.04
Phosphate-P	0.12	0.01031	0.00
Bromide	0.2	0.01252	0.00
		SUM	6.05

ANION-CATION BA **-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	624	
Cation Sum X 100	587	**94%**
Anion Sum X 100	605	**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

Ammonia by Electrode QC Summary (SM 4500-NH3)

Date: 6/30/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.01	---	<0.05	1100
ICVL	0.050	0.04	80.00%	90-110	1100
ICV	0.500	0.500	100.00%	90-110	1100
CCVB1	---	0.11	---	<0.05	1130
CCV1	0.500	0.490	98.00%	90-110	1130
CCVB2	---	0.03	---	<0.05	1200

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	
AB32392	ND	0.500	0.500	0.510	100	102	2.0	85-120	10	1200

MS = Matrix Spike; MSD = Matrix Spike Duplicate; IPC = Instrument Performance Check

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Alkalinity QC Summary (SM 2320B)

Date Analyzed: 7/7/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICV	40	41	103	95-105	9:02
CCV	40	40	100	95-105	10:58

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB32340	170	170	0	5	10:58

ICV= Initial Calibration Verification; CCV= Continuing Calibration Verification; RPD = Relative Percent Difference; Rec = Recovery

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Color QC Summary (SM 2120B)

Date Analyzed: 6/26/2015

	Value (Color Units)	Result (Color Units)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<3	---	<3	10:16
ICV	5	5	100	80-120	10:16

Sample ID	Sample (Color Units)	Sample Dup (Color Units)	% RPD	Acceptance Criteria % RPD	Time
AB32276	Not Detected	Not Detected	NA	10	10:16

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

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MBAS QC Summary (SM 5540C)

Date Analyzed: 6/26/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	0.002	---	<0.05	836
ICVL	0.050	0.047	94	80-120	838
ICV	0.250	0.259	103.6	80-120	1053

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	
AB32340	0.011	0.250	0.24	0.242	91.6	92.4	0.8	80/120	10	1024

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: 6/25/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	<0.01	---	< 0.01	11:33
LCSL	0.01	0.014	140	50-150	11:33
ICV	0.30	0.30	100	90-110	11:33
QCS	0.30	0.30	100	80-120	11:33
CCV	0.30	0.29	97	80-120	11:33

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		
AB32250	0.07	0.30	0.38	0.35	103	93	8	70-130	10	11:33	11:33

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: 6/25/2015

	Value (pH Units)	Result (pH Units)	% Rec	Acceptance Criteria %Rec	Time
ICV	6.86	6.89	100	95-105	16:45

Sample ID	Sample (pH Units)	Sample Dup (pH Units)	% RPD	Acceptance Criteria % RPD	Time
AB32325	7.5	7.5	0	10	16:45

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: 6/30/2015

	Value (umhos/cm)	Result (umhos/cm)	% Rec	Acceptance Criteria %Rec	Time
ICV	1412	1408	99.7%	95-105	1630

Sample ID	Sample (umhos/cm)	Sample Dup (umhos/cm)	% RPD	Acceptance Criteria % RPD	Time
AB32340	624	624	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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TDS QC Summary (SM 2540C)

Date Analyzed: 6/30/2015

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %	Time
ICVB	---	6	---	<10	955
ICVL	100	97	97	80-120	955
ICV	500	506	101.2	90-110	955

Sample ID	Sample (mg/L)	Sample Dup (mg/L)	% RPD	Acceptance Criteria % RPD	Time
AB32389	2940	3046	3.5	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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Kjehldahl Nitrogen QC Summary (SM 4500-NH3)

Date: 7/7/2015
Time: 1600

	Value (mg/L)	Result (mg/L)	% Rec	Acceptance Criteria %
LCB	---	0.095	---	<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
AB32315	ND	5.0	4.6	4.9	92	98	6.3	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: 6/26/2015

	Value (NTU)	Result (NTU)	% Rec	Acceptance Criteria %Rec	Time
ICVB	---	<0.05	---	<0.05	9:00
ICV	1.00	1.03	103%	95-105	9:00

Sample ID	Sample (NTU)	Sample Dup (NTU)	% RPD	Acceptance Criteria % RPD	Time
AB32307	0.05	0.05	0%	10	9:40

ICV= Initial Calibration Verification, ICVB= Initial Calibration Verification Blank;
RPD = Relative Percent Difference; Rec = Recovery

Batch # 20150701b

Analyte/		IC	Prep	LCS	%Rec	LCSD	%Rec	%Diff	IC Verification			QCS (95-105%)		
WL	Range	Blank	Blank	Value	85-115%	Value	85-115%		Value	Result	%Rec	Value	Result	%Rec
B 249.678	0.05-5ppm	0.01	0.00	1.02	101.6%	1.04	104.0%	2.4%	1	1.00	100.0%	1	1.0	99.8%
B 249.772	0.05-5ppm	0.01	0.01	1.01	101.2%	1.04	104.4%	3.2%	1	1.00	100.4%	1	1.0	99.5%
Ca 317.933	50-300ppm	-5.93	-5.98	49.8	99.6%	50.2	100.4%	0.8%	50	48.1	96.2%	50	47.1	94.2%
Ca 396.847	0.5-50ppm	-0.36	-0.41	50.3	100.6%	46.6	93.2%	7.7%	50	49.7	99.4%	50	49.2	98.4%
Cu 324.754	10ppb-100ppm	2.20	1.43	1021	102.1%	1046	104.6%	2.5%	1000	1000	100.0%	1000	988.1	98.8%
Cu 327.395	10ppb-100ppm	3.47	4.69	1027	102.7%	1047	104.7%	1.9%	1000	996	99.6%	1000	985.3	98.5%
Fe 238.204	10ppb-100ppm	2.22	1.05	1010	101.0%	1029	102.9%	2.0%	1000	1004	100.4%	1000	995.1	99.5%
Fe 259.940	10ppb-100ppm	3.07	6.13	997	99.7%	1017	101.7%	2.0%	1000	992	99.2%	1000	988.1	98.8%
K 766.491	0.5-750ppm	-0.07	-0.08	10.0	100.1%	10.3	103.1%	2.9%	10	9.9	98.7%	10	9.8	97.8%
Mg 202.582	50-1000ppm	-2.15	-2.19	50.7	101.3%	51.7	103.3%	2.0%	50	49.9	99.8%	50	49.4	98.9%
Mg 279.078	0.5-50ppm	0.24	0.18	50.4	100.9%	51.7	103.3%	2.4%	50	49.9	99.7%	50	49.4	98.8%
Mn 257.610	10ppb-11ppm	2.97	1.96	1012	101.2%	1027	102.7%	1.5%	1000	995	99.5%	1000	996.9	99.7%
Mn 260.568	10ppb-11ppm	2.02	1.43	1009	100.9%	1029	102.9%	1.9%	1000	994	99.4%	1000	995.0	99.5%
Na 568.821	50-1000ppm	0.53	0.59	49.6	99.1%	50.4	100.8%	1.7%	50	48.9	97.8%	50	48.9	97.8%
Na 589.592	0.5-50ppm	0.27	0.23	49.8	99.5%	51.8	103.5%	3.9%	50	49.5	98.9%	50	49.3	98.5%
Si 251.611	0.5-200ppm	0.30	0.12	50.4	100.9%	51.4	102.7%	1.8%	50	50.0	100.0%	50	50.1	100.3%
Si 252.411	0.5-200ppm	0.33	0.15	50.3	100.6%	51.2	102.4%	1.8%	50	50.1	100.2%	50	50.2	100.4%
Zn 213.857	10ppb-50ppm	-4.67	-5.37	1005	100.5%	1013	101.3%	0.8%	1000	988	98.8%	1000	989.3	98.9%

Sample ID AB32346

Analyte/	Sample	MS	%Rec	MSD	%Rec	%Diff	CCV (90-110%)			%Diff	CC
WL	Value	Value	70-130%	Value	70-130%		Value	Result	%Rec	10%	Blank
B 249.678	0.04	1.04	99.6%	1.03	98.8%	0.8%	1	1.00	100.1%	0.1%	0.00
B 249.772	0.05	1.03	98.0%	1.03	98.7%	0.6%	1	1.00	100.1%	0.4%	0.01
Ca 317.933	20.7	73.3	105.3%	73.3	105.2%	0.1%	50	48.4	96.8%	0.6%	-5.95
Ca 396.847	25.6	70.2	89.2%	70.2	89.4%	0.1%	50	49.6	99.2%	0.2%	-0.38
Cu 324.754	3	978	97.5%	976	97.3%	0.2%	1000	993	99.3%	0.7%	1.97
Cu 327.395	6	975	96.9%	978	97.2%	0.3%	1000	992	99.2%	0.3%	4.07
Fe 238.204	7	1010	100.3%	992	98.5%	1.8%	1000	1005	100.5%	0.1%	1.95
Fe 259.940	6	999	99.3%	981	97.5%	1.8%	1000	996	99.6%	0.5%	1.78
K 766.491	1.4	11.2	98.1%	11.2	98.4%	0.3%	10	9.8	98.5%	0.2%	-0.07
Mg 202.582	7.9	58.3	100.9%	58.5	101.3%	0.4%	50	49.8	99.6%	0.2%	-2.17
Mg 279.078	9.9	58.3	96.8%	58.2	96.6%	0.2%	50	49.9	99.9%	0.2%	0.21
Mn 257.610	2	978	97.6%	981	97.9%	0.3%	1000	996	99.6%	0.1%	2.44
Mn 260.568	2	982	98.0%	983	98.1%	0.1%	1000	997	99.7%	0.4%	1.94
Na 568.821	93.2	139.8	93.2%	139.3	92.2%	0.4%	50	47.9	95.8%	2.0%	0.62
Na 589.592	93.0	138.5	91.1%	136.4	86.7%	1.6%	50	49.0	97.9%	1.0%	0.26
Si 251.611	33.2	80.5	94.7%	80.7	95.1%	0.2%	50	50.1	100.2%	0.3%	0.13
Si 252.411	33.1	80.4	94.5%	80.5	94.8%	0.2%	50	50.1	100.2%	0.0%	0.14
Zn 213.857	10	975	96.5%	972	96.2%	0.2%	1000	993	99.3%	1%	-4.04

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: **20150626**

		F	Cl	NO2-N	SO4	Br	NO3-N
Spike amount		**2**	**20**	**2**	**20**	**2**	**2**
	ICVB	0.00	0.03	0.03	0.02	0.00	0.00
	ICV	1.97	19.87	2.10	20.51	1.81	1.92
	Rec 90-110%	98.55	99.35	104.99	102.54	90.75	96.17
	ICVL	0.19	1.74	0.20	1.68	0.22	0.21
	Rec 50-150%	95.74	87.17	100.53	84.19	112.39	105.21
Sample ID	**AB32348**	0.52	751.53	0.17	14.69	1.25	24.33
	MS	2.39	778.68	2.18	34.50	3.28	26.03
	Rec 80-120%	93.32	135.75	100.27	99.05	101.55	84.98
	MSD	2.51	753.06	2.17	33.88	3.26	25.20
	Rec 80-120%	99.61	7.66	100.14	95.94	100.14	43.40
	Diff 10%	5.14	3.35	0.12	1.82	0.86	3.25
	CCV	2.07	20.35	2.09	20.85	1.88	2.03
	Rec 90-110%	103.35	101.75	104.55	104.25	93.83	101.72
	Diff 10%	4.75	2.39	0.42	1.65	3.34	5.61
	CCVB	0.06	0.03	0.04	0.00	0.00	0.07

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5F2587
7/10/2015
Invoice: A514223

David Holland
Monterey Bay Analytical
4 Justin Court Suite D
Monterey, CA 93940

RE: Report for A5F2587 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 6/30/2015. 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.

If additional clarification of any information is required, please contact your Project Manager, John Montierth , at (800) 877-8310 or (559) 497-2888 x201.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

John Montierth, Project Manager

Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details		Invoice Details	
Client:	Monterey Bay Analytical	**Invoice To:**	Monterey Bay Analytical
Report To:	David Holland	**Invoice Attn:**	David Holland
Project #:	-	**Project PO#:**	-
Received:	6/30/2015 - 12:00		
Report Due:	7/15/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ºC: 1.4

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Cooler: New Cooler
Temperature on Receipt ºC: 5.9

Containers Intact
COC/Labels Agree
Received On Wet Ice
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Bubble Wrap
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.
MS1.0	Matrix spike recoveries exceed control limits.
MS2.0	MS/MSD RPD exceeds control limit. No material impact as both sets of recovery data meet control criteria.

Report Distribution

Recipient(s)	Report Format	CC:
David Holland	FINAL.RPT	
Mason Weidner	FINAL.RPT	

Certificate of Analysis

Sample ID: A5F2587-01
Sampled By: Matan Salmon
Sample Description: MW-9D (monitoring) // AB32340

Sample Date - Time: 06/25/15 - 14:40
Matrix: Ground Water
Sample Type: Grab

BSK Associates Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
EDB and DBCP by GC-ECD									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A507286	07/01/15	07/02/15	
Ethylene Dibromide (EDB)	EPA 504.1	ND	0.020	ug/L	1	A507286	07/01/15	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	102 %	*Acceptable range: 70-130 %*						
Chlorinated Acid Herbicides by GC-ECD									
2,4,5-T	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
2,4,5-TP (Silvex)	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
2,4-D	EPA 515.3	ND	10	ug/L	1	A507269	06/30/15	07/02/15	
Bentazon	EPA 515.3	ND	2.0	ug/L	1	A507269	06/30/15	07/02/15	
Dalapon	EPA 515.3	ND	10	ug/L	1	A507269	06/30/15	07/02/15	
Dicamba	EPA 515.3	ND	1.5	ug/L	1	A507269	06/30/15	07/02/15	
Dinoseb	EPA 515.3	ND	2.0	ug/L	1	A507269	06/30/15	07/02/15	
Pentachlorophenol	EPA 515.3	ND	0.20	ug/L	1	A507269	06/30/15	07/02/15	
Picloram	EPA 515.3	ND	1.0	ug/L	1	A507269	06/30/15	07/02/15	
Surrogate: DCPAA	EPA 515.3	99 %	*Acceptable range: 70-130 %*						
Volatile Organics by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A507280	06/30/15	07/01/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	

Certificate of Analysis

Sample ID: A5F2587-01
Sampled By: Matan Salmon
Sample Description: MW-9D (monitoring) // AB32340

Sample Date - Time: 06/25/15 - 14:40
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	A507280	06/30/15	07/01/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	BS1.0
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A507280	06/30/15	07/01/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A507280	06/30/15	07/01/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A507280	06/30/15	07/01/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Toluene	EPA 524.2	**2.2**	0.50	ug/L	1	A507280	06/30/15	07/01/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A507280	06/30/15	07/01/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A507280	06/30/15	07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	95 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 524.2	98 %	*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					
Total Xylenes, EPA 524.2		ND	0.50	ug/L					

Certificate of Analysis

Sample ID: A5F2587-01
Sampled By: Matan Salmon
Sample Description: MW-9D (monitoring) // AB32340

Sample Date - Time: 06/25/15 - 14:40
Matrix: Ground Water
Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS									
Alachlor	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Atrazine	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Benzo(a)pyrene	EPA 525.2	ND	0.10	ug/L	1	A507341	07/02/15	07/07/15	BS1.0
Bis(2-ethylhexyl) adipate	EPA 525.2	ND	3.0	ug/L	1	A507341	07/02/15	07/07/15	
Bis(2-ethylhexyl) phthalate	EPA 525.2	ND	3.0	ug/L	1	A507341	07/02/15	07/07/15	
Bromacil	EPA 525.2	ND	10	ug/L	1	A507341	07/02/15	07/07/15	BS1.0
Butachlor	EPA 525.2	ND	0.38	ug/L	1	A507341	07/02/15	07/07/15	
Diazinon	EPA 525.2	ND	0.25	ug/L	1	A507341	07/02/15	07/07/15	
Dimethoate	EPA 525.2	ND	10	ug/L	1	A507341	07/02/15	07/07/15	
Metolachlor	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Metribuzin	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Molinate	EPA 525.2	ND	2.0	ug/L	1	A507341	07/02/15	07/07/15	
Prometryn	EPA 525.2	ND	2.0	ug/L	1	A507341	07/02/15	07/07/15	
Propachlor	EPA 525.2	ND	0.50	ug/L	1	A507341	07/02/15	07/07/15	
Simazine	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Thiobencarb	EPA 525.2	ND	1.0	ug/L	1	A507341	07/02/15	07/07/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.2	92 %	*Acceptable range: 70-130 %*						
Carbamates by HPLC									
3-Hydroxycarbofuran	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb Sulfone	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Aldicarb Sulfoxide	EPA 531.1	ND	3.0	ug/L	1	A507267	06/30/15	07/01/15	
Carbaryl	EPA 531.1	ND	5.0	ug/L	1	A507267	06/30/15	07/01/15	
Carbofuran	EPA 531.1	ND	5.0	ug/L	1	A507267	06/30/15	07/01/15	
Methomyl	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Oxamyl	EPA 531.1	ND	20	ug/L	1	A507267	06/30/15	07/01/15	
Carbamates by HPLC									
Methiocarb	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Propoxur	EPA 531.1	ND	2.0	ug/L	1	A507267	06/30/15	07/01/15	
Glyphosate by HPLC									
Glyphosate	EPA 547	ND	25	ug/L	1	A507422	07/06/15	07/06/15	
Surrogate: AMPA	EPA 547	82 %	*Acceptable range: 70-130 %*						
Endothall by GC-MS									
Endothall	EPA 548.1	ND	45	ug/L	1	A507403	07/02/15	07/05/15	
Diquat by HPLC									
Diquat	EPA 549.2	ND	4.0	ug/L	1	A507404	07/02/15	07/09/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 504.1 - Quality Control											
Batch: A507286										Prepared: 07/01/2015	
Prep Method: EPA 505										Analyst: AAR	
Blank (A507286-BLK1)											
Dibromochloropropane (DBCP)	ND	0.010	ug/L							07/02/15	
Ethylene Dibromide (EDB)	ND	0.020	ug/L							07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*103*	*70-130*			07/02/15	
Blank Spike (A507286-BS1)											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20		101	70-130			07/02/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20		94	70-130			07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.48*			*0.46*		*105*	*70-130*			07/02/15	
Blank Spike Dup (A507286-BSD1)											
Dibromochloropropane (DBCP)	0.19	0.010	ug/L	0.20		97	70-130	5	20	07/02/15	
Ethylene Dibromide (EDB)	0.18	0.020	ug/L	0.20		92	70-130	2	20	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*103*	*70-130*			07/02/15	
Matrix Spike (A507286-MS1), Source: A5F2509-01											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	97	65-135			07/02/15	
Ethylene Dibromide (EDB)	0.20	0.020	ug/L	0.20	ND	96	65-135			07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.47*			*0.46*		*102*	*70-130*			07/02/15	
Matrix Spike Dup (A507286-MSD1), Source: A5F2509-01											
Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20	ND	97	65-135	1	20	07/02/15	
Ethylene Dibromide (EDB)	0.19	0.020	ug/L	0.20	ND	95	65-135	1	20	07/02/15	
Surrogate: 1-Br-2-Nitrobenzene	*0.46*			*0.47*		*99*	*70-130*			07/02/15	
EPA 515.3 - Quality Control											
Batch: A507269										Prepared: 06/30/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank (A507269-BLK1)											
2,4,5-T	ND	1.0	ug/L							07/02/15	
2,4,5-TP (Silvex)	ND	1.0	ug/L							07/02/15	
2,4-D	ND	10	ug/L							07/02/15	
Bentazon	ND	2.0	ug/L							07/02/15	
Dalapon	ND	10	ug/L							07/02/15	
Dicamba	ND	1.5	ug/L							07/02/15	
Dinoseb	ND	2.0	ug/L							07/02/15	
Pentachlorophenol	ND	0.20	ug/L							07/02/15	
Picloram	ND	1.0	ug/L							07/02/15	
Surrogate: DCPAA	*57*			*58*		*98*	*70-130*			07/02/15	
Blank Spike (A507269-BS1)											
2,4,5-T	4.4	1.0	ug/L	4.0		110	70-130			07/01/15	
2,4,5-TP (Silvex)	0.88	1.0	ug/L	0.80		111	70-130			07/01/15	
2,4-D	0.43	10	ug/L	0.40		108	70-130			07/01/15	
Bentazon	8.1	2.0	ug/L	8.0		102	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 515.3 - Quality Control											
Batch: A507269										Prepared: 06/30/2015	
Prep Method: EPA 515.3										Analyst: AAR	
Blank Spike (A507269-BS1)											
Dalapon	4.6	10	ug/L	4.0		115	70-130			07/01/15	
Dicamba	6.4	1.5	ug/L	6.0		107	70-130			07/01/15	
Dinoseb	0.83	2.0	ug/L	0.80		103	70-130			07/01/15	
Pentachlorophenol	0.16	0.20	ug/L	0.16		101	70-130			07/01/15	
Picloram	0.50	1.0	ug/L	0.40		124	70-130			07/01/15	
Surrogate: DCPAA	*58*			*58*		*99*	*70-130*			07/01/15	
Blank Spike Dup (A507269-BSD1)											
2,4,5-T	4.3	1.0	ug/L	4.0		107	70-130	3	20	07/02/15	
2,4,5-TP (Silvex)	0.89	1.0	ug/L	0.80		112	70-130	1	20	07/02/15	
2,4-D	0.44	10	ug/L	0.40		110	70-130	2	20	07/02/15	
Bentazon	8.4	2.0	ug/L	8.0		105	70-130	3	20	07/02/15	
Dalapon	4.6	10	ug/L	4.0		115	70-130	0	20	07/02/15	
Dicamba	6.4	1.5	ug/L	6.0		107	70-130	0	20	07/02/15	
Dinoseb	0.84	2.0	ug/L	0.80		105	70-130	1	20	07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16		103	70-130	2	20	07/02/15	
Picloram	0.40	1.0	ug/L	0.40		101	70-130	20	20	07/02/15	
Surrogate: DCPAA	*59*			*58*		*101*	*70-130*			07/02/15	
Matrix Spike (A507269-MS1), Source: A5F2292-01											
2,4,5-T	4.7	1.0	ug/L	4.0	ND	117	70-130			07/02/15	
2,4,5-TP (Silvex)	0.87	1.0	ug/L	0.80	ND	108	70-130			07/02/15	
2,4-D	0.46	10	ug/L	0.40	ND	114	70-130			07/02/15	
Bentazon	8.1	2.0	ug/L	8.0	ND	101	70-130			07/02/15	
Dalapon	4.8	10	ug/L	4.0	ND	119	70-130			07/02/15	
Dicamba	6.1	1.5	ug/L	6.0	ND	102	70-130			07/02/15	
Dinoseb	0.81	2.0	ug/L	0.80	ND	102	70-130			07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	105	70-130			07/02/15	
Picloram	0.41	1.0	ug/L	0.40	ND	103	70-130			07/02/15	
Surrogate: DCPAA	*60*			*58*		*103*	*70-130*			07/02/15	
Matrix Spike Dup (A507269-MSD1), Source: A5F2292-01											
2,4,5-T	4.5	1.0	ug/L	4.0	ND	114	70-130	3	20	07/02/15	
2,4,5-TP (Silvex)	1.0	1.0	ug/L	0.80	ND	127	70-130	16	20	07/02/15	
2,4-D	0.44	10	ug/L	0.40	ND	111	70-130	3	20	07/02/15	
Bentazon	8.2	2.0	ug/L	8.0	ND	102	70-130	1	20	07/02/15	
Dalapon	5.0	10	ug/L	4.0	ND	126	70-130	6	20	07/02/15	
Dicamba	6.3	1.5	ug/L	6.0	ND	106	70-130	3	20	07/02/15	
Dinoseb	0.84	2.0	ug/L	0.80	ND	105	70-130	3	20	07/02/15	
Pentachlorophenol	0.17	0.20	ug/L	0.16	ND	104	70-130	1	20	07/02/15	
Picloram	0.51	1.0	ug/L	0.40	ND	128	70-130	22	20	07/02/15	MS2.0
Surrogate: DCPAA	*60*			*58*		*103*	*70-130*			07/02/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A507280-BLK1)											
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							07/01/15	
1,1,1-Trichloroethane	ND	0.50	ug/L							07/01/15	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							07/01/15	
1,1,2-Trichloroethane	ND	0.50	ug/L							07/01/15	
1,1-Dichloroethane	ND	0.50	ug/L							07/01/15	
1,1-Dichloroethene	ND	0.50	ug/L							07/01/15	
1,1-Dichloropropene	ND	0.50	ug/L							07/01/15	
1,2,3-Trichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2,4-Trimethylbenzene	ND	0.50	ug/L							07/01/15	
1,2-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
1,2-Dichloroethane	ND	0.50	ug/L							07/01/15	
1,2-Dichloropropane	ND	0.50	ug/L							07/01/15	
1,3,5-Trimethylbenzene	ND	0.50	ug/L							07/01/15	
1,3-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
1,3-Dichloropropane	ND	0.50	ug/L							07/01/15	
1,4-Dichlorobenzene	ND	0.50	ug/L							07/01/15	
2,2-Dichloropropane	ND	0.50	ug/L							07/01/15	
2-Butanone	ND	5.0	ug/L							07/01/15	
2-Chlorotoluene	ND	0.50	ug/L							07/01/15	
2-Hexanone	ND	10	ug/L							07/01/15	
4-Chlorotoluene	ND	0.50	ug/L							07/01/15	
4-Methyl-2-pentanone	ND	5.0	ug/L							07/01/15	
Acetone	ND	10	ug/L							07/01/15	
Benzene	ND	0.50	ug/L							07/01/15	
Bromobenzene	ND	0.50	ug/L							07/01/15	
Bromochloromethane	ND	0.50	ug/L							07/01/15	
Bromodichloromethane	ND	0.50	ug/L							07/01/15	
Bromoform	ND	0.50	ug/L							07/01/15	
Bromomethane	ND	0.50	ug/L							07/01/15	
Carbon Tetrachloride	ND	0.50	ug/L							07/01/15	
Chlorobenzene	ND	0.50	ug/L							07/01/15	
Chloroethane	ND	0.50	ug/L							07/01/15	
Chloroform	ND	0.50	ug/L							07/01/15	
Chloromethane	ND	0.50	ug/L							07/01/15	
cis-1,2-Dichloroethene	ND	0.50	ug/L							07/01/15	
cis-1,3-Dichloropropene	ND	0.50	ug/L							07/01/15	
Dibromochloromethane	ND	0.50	ug/L							07/01/15	
Dibromomethane	ND	0.50	ug/L							07/01/15	
Dichlorodifluoromethane	ND	0.50	ug/L							07/01/15	
Dichloromethane	ND	0.50	ug/L							07/01/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							07/01/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							07/01/15	
Ethylbenzene	ND	0.50	ug/L							07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank (A507280-BLK1)											
Hexachlorobutadiene	ND	0.50	ug/L							07/01/15	
Isopropylbenzene	ND	0.50	ug/L							07/01/15	
m,p-Xylenes	ND	0.50	ug/L							07/01/15	
Methyl-t-butyl ether	ND	0.50	ug/L							07/01/15	
Naphthalene	ND	0.50	ug/L							07/01/15	
n-Butylbenzene	ND	0.50	ug/L							07/01/15	
n-Propylbenzene	ND	0.50	ug/L							07/01/15	
o-Xylene	ND	0.50	ug/L							07/01/15	
p-Isopropyltoluene	ND	0.50	ug/L							07/01/15	
sec-Butylbenzene	ND	0.50	ug/L							07/01/15	
Styrene	ND	0.50	ug/L							07/01/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							07/01/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							07/01/15	
tert-Butylbenzene	ND	0.50	ug/L							07/01/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							07/01/15	
Toluene	ND	0.50	ug/L							07/01/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							07/01/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							07/01/15	
Trichloroethene (TCE)	ND	0.50	ug/L							07/01/15	
Trichlorofluoromethane	ND	5.0	ug/L							07/01/15	
Vinyl Chloride	ND	0.50	ug/L							07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*98*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*50*			*50*		*101*	*70-130*			07/01/15	
Blank Spike (A507280-BS1)											
1,1,1,2-Tetrachloroethane	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,1,1-Trichloroethane	10	0.50	ug/L	10		101	70-130			07/01/15	
1,1,2,2-Tetrachloroethane	9.3	0.50	ug/L	10		93	70-130			07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		100	70-130			07/01/15	
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,1-Dichloroethane	10	0.50	ug/L	10		100	70-130			07/01/15	
1,1-Dichloroethene	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,1-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15	
1,2,3-Trichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
1,2,4-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,2,4-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,2-Dichlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15	
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,3,5-Trimethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15	
1,3-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130			07/01/15	
1,4-Dichlorobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15	
2,2-Dichloropropane	10	0.50	ug/L	10		100	70-130			07/01/15	
2-Butanone	9.5	5.0	ug/L	10		95	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A507280										Prepared: 07/01/2015		
Prep Method: no prep-volatiles										Analyst: JGB		
Blank Spike (A507280-BS1)												
2-Chlorotoluene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
2-Hexanone	9.7	10	ug/L	10		97	70-130			07/01/15		
4-Chlorotoluene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
4-Methyl-2-pentanone	9.5	5.0	ug/L	10		95	70-130			07/01/15		
Acetone	9.7	10	ug/L	10		97	70-130			07/01/15		
Benzene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Bromobenzene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
Bromochloromethane	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Bromodichloromethane	10	0.50	ug/L	10		100	70-130			07/01/15		
Bromoform	11	0.50	ug/L	10		110	70-130			07/01/15		
Bromomethane	14	0.50	ug/L	10		136	70-130			07/01/15	BS	***High***
Carbon disulfide	10	10	ug/L	10		103	70-130			07/01/15		
Carbon Tetrachloride	10	0.50	ug/L	10		102	70-130			07/01/15		
Chlorobenzene	9.6	0.50	ug/L	10		96	70-130			07/01/15		
Chloroethane	9.6	0.50	ug/L	10		96	70-130			07/01/15		
Chloroform	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Chloromethane	9.9	0.50	ug/L	10		99	70-130			07/01/15		
cis-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130			07/01/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15		
Dibromochloromethane	10	0.50	ug/L	10		103	70-130			07/01/15		
Dibromomethane	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Dichlorodifluoromethane	10	0.50	ug/L	10		104	70-130			07/01/15		
Dichloromethane	10	0.50	ug/L	10		102	70-130			07/01/15		
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		100	70-130			07/01/15		
Ethyl tert-Butyl Ether (ETBE)	9.9	0.50	ug/L	10		99	70-130			07/01/15		
Ethylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Hexachlorobutadiene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Isopropylbenzene	10	0.50	ug/L	10		100	70-130			07/01/15		
m,p-Xylenes	20	0.50	ug/L	20		99	70-130			07/01/15		
Methyl-t-butyl ether	20	0.50	ug/L	20		99	70-130			07/01/15		
Naphthalene	9.2	0.50	ug/L	10		92	70-130			07/01/15		
n-Butylbenzene	9.5	0.50	ug/L	10		95	70-130			07/01/15		
n-Propylbenzene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
o-Xylene	9.9	0.50	ug/L	10		99	70-130			07/01/15		
p-Isopropyltoluene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
sec-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Styrene	9.6	0.50	ug/L	10		96	70-130			07/01/15		
tert-Amyl Methyl Ether (TAME)	9.3	3.0	ug/L	10		93	70-130			07/01/15		
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10		101	70-130			07/01/15		
tert-Butylbenzene	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130			07/01/15		
Toluene	9.7	0.50	ug/L	10		97	70-130			07/01/15		
trans-1,2-Dichloroethene	10	0.50	ug/L	10		101	70-130			07/01/15		
trans-1,3-Dichloropropene	10	0.50	ug/L	10		101	70-130			07/01/15		
Trichloroethene (TCE)	10	0.50	ug/L	10		100	70-130			07/01/15		

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Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 524.2 - Quality Control												
Batch: A507280										Prepared: 07/01/2015		
Prep Method: no prep-volatiles										Analyst: JGB		
Blank Spike (A507280-BS1)												
Trichlorofluoromethane	11	5.0	ug/L	10		109	70-130			07/01/15		
Vinyl Chloride	11	0.50	ug/L	10		107	70-130			07/01/15		
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*95*	*70-130*			07/01/15		
Surrogate: Bromofluorobenzene	*48*			*50*		*96*	*70-130*			07/01/15		
Blank Spike Dup (A507280-BSD1)												
1,1,1,2-Tetrachloroethane	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
1,1,1-Trichloroethane	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		
1,1,2,2-Tetrachloroethane	9.5	0.50	ug/L	10		95	70-130	2	30	07/01/15		
1,1,2-Trichloro-1,2,2-trifluoroethane	9.8	10	ug/L	10		98	70-130	2	30	07/01/15		
1,1,2-Trichloroethane	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15		
1,1-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
1,1-Dichloroethene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
1,1-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		
1,2,3-Trichlorobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
1,2,4-Trichlorobenzene	9.5	0.50	ug/L	10		95	70-130	1	30	07/01/15		
1,2,4-Trimethylbenzene	9.5	0.50	ug/L	10		95	70-130	3	30	07/01/15		
1,2-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	2	30	07/01/15		
1,2-Dichloroethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
1,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
1,3,5-Trimethylbenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
1,3-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15		
1,3-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
1,4-Dichlorobenzene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15		
2,2-Dichloropropane	9.9	0.50	ug/L	10		99	70-130	2	30	07/01/15		
2-Butanone	9.3	5.0	ug/L	10		93	70-130	2	30	07/01/15		
2-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	2	30	07/01/15		
2-Hexanone	9.5	10	ug/L	10		95	70-130	2	30	07/01/15		
4-Chlorotoluene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
4-Methyl-2-pentanone	9.6	5.0	ug/L	10		96	70-130	1	30	07/01/15		
Acetone	9.3	10	ug/L	10		93	70-130	4	30	07/01/15		
Benzene	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15		
Bromobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
Bromochloromethane	9.5	0.50	ug/L	10		95	70-130	5	30	07/01/15		
Bromodichloromethane	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15		
Bromoform	11	0.50	ug/L	10		108	70-130	2	30	07/01/15		
Bromomethane	13	0.50	ug/L	10		135	70-130	1	30	07/01/15	BS	***High***
Carbon disulfide	10	10	ug/L	10		101	70-130	2	30	07/01/15		
Carbon Tetrachloride	10	0.50	ug/L	10		101	70-130	1	30	07/01/15		
Chlorobenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15		
Chloroethane	9.4	0.50	ug/L	10		94	70-130	2	30	07/01/15		
Chloroform	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15		
Chloromethane	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15		
cis-1,2-Dichloroethene	9.9	0.50	ug/L	10		99	70-130	0	30	07/01/15		
cis-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15		

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Blank Spike Dup (A507280-BSD1)											
Dibromochloromethane	10	0.50	ug/L	10		102	70-130	1	30	07/01/15	
Dibromomethane	9.8	0.50	ug/L	10		98	70-130	0	30	07/01/15	
Dichlorodifluoromethane	10	0.50	ug/L	10		103	70-130	1	30	07/01/15	
Dichloromethane	9.7	0.50	ug/L	10		97	70-130	5	30	07/01/15	
Di-isopropyl ether (DIPE)	10	3.0	ug/L	10		100	70-130	0	30	07/01/15	
Ethyl tert-Butyl Ether (ETBE)	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
Ethylbenzene	9.6	0.50	ug/L	10		96	70-130	1	30	07/01/15	
Hexachlorobutadiene	9.4	0.50	ug/L	10		94	70-130	3	30	07/01/15	
Isopropylbenzene	9.7	0.50	ug/L	10		97	70-130	3	30	07/01/15	
m,p-Xylenes	19	0.50	ug/L	20		97	70-130	3	30	07/01/15	
Methyl-t-butyl ether	20	0.50	ug/L	20		98	70-130	1	30	07/01/15	
Naphthalene	9.6	0.50	ug/L	10		96	70-130	5	30	07/01/15	
n-Butylbenzene	9.4	0.50	ug/L	10		94	70-130	1	30	07/01/15	
n-Propylbenzene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
o-Xylene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
p-Isopropyltoluene	9.6	0.50	ug/L	10		96	70-130	2	30	07/01/15	
sec-Butylbenzene	9.7	0.50	ug/L	10		97	70-130	2	30	07/01/15	
Styrene	9.2	0.50	ug/L	10		92	70-130	5	30	07/01/15	
tert-Amyl Methyl Ether (TAME)	9.5	3.0	ug/L	10		95	70-130	2	30	07/01/15	
tert-Butyl alcohol (TBA)	8.9	2.0	ug/L	10		89	70-130	12	30	07/01/15	
tert-Butylbenzene	9.6	0.50	ug/L	10		96	70-130	3	30	07/01/15	
Tetrachloroethene (PCE)	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
Toluene	9.8	0.50	ug/L	10		98	70-130	1	30	07/01/15	
trans-1,2-Dichloroethene	10	0.50	ug/L	10		100	70-130	2	30	07/01/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10		100	70-130	1	30	07/01/15	
Trichloroethene (TCE)	9.9	0.50	ug/L	10		99	70-130	1	30	07/01/15	
Trichlorofluoromethane	11	5.0	ug/L	10		107	70-130	2	30	07/01/15	
Vinyl Chloride	11	0.50	ug/L	10		106	70-130	1	30	07/01/15	
Surrogate: 1,2-Dichlorobenzene-d4	*48*			*50*		*96*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*48*			*50*		*97*	*70-130*			07/01/15	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
1,1,1,2-Tetrachloroethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
1,1,1-Trichloroethane	12	0.50	ug/L	10	ND	119	70-130			07/01/15	
1,1,2,2-Tetrachloroethane	10	0.50	ug/L	10	ND	103	70-130			07/01/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	12	10	ug/L	10	ND	121	70-130			07/01/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10	ND	110	70-130			07/01/15	
1,1-Dichloroethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
1,1-Dichloroethene	12	0.50	ug/L	10	ND	116	70-130			07/01/15	
1,1-Dichloropropene	12	0.50	ug/L	10	ND	119	70-130			07/01/15	
1,2,3-Trichlorobenzene	11	0.50	ug/L	10	ND	106	70-130			07/01/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10	ND	105	70-130			07/01/15	
1,2,4-Trimethylbenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
1,2-Dichlorobenzene	11	0.50	ug/L	10	ND	106	70-130			07/01/15	
1,2-Dichloroethane	11	0.50	ug/L	10	ND	113	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
1,2-Dichloropropane	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10	ND	114	70-130			07/01/15	
1,3-Dichlorobenzene	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
1,3-Dichloropropane	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
1,4-Dichlorobenzene	11	0.50	ug/L	10	ND	107	70-130			07/01/15	
2,2-Dichloropropane	12	0.50	ug/L	10	ND	115	70-130			07/01/15	
2-Butanone	10	5.0	ug/L	10	ND	102	70-130			07/01/15	
2-Chlorotoluene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
2-Hexanone	10	10	ug/L	10	ND	103	70-130			07/01/15	
4-Chlorotoluene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10	ND	102	70-130			07/01/15	
Acetone	8.9	10	ug/L	10	ND	89	70-130			07/01/15	
Benzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Bromobenzene	10	0.50	ug/L	10	ND	104	70-130			07/01/15	
Bromochloromethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
Bromodichloromethane	11	0.50	ug/L	10	ND	108	70-130			07/01/15	
Bromoform	8.6	0.50	ug/L	10	ND	86	70-130			07/01/15	
Bromomethane	9.4	0.50	ug/L	10	ND	94	70-130			07/01/15	
Carbon disulfide	12	10	ug/L	10	ND	119	70-130			07/01/15	
Carbon Tetrachloride	12	0.50	ug/L	10	ND	118	70-130			07/01/15	
Chlorobenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
Chloroethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Chloroform	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
Chloromethane	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10	ND	114	70-130			07/01/15	
cis-1,3-Dichloropropene	9.5	0.50	ug/L	10	ND	95	70-130			07/01/15	
Dibromochloromethane	9.9	0.50	ug/L	10	ND	99	70-130			07/01/15	
Dibromomethane	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Dichlorodifluoromethane	13	0.50	ug/L	10	ND	134	70-130			07/01/15	MS1.0 ***High***
Dichloromethane	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10	ND	112	70-130			07/01/15	
Ethyl tert-Butyl Ether (ETBE)	12	0.50	ug/L	10	ND	115	70-130			07/01/15	
Ethylbenzene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
Hexachlorobutadiene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Isopropylbenzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
m,p-Xylenes	23	0.50	ug/L	20	ND	114	70-130			07/01/15	
Methyl-t-butyl ether	22	0.50	ug/L	20	ND	111	70-130			07/01/15	
Naphthalene	9.9	0.50	ug/L	10	ND	99	70-130			07/01/15	
n-Butylbenzene	11	0.50	ug/L	10	ND	109	70-130			07/01/15	
n-Propylbenzene	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
o-Xylene	11	0.50	ug/L	10	ND	113	70-130			07/01/15	
p-Isopropyltoluene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
sec-Butylbenzene	11	0.50	ug/L	10	ND	115	70-130			07/01/15	
Styrene	14	0.50	ug/L	10	ND	142	70-130			07/01/15	MS1.0 ***High***
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10	ND	113	70-130			07/01/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 524.2 - Quality Control											
Batch: A507280										Prepared: 07/01/2015	
Prep Method: no prep-volatiles										Analyst: JGB	
Matrix Spike (A507280-MS1), Source: A5F2589-01											
tert-Butyl alcohol (TBA)	10	2.0	ug/L	10	ND	103	70-130			07/01/15	
tert-Butylbenzene	11	0.50	ug/L	10	ND	111	70-130			07/01/15	
Tetrachloroethene (PCE)	12	0.50	ug/L	10	ND	120	70-130			07/01/15	
Toluene	11	0.50	ug/L	10	ND	112	70-130			07/01/15	
trans-1,2-Dichloroethene	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
trans-1,3-Dichloropropene	8.9	0.50	ug/L	10	ND	89	70-130			07/01/15	
Trichloroethene (TCE)	12	0.50	ug/L	10	ND	117	70-130			07/01/15	
Trichlorofluoromethane	13	5.0	ug/L	10	ND	132	70-130			07/01/15	MS1.0 ***High***
Vinyl Chloride	13	0.50	ug/L	10	ND	132	70-130			07/01/15	MS1.0 ***High***
Surrogate: 1,2-Dichlorobenzene-d4	*49*			*50*		*98*	*70-130*			07/01/15	
Surrogate: Bromofluorobenzene	*49*			*50*		*99*	*70-130*			07/01/15	
EPA 525.2 - Quality Control											
Batch: A507341										Prepared: 07/02/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Blank (A507341-BLK1)											
Alachlor	ND	1.0	ug/L							07/06/15	
Atrazine	ND	0.50	ug/L							07/06/15	
Benzo(a)pyrene	ND	0.10	ug/L							07/06/15	
Bis(2-ethylhexyl) adipate	ND	3.0	ug/L							07/06/15	
Bis(2-ethylhexyl) phthalate	ND	3.0	ug/L							07/06/15	
Bromacil	ND	10	ug/L							07/06/15	
Butachlor	ND	0.38	ug/L							07/06/15	
Diazinon	ND	0.25	ug/L							07/06/15	
Dimethoate	ND	10	ug/L							07/06/15	
Metolachlor	ND	0.50	ug/L							07/06/15	
Metribuzin	ND	0.50	ug/L							07/06/15	
Molinate	ND	2.0	ug/L							07/06/15	
Prometryn	ND	2.0	ug/L							07/06/15	
Propachlor	ND	0.50	ug/L							07/06/15	
Simazine	ND	1.0	ug/L							07/06/15	
Thiobencarb	ND	1.0	ug/L							07/06/15	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*108*	*70-130*			07/06/15	
Blank Spike (A507341-BS1)											
Alachlor	1.1	1.0	ug/L	1.0		106	70-130			07/06/15	
Atrazine	0.57	0.50	ug/L	0.50		115	70-130			07/06/15	
Benzo(a)pyrene	0.19	0.10	ug/L	0.10		193	70-130			07/06/15	BS ***High***
Bis(2-ethylhexyl) adipate	2.1	3.0	ug/L	2.0		106	70-130			07/06/15	
Bis(2-ethylhexyl) phthalate	1.7	3.0	ug/L	1.5		116	70-130			07/06/15	
Bromacil	1.4	10	ug/L	1.0		136	70-130			07/06/15	BS ***High***
Butachlor	1.1	0.38	ug/L	1.0		111	70-130			07/06/15	
Diazinon	0.16	0.25	ug/L	0.20		82	70-130			07/06/15	
Dimethoate	1.2	10	ug/L	1.0		117	70-130			07/06/15	

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Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual	
EPA 525.2 - Quality Control												
Batch: A507341										Prepared: 07/02/2015		
Prep Method: EPA 525.2										Analyst: MTM		
Blank Spike (A507341-BS1)												
Metolachlor	2.2	0.50	ug/L	2.0		110	70-130			07/06/15		
Metribuzin	1.2	0.50	ug/L	1.0		116	70-130			07/06/15		
Molinate	1.0	2.0	ug/L	1.0		103	70-130			07/06/15		
Prometryn	1.9	2.0	ug/L	2.0		93	70-130			07/06/15		
Propachlor	0.54	0.50	ug/L	0.50		107	70-130			07/06/15		
Simazine	0.36	1.0	ug/L	0.35		103	70-130			07/06/15		
Thiobencarb	0.56	1.0	ug/L	0.50		113	70-130			07/06/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.1*			*5.0*		*103*	*70-130*			07/06/15		
Blank Spike Dup (A507341-BSD1)												
Alachlor	1.1	1.0	ug/L	1.0		106	70-130	1	30	07/06/15		
Atrazine	0.49	0.50	ug/L	0.50		99	70-130	15	30	07/06/15		
Benzo(a)pyrene	0.19	0.10	ug/L	0.10		193	70-130	0	30	07/06/15	BS	***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	2.0		111	70-130	5	30	07/06/15		
Bis(2-ethylhexyl) phthalate	1.8	3.0	ug/L	1.5		117	70-130	1	30	07/06/15		
Bromacil	1.4	10	ug/L	1.0		137	70-130	1	30	07/06/15	BS	***High***
Butachlor	1.1	0.38	ug/L	1.0		107	70-130	4	30	07/06/15		
Diazinon	0.18	0.25	ug/L	0.20		90	70-130	9	30	07/06/15		
Dimethoate	1.1	10	ug/L	1.0		113	70-130	4	30	07/06/15		
Metolachlor	2.2	0.50	ug/L	2.0		109	70-130	1	30	07/06/15		
Metribuzin	1.2	0.50	ug/L	1.0		116	70-130	0	30	07/06/15		
Molinate	1.1	2.0	ug/L	1.0		109	70-130	5	30	07/06/15		
Prometryn	2.1	2.0	ug/L	2.0		104	70-130	11	30	07/06/15		
Propachlor	0.54	0.50	ug/L	0.50		108	70-130	1	30	07/06/15		
Simazine	0.35	1.0	ug/L	0.35		101	70-130	3	30	07/06/15		
Thiobencarb	0.55	1.0	ug/L	0.50		109	70-130	3	30	07/06/15		
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.4*			*5.0*		*108*	*70-130*			07/06/15		
Matrix Spike (A507341-MS1), Source: A5F2610-01												
Alachlor	1.2	1.0	ug/L	0.97	ND	120	70-130			07/06/15		
Atrazine	0.57	0.50	ug/L	0.49	ND	118	70-130			07/06/15		
Benzo(a)pyrene	0.18	0.10	ug/L	0.097	ND	184	70-130			07/06/15	MS1.0	***High***
Bis(2-ethylhexyl) adipate	2.2	3.0	ug/L	1.9	ND	113	70-130			07/06/15		
Bis(2-ethylhexyl) phthalate	1.6	3.0	ug/L	1.5	ND	112	70-130			07/06/15		
Bromacil	1.4	10	ug/L	0.97	ND	142	70-130			07/06/15	MS1.0	***High***
Butachlor	1.2	0.38	ug/L	0.97	ND	121	70-130			07/06/15		
Diazinon	0.19	0.25	ug/L	0.19	ND	99	70-130			07/06/15		
Dimethoate	1.2	10	ug/L	0.97	ND	120	70-130			07/06/15		
Metolachlor	2.2	0.50	ug/L	1.9	ND	113	70-130			07/06/15		
Metribuzin	1.2	0.50	ug/L	0.97	ND	124	70-130			07/06/15		
Molinate	1.0	2.0	ug/L	0.97	ND	104	70-130			07/06/15		
Prometryn	2.0	2.0	ug/L	1.9	ND	101	70-130			07/06/15		
Propachlor	0.54	0.50	ug/L	0.49	ND	112	70-130			07/06/15		
Simazine	0.38	1.0	ug/L	0.34	ND	112	70-130			07/06/15		
Thiobencarb	0.57	1.0	ug/L	0.49	ND	117	70-130			07/06/15		

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 525.2 - Quality Control											
Batch: A507341										Prepared: 07/02/2015	
Prep Method: EPA 525.2										Analyst: MTM	
Matrix Spike (A507341-MS1), Source: A5F2610-01											
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.9*			*4.9*		*100*	*70-130*			07/06/15	
EPA 531.1 - Quality Control											
Batch: A507267										Prepared: 06/30/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Blank (A507267-BLK1)											
3-Hydroxycarbofuran	ND	3.0	ug/L							07/01/15	
Aldicarb	ND	3.0	ug/L							07/01/15	
Aldicarb Sulfone	ND	2.0	ug/L							07/01/15	
Aldicarb Sulfoxide	ND	3.0	ug/L							07/01/15	
Carbaryl	ND	5.0	ug/L							07/01/15	
Carbofuran	ND	5.0	ug/L							07/01/15	
Methiocarb	ND	2.0	ug/L							07/01/15	
Methomyl	ND	2.0	ug/L							07/01/15	
Oxamyl	ND	20	ug/L							07/01/15	
Propoxur	ND	2.0	ug/L							07/01/15	
Blank Spike (A507267-BS1)											
3-Hydroxycarbofuran	4.1	3.0	ug/L	4.0		102	80-120			07/01/15	
Aldicarb	3.6	3.0	ug/L	4.0		91	80-120			07/01/15	
Aldicarb Sulfone	4.0	2.0	ug/L	4.0		101	80-120			07/01/15	
Aldicarb Sulfoxide	4.1	3.0	ug/L	4.0		103	80-120			07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120			07/01/15	
Carbofuran	4.2	5.0	ug/L	4.0		106	80-120			07/01/15	
Methiocarb	4.1	2.0	ug/L	4.0		102	80-120			07/01/15	
Methomyl	3.9	2.0	ug/L	4.0		97	80-120			07/01/15	
Oxamyl	4.1	20	ug/L	4.0		102	80-120			07/01/15	
Propoxur	4.1	2.0	ug/L	4.0		102	80-120			07/01/15	
Blank Spike Dup (A507267-BSD1)											
3-Hydroxycarbofuran	4.0	3.0	ug/L	4.0		100	80-120	2	20	07/01/15	
Aldicarb	3.6	3.0	ug/L	4.0		90	80-120	1	20	07/01/15	
Aldicarb Sulfone	3.9	2.0	ug/L	4.0		98	80-120	2	20	07/01/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0		100	80-120	3	20	07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0		102	80-120	1	20	07/01/15	
Carbofuran	4.0	5.0	ug/L	4.0		99	80-120	6	20	07/01/15	
Methiocarb	3.4	2.0	ug/L	4.0		85	80-120	17	20	07/01/15	
Methomyl	4.0	2.0	ug/L	4.0		100	80-120	4	20	07/01/15	
Oxamyl	4.0	20	ug/L	4.0		100	80-120	2	20	07/01/15	
Propoxur	3.9	2.0	ug/L	4.0		96	80-120	6	20	07/01/15	
Matrix Spike (A507267-MS1), Source: A5F2371-01											
3-Hydroxycarbofuran	4.2	3.0	ug/L	4.0	ND	105	65-135			07/01/15	
Aldicarb	3.7	3.0	ug/L	4.0	ND	93	65-135			07/01/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 531.1 - Quality Control											
Batch: A507267										Prepared: 06/30/2015	
Prep Method: EPA 531.1										Analyst: ZZZ	
Matrix Spike (A507267-MS1), Source: A5F2371-01											
Aldicarb Sulfone	4.0	2.0	ug/L	4.0	ND	99	65-135			07/01/15	
Aldicarb Sulfoxide	4.0	3.0	ug/L	4.0	ND	99	65-135			07/01/15	
Carbaryl	4.1	5.0	ug/L	4.0	ND	102	65-135			07/01/15	
Carbofuran	4.2	5.0	ug/L	4.0	ND	105	65-135			07/01/15	
Methiocarb	4.2	2.0	ug/L	4.0	ND	89	65-135			07/01/15	
Methomyl	4.4	2.0	ug/L	4.0	ND	109	65-135			07/01/15	
Oxamyl	4.1	20	ug/L	4.0	ND	101	65-135			07/01/15	
Propoxur	4.0	2.0	ug/L	4.0	ND	100	65-135			07/01/15	
EPA 547 - Quality Control											
Batch: A507422										Prepared: 07/06/2015	
Prep Method: EPA 547										Analyst: WPR	
Blank (A507422-BLK1)											
Glyphosate	ND	25	ug/L							07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike (A507422-BS1)											
Glyphosate	91	25	ug/L	100		91	70-130			07/06/15	
Surrogate: AMPA	*100*			*100*		*104*	*70-130*			07/06/15	
Blank Spike Dup (A507422-BSD1)											
Glyphosate	120	25	ug/L	100		117	70-130	25	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
Matrix Spike (A507422-MS1), Source: A5F2424-01											
Glyphosate	88	25	ug/L	100	ND	87	70-130			07/06/15	
Surrogate: AMPA	*96*			*100*		*94*	*70-130*			07/06/15	
Matrix Spike Dup (A507422-MSD1), Source: A5F2424-01											
Glyphosate	120	25	ug/L	100	ND	114	70-130	27	30	07/06/15	
Surrogate: AMPA	*100*			*100*		*102*	*70-130*			07/06/15	
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 07/02/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Blank (A507403-BLK1)											
Endothall	ND	45	ug/L							07/05/15	
Blank Spike (A507403-BS1)											
Endothall	18	45	ug/L	20		92	46-116			07/05/15	
Blank Spike Dup (A507403-BSD1)											
Endothall	22	45	ug/L	20		110	46-116	18	30	07/05/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 548.1 - Quality Control											
Batch: A507403										Prepared: 07/02/2015	
Prep Method: EPA 548.1										Analyst: MTM	
Matrix Spike (A507403-MS1), Source: A5F2319-01											
Endothall	20	45	ug/L	20	ND	98	46-116			07/05/15	
EPA 549.2 - Quality Control											
Batch: A507404										Prepared: 07/02/2015	
Prep Method: EPA 549.2										Analyst: PYA	
Blank (A507404-BLK1)											
Diquat	ND	0.40	ug/L							07/09/15	
Blank Spike (A507404-BS1)											
Diquat	3.6	0.40	ug/L	4.0		90	70-130			07/09/15	
Blank Spike Dup (A507404-BSD1)											
Diquat	3.5	0.40	ug/L	4.0		88	70-130	2	30	07/09/15	

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		

Please see the individual Subcontract Lab's report for applicable certifications.

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	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5F2587

06302015

Monte6227

Turnaround: Standard

Due Date: 7/15/2015

Monterey Bay Analytical

Printed: 6/30/2015 4:10:34PM

BSK Associates Engineers & Laboratories

1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 · Fax (559) 497-2893
www.bskassociates.com

1.4,5.9

Turnaround Time Request
- [X] Standard - 10 business days
- [ ] Rush (Surcharge may apply)
- [ ] Date needed:

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Monte6227

06/30/2015
10

Y

*Required Fields

Temp:

Company/Client Name*:	Report Attention*:	Invoice To*:	Phone*:	Fax:
Monterey Bay Analytical Services	Mason Weidner-Holland Additional cc's: David Holland	David Holland PO#:	831-375-6227	831-641-0734

E-mail*: mweidner@mbasinc.com, dholland@mbasinc

Address*:	City*:	State*:	Zip*:
4 Justin Court, Suite D	Monterey	CA	93940

Project: Cal Am

Project #:

How would you like to receive your completed results?*
- [X] E-Mail
- [ ] Fax
- [ ] Mail

Reporting Options:
- [ ] Trace (J-Flag)
- [ ] Swamp
- [ ] EDD Type: _____

Sampler Name (Printed/Signature)*: Matan Salmon

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 #: _____

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* Date	Sampled* Time	Matrix*	Comments / Station Code / WTRAX	EPA 524	EPA 504	EPA 515	EPA 525	EPA 531	EPA 547	EPA 548	EPA 549
	MW-9D (monitoring)	6/25/15	1440	GW	AB32340	X	X	X	X	X	X	X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Printed Name)	Company
D. Holland	MBAS	6/29/15	1600		
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	Time	Payment Received at Delivery: Date:	Check / Cash
		6/30/15		Amount:	PIA#: Init.

Shipping Method: ONTRAC 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

BSK Associates SR-FL-0002-14

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Sample Integrity

BSK Bottles: Yes No Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°C 5.9 1.4	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 $Na_2S_2O_3$	—	—	1
None (P) White Cap	—	—	
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N	
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N	
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	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	—	—	
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—	2C
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—	1C
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—	2C
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—	2V
$Na_2S_2O_3$ + 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

Labeled by: JH @ 16:19 Labels checked by: MR @ 1625 RUSH Paged by:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762

July 8, 2015

Ceres ID: 10714

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 July2, 2015. This sample was analyzed for 2,3,7,8-TCDD by EPA 1613B. Routine turn-around time was provided for this work.

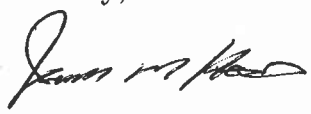
This work was authorized under M.B.A.'s Project # AB32340.

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

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
10714-001	MW-9D (monitoring)	7/2/2015	6/25/2015	14:40

Section II: Data Summary

EPA Method 1613B *Ceres Analytical Laboratory*

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:	AB32340	Sample Size:	1.000 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
				ZB-5 MS Analysis Date:	8-Jul-15		

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	4.46		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	88.6	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	84.8	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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:	AB32340	Sample Size:	1.000 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
				ZB-5 MS Analysis Date:	8-Jul-15		

Analyte	Conc. (ng/ml)	Limits [a]	Qualifiers
2,3,7,8-TCDD	9.44	7.3-14.6	

	Labeled Standards	Conc.	Limits [a]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	90.7	25-141	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	9.23	3.7-15.8	

a. Method acceptance criteria .

Analyst: JMH Reviewed by: BS

Sample ID: **MW-9D (monitoring)**

Client Data		**Sample Data**		**Laboratory Data**			
Name:	Monterey Bay Analytical	Matrix:	Aqueous	Lab Sample ID:	10714-001	Date Received:	2-Jul-15
Project:	AB32340	Sample Size:	1.030 L	QC Batch #:	1337	Date Extracted:	7-Jul-15
Date Collected:	25-Jun-15			ZB-5 MS Analysis Date:	8-Jul-15		
Time Collected:	14:40						

Analyte	Conc. (pg/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	2.05		

	Labeled Standards	% R	LCL-UCL [c]	Qualifiers
IS	^{13}C-2,3,7,8-TCDD	82.4	31 - 137	
CRS	$^{37}Cl_4$-2,3,7,8-TCDD	95.0	42 - 164	

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. 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: 10714

Temperature: 3.5 °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	Company Name: Same	Ceres Quote #:
Contact Name: David Holland	Contact Name:	P.O. #
Address: 4 Justin Court Ste D Monterey CA 93940	Address:	Project ID:
Ph: 831-375-6227	Ph: Fx:	**TAT** (business days)
Email: mweidner@mbasinc.com	Email:	Std 15 days; Rush TAT available please call

Matrix abreviations:

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 Date	Sample Collection Time	Matrix	# of containers	EPA 1613	EPA 8290	NCASI 551	EPA 8280	EPA 613	Other	TEF: ☐ 1998 WHO ☐ 2005 WHO ☐ Other — Comments
1	MW-9D (monitoring)	6/25/2015	1440	Aq	1	X						AB32340
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
D. Holland	7/1/2015	16:00		7/2/15	0945

Client understands that all terms desribed 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: 10714	Date/Time: 7/2/15 09:15
Client Project ID: AB32340	Received Temperature: 3.5°C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N / (NA)
List COC discrepancies: 7/2/15	
List Damaged Samples: 7/2/15	

Ceres Analytical Laboratory

Process Request

Ceres ID: 10714 PB: 1337 Sample #s: 1 Due Date: 7/17/15

Matrix (circle one): Drinking Water (Aqueous) Effluent Influent Ash

Solid Soil Sediment Sludge Clay/Clay Slurry Other: _____

Method (circle one): (□ 1613 2,3,7,8-TCDD)

□ 1613 2,3,7,8-TCDD/F

□ 1613 Cl_4-Cl_8

□ 8290 2,3,7,8-TCDD

□ 8290 2,3,7,8-TCDD/F

□ 8290 Cl_4-Cl_8

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:

$$Sample\ Volume = (Sample + Bottle\ Wt) - Empty\ Bottle\ Wt.$$

Ceres ID	Sample +Bottle Wt.	Empty Bottle Wt.	Sample Volume
10714-1	1541.13g	511.55g	1.030L

Chemist: _____ Date: 7/7/15

Method: 1613B
SOP #: 3011

Ceres Analytical Laboratory

Sample Prep Bench Sheet

				ISS/PAR	CSS				RSS
Ceres ID	Client ID	Ver.	wt/vol	chem/date/witness	chem/date/witness	AP	AB/AC	FC	chem/date/witness
0-1337-MB001	Method Blank		1.000L	JF 7/7/15 DH	JF 7/8/15 DH	NA	JF 7/8/15	NA	JF 7/8/15 DH
0-1337-OPR001	OPR		1.000L	(A)					
10714-1337-001	MW-9D (monitoring)	✓	1.030L						

Comments : (A) OPR spiked with NSS.

Soxhlet Start: 14:00 7/7/15

Soxhlet Stop: 07:00 7/8/15

Samples Logged out by: JF 10:27 7/7/15

Samples Returned by: NA

Note samples Depleted: 1

Sample Extracts Storage Location: Box 17

Extracts to Instrument: 09:49 7/8/15 JF

Extracts returned to Storage Location: 15:15 7/8/15 JF

Chemist: JF

Method: 1613B
SOP #: 301.1

Ceres Analytical Laboratory

Sample Prep Bench Sheet

Standard	Standard ID	Vol.	Expiration Date
ISS	SO21115A	10l	2/11/20
NSS	B	↓	↓
CSS	C	↓	
RSS	D	2l	

Solvents/Solutions/Packing Materials

Name	Amount	Lot #	Exp. Date
Toluene	450ml	146339	7/1/16
Hexanes	30,30,100,20	150700	6/15/16
Si Gel	4g	P062315A	12/23/15
Basic Gel	4g	P061915A	12/19/15
Acid Gel	8g	P062415B	12/24/15
Acid Al	6g	P062415A	12/24/15
Na_2SO_4	1.5g	P040515A	10/15/15
20% DCM/Hex	30ml	L070915A	1/5/16

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

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1507537

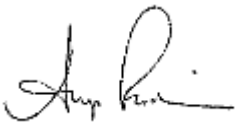
Report Created for: Monterey Bay Analytical

4 Justin Court, Suite D
Monterey, CA 93940

Project Contact: David Holland
Project P.O.:
Project Name: Geoscience

Project Received: 07/15/2015

Analytical Report reviewed & approved for release on 07/23/2015 by:



Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Monterey Bay Analytical
Project: Geoscience
WorkOrder: 1507537

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Analytical Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507537
Project:	Geoscience	**Extraction Method:**	E365.1
Date Received:	7/15/15 15:42	**Analytical Method:**	E365.1
Date Prepared:	7/21/15	**Unit:**	mg/L

Dissolved Phosphorous as P

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-9D (monitoring)	**1507537-001A**	**Water**	**06/25/2015 14:40**	**WC_SKALAR**	**107793**

Analytes	Result	RL	DF	Date Analyzed
Phosphorous, Dissolved (as P)	**0.12**	0.040	1	07/22/2015 21:18

Analyst(s): JS

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Quality Control Report

Client:	Monterey Bay Analytical	**WorkOrder:**	1507537
Date Prepared:	7/20/15	**BatchID:**	107793
Date Analyzed:	7/21/15	**Extraction Method:**	E365.1
Instrument:	WC_SKALAR	**Analytical Method:**	E365.1
Matrix:	Water	**Unit:**	mg/L
Project:	Geoscience	**Sample ID:**	MB/LCS-107793 1507453-001AMS/MSD

QC Summary Report for E365.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Phosphorous as P	ND	0.837	0.040	0.80	-	105	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Phosphorous as P	1.05	1.08	0.80	0.3645	86.2	89.3	80-120	2.36	20

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1507537 **ClientCode: MBAS**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
David Holland
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940
831-375-6227 FAX: 831-641-0734

Email: mweidner@mbasinc.com; Dholland@mbas
cc/3rd Party:
PO:
ProjectNo: Geoscience

Bill to:
Accounts Payable
Monterey Bay Analytical
4 Justin Court, Suite D
Monterey, CA 93940

Requested TAT: 5 days

Date Received: **07/15/2015**
Date Printed: **07/15/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1507537-001	MW-9D (monitoring)	Water	6/25/2015 14:40	☐	A											

Test Legend:

1	TotalP_Diss	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: MONTEREY BAY ANALYTICAL **QC Level:** LEVEL 2 **Work Order:** 1507537
Project: Geoscience **Client Contact:** David Holland **Date Received:** 7/15/2015
Comments: **Contact's Email:** mweidner@mbasinc.com; Dholland@mbasinc.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1507537-001A	MW-9D (monitoring)	Water	E365.1 (Dissolved Phosphorous)	1	250mL HDPE w/ HS04	☐	6/25/2015 14:40	5 days	None	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1507537

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW)

Report To: David Holland Bill To:
Company: Monterey Bay Analytical Services
4 Justin Ct. Suite D
Monterey, Ca 93940 E-Mail: mweidner@mbasinc.com
Tele: (831) 375 - 6227 Fax: (831) 641-0734
Project #: Project Name: Geoscience
Project Location: CalAm
Sampler Signature: Matan Salmon

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other: Total Dissolved Phosphorous	Other: (Samples filtered and preserved w/ H2SO4)	Comments
																																	Filter Samples for Metals analysis: Yes / No
	MW-9D (monitoring)	6/25/15	1440	1	P	X					X			X																	X		AB32340

Relinquished By:	Date:	Time:	Received By:
David Holland/	7/14/15	16:00	
Relinquished By:	Date: 7/15/15	Time: 0830	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 2.0
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

COMMENTS: SpCond=574uS/cm

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Sample Receipt Checklist

Client Name: **Monterey Bay Analytical**
Date and Time Received: **7/15/2015 3:42:32 PM**

Project Name: **Geoscience**
LogIn Reviewed by: Maria Venegas

WorkOrder №: **1507537** Matrix: Water
Carrier: Golden State Overnight

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET/BLU)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

CERTIFICATE OF ANALYSIS

Client: Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Attention: David Holland

Phone: (831) 375-6227

Fax: (831) 641-0734

Work Order(s): 5G01013

Report Date: 07/13/15 11:44

Received Date: 07/01/15 09:45

Turn Around: Normal

Client Project: Cal Am

NELAC #4047-002 ORELAP 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 07/01/15 09:45 with the Chain of Custody document. The samples were received in good condition, at 2.3 °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: 07/01/15 09:45
Date Reported: 07/13/15 11:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Lab ID	Matrix	Date Sampled
MW-9D (monitoring)	Matan Salmon	5G01013-01	Water	06/25/15 14:40
Comments: AB32340				

ANALYSES

Anions by IC, EPA Method 9056

Chlorinated Pesticides and/or PCBs

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety
www.wecklabs.com

Monterey Bay Analytical Services
4 Justin Court, Suite D
Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

5G01013-01 MW-9D (monitoring)

Sampled: 06/25/15 14:40 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32340

Anions by IC, EPA Method 9056

Method: EPA 9056M Batch: W5G0128 Prepared: 07/02/15 10:00 Analyst: Alice T Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Iodide	ND	500	ug/l	50	07/02/15 13:36	M-05

Chlorinated Pesticides and/or PCBs

Method: EPA 508 Batch: W5G0076 Prepared: 07/02/15 12:50 Analyst: Paolo Lorenzo A Ramirez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
4,4´-DDD	ND		0.010	ug/l	1	07/06/15 22:21	
4,4´-DDE	ND		0.010	ug/l	1	07/06/15 22:21	
4,4´-DDT	ND		0.010	ug/l	1	07/06/15 22:21	
Aldrin	ND		0.010	ug/l	1	07/06/15 22:21	
alpha-BHC	ND		0.010	ug/l	1	07/06/15 22:21	
Aroclor 1016	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1221	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1232	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1242	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1248	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1254	ND		0.10	ug/l	1	07/06/15 22:21	
Aroclor 1260	ND		0.10	ug/l	1	07/06/15 22:21	
beta-BHC	ND		0.010	ug/l	1	07/06/15 22:21	
Chlordane (tech)	ND		0.10	ug/l	1	07/06/15 22:21	
Chlorothalonil	ND		0.050	ug/l	1	07/06/15 22:21	
delta-BHC	ND		0.010	ug/l	1	07/06/15 22:21	
Dieldrin	ND		0.010	ug/l	1	07/06/15 22:21	
Endosulfan I	ND		0.010	ug/l	1	07/06/15 22:21	
Endosulfan II	ND		0.010	ug/l	1	07/06/15 22:21	
Endosulfan sulfate	ND		0.010	ug/l	1	07/06/15 22:21	
Endrin	ND		0.010	ug/l	1	07/06/15 22:21	
Endrin aldehyde	ND		0.010	ug/l	1	07/06/15 22:21	
gamma-BHC (Lindane)	ND		0.010	ug/l	1	07/06/15 22:21	
Heptachlor	ND		0.010	ug/l	1	07/06/15 22:21	
Heptachlor epoxide	ND		0.010	ug/l	1	07/06/15 22:21	
Hexachlorobenzene	ND		0.050	ug/l	1	07/06/15 22:21	
Hexachlorocyclopentadiene	ND		0.050	ug/l	1	07/06/15 22:21	
Methoxychlor	ND		0.010	ug/l	1	07/06/15 22:21	
PCBs, Total	ND		0.50	ug/l	1	07/06/15 22:21	
Propachlor	ND		0.050	ug/l	1	07/06/15 22:21	
Toxaphene	ND		1.0	ug/l	1	07/06/15 22:21	
Trifluralin	ND		0.010	ug/l	1	07/06/15 22:21	
Surr: Decachlorobiphenyl	*68 %*	Conc:*0.0683*	*70-130*	%			*S-GC*
Surr: Tetrachloro-meta-xylene	*93 %*	Conc:*0.0931*	*70-130*	%			

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Monterey CA, 93940

Date Received: 07/01/15 09:45
Date Reported: 07/13/15 11:44

5G01013-01 MW-9D (monitoring)

Sampled: 06/25/15 14:40 **Sampled By:** Matan Salmon **Matrix:** Water

Sample Note: AB32340

Chlorinated Pesticides and/or PCBs

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QUALITY CONTROL SECTION

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Date Reported: 07/13/15 11:44

Anions by IC, EPA Method 9056 - Quality Control

Batch W5G0128 - EPA 9056M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0128-BLK1)				Analyzed: 07/02/15 11:27						
Iodide	ND	10	ug/l							
LCS (W5G0128-BS1)				Analyzed: 07/02/15 11:59						
Iodide	42.7	10	ug/l	40.0		107	85-115			
Matrix Spike (W5G0128-MS1)	**Source: 5G01016-01**			Analyzed: 07/02/15 16:57						
Iodide	41.9	10	ug/l	40.0	ND	105	80-120			
Matrix Spike (W5G0128-MS2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:26						
Iodide	54.2	10	ug/l	40.0	11.7	106	80-120			
Matrix Spike Dup (W5G0128-MSD1)	**Source: 5G01016-01**			Analyzed: 07/02/15 17:11						
Iodide	43.6	10	ug/l	40.0	ND	109	80-120	4	20	
Matrix Spike Dup (W5G0128-MSD2)	**Source: 5G01019-05**			Analyzed: 07/02/15 17:41						
Iodide	53.5	10	ug/l	40.0	11.7	104	80-120	1	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5G0076-BLK1)				Analyzed: 07/06/15 20:18						
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							
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	*0.108*		*ug/l*	*0.100*		*108*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0934*		*ug/l*	*0.100*		*93*	*70-130*			
LCS (W5G0076-BS1)				Analyzed: 07/06/15 20:48						
4,4´-DDD	0.0859	0.010	ug/l	0.100		86	55-142			
4,4´-DDE	0.0934	0.010	ug/l	0.100		93	49-129			
4,4´-DDT	0.100	0.010	ug/l	0.100		100	54-160			
Aldrin	0.0872	0.010	ug/l	0.100		87	29-115			
alpha-BHC	0.0936	0.010	ug/l	0.100		94	59-131			
beta-BHC	0.107	0.010	ug/l	0.100		107	63-136			
delta-BHC	0.109	0.010	ug/l	0.100		109	59-137			
Dieldrin	0.0909	0.010	ug/l	0.100		91	59-135			
Endosulfan I	0.0701	0.010	ug/l	0.100		70	28-138			
Endosulfan II	0.0741	0.010	ug/l	0.100		74	53-133			
Endosulfan sulfate	0.0783	0.010	ug/l	0.100		78	58-155			
Endrin	0.0882	0.010	ug/l	0.100		88	57-148			
Endrin aldehyde	0.0980	0.010	ug/l	0.100		98	45-139			
gamma-BHC (Lindane)	0.0908	0.010	ug/l	0.100		91	59-129			
Heptachlor	0.0912	0.010	ug/l	0.100		91	42-136			
Heptachlor epoxide	0.0934	0.010	ug/l	0.100		93	59-134			
Methoxychlor	0.0773	0.010	ug/l	0.100		77	56-167			
Surr: Decachlorobiphenyl	*0.100*		*ug/l*	*0.100*		*100*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0837*		*ug/l*	*0.100*		*84*	*70-130*			
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
4,4´-DDD	0.0966	0.010	ug/l	0.100		97	55-142	12	25	
4,4´-DDE	0.105	0.010	ug/l	0.100		105	49-129	11	25	
4,4´-DDT	0.112	0.010	ug/l	0.100		112	54-160	11	25	
Aldrin	0.0981	0.010	ug/l	0.100		98	29-115	12	25	
alpha-BHC	0.106	0.010	ug/l	0.100		106	59-131	13	25	
beta-BHC	0.121	0.010	ug/l	0.100		121	63-136	12	25	
delta-BHC	0.124	0.010	ug/l	0.100		124	59-137	13	25	

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Date Reported: 07/13/15 11:44

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5G0076 - EPA 508

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W5G0076-BSD1)				Analyzed: 07/06/15 21:19						
Dieldrin	0.102	0.010	ug/l	0.100		102	59-135	12	25	
Endosulfan I	0.0768	0.010	ug/l	0.100		77	28-138	9	25	
Endosulfan II	0.0832	0.010	ug/l	0.100		83	53-133	12	25	
Endosulfan sulfate	0.0895	0.010	ug/l	0.100		90	58-155	13	25	
Endrin	0.0988	0.010	ug/l	0.100		99	57-148	11	25	
Endrin aldehyde	0.111	0.010	ug/l	0.100		111	45-139	13	25	
gamma-BHC (Lindane)	0.104	0.010	ug/l	0.100		104	59-129	13	25	
Heptachlor	0.103	0.010	ug/l	0.100		103	42-136	13	25	
Heptachlor epoxide	0.104	0.010	ug/l	0.100		104	59-134	11	25	
Methoxychlor	0.0884	0.010	ug/l	0.100		88	56-167	13	25	
Surr: Decachlorobiphenyl	*0.105*		*ug/l*	*0.100*		*105*	*70-130*			
Surr: Tetrachloro-meta-xylene	*0.0932*		*ug/l*	*0.100*		*93*	*70-130*			

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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.

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Chain of Custody / Analysis Request

MBAS
MONTEREY BAY ANALYTICAL SERVICES
PRECISION • ACCURACY • DEPENDABILITY

4 Justin Court, Suite D
Monterey, CA 93940
(831) 375-MBAS (6227)
(831) 641-0734 (Fax)
MontereyBayAnalytical@USA.net

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 Date	Sampling Time	Receiving Temp.	Coliform Analysis: CL2 Residual	Routine	Other	Repeat	Special	# Cont.	Container Type	Container Size	Analysis Requested: See attached list for analyses.	Possible seawater salinity levels.	Lab to filter diss. Ammonia, TKN, and P.	Please run dissolved & total mass balanc	MBAS Project Manager: David Holland	Dissolved metals sample was filtered in the field using 0.45 um filter
32340		MW-9D	6/25/15	1440	22.1°C									Field Parameters:					
																Temp:	21.2°C		
																pH:	7.44		
																Sp Cond:	574 µS/cm		
																Turb:	533 NS/cm		

	Printed Name	Signature	Date	Time	Comment
Sampled by:	Matan Salmon		6/25/15	1440	Is sample for regulatory purposes? (Yes) / No
Relinquished by:	Matan Salmon		6/25/15	1616	
Received by:					
Relinquished by:					
Received by:	Mollie Wooden		6/25/15	1616	

[ ] Payment received Check # Amount: Receipt # Date:

CalAm DW - Geoscience

Sample Condition Upon Receipt

COC Info

Was temp acceptable? Chemistry ≤6°C Micro ≤10°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

Discrepency 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 + divide 1L 0.45µ membrane filter → 500mL H_2SO_4 + $Na_2S_2O_3$

250mL H_2SO_4

250mL NP

HM 6/25/15

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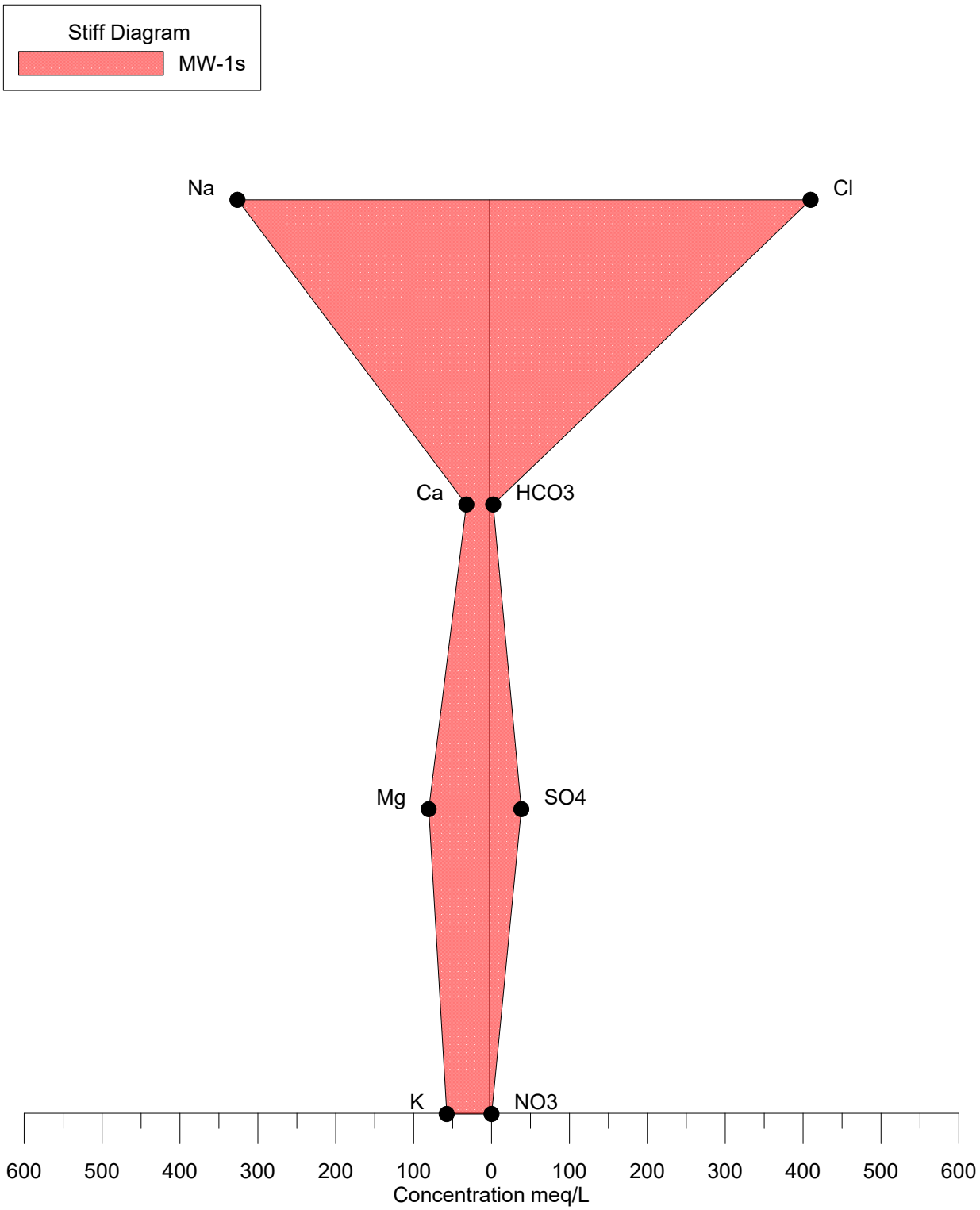
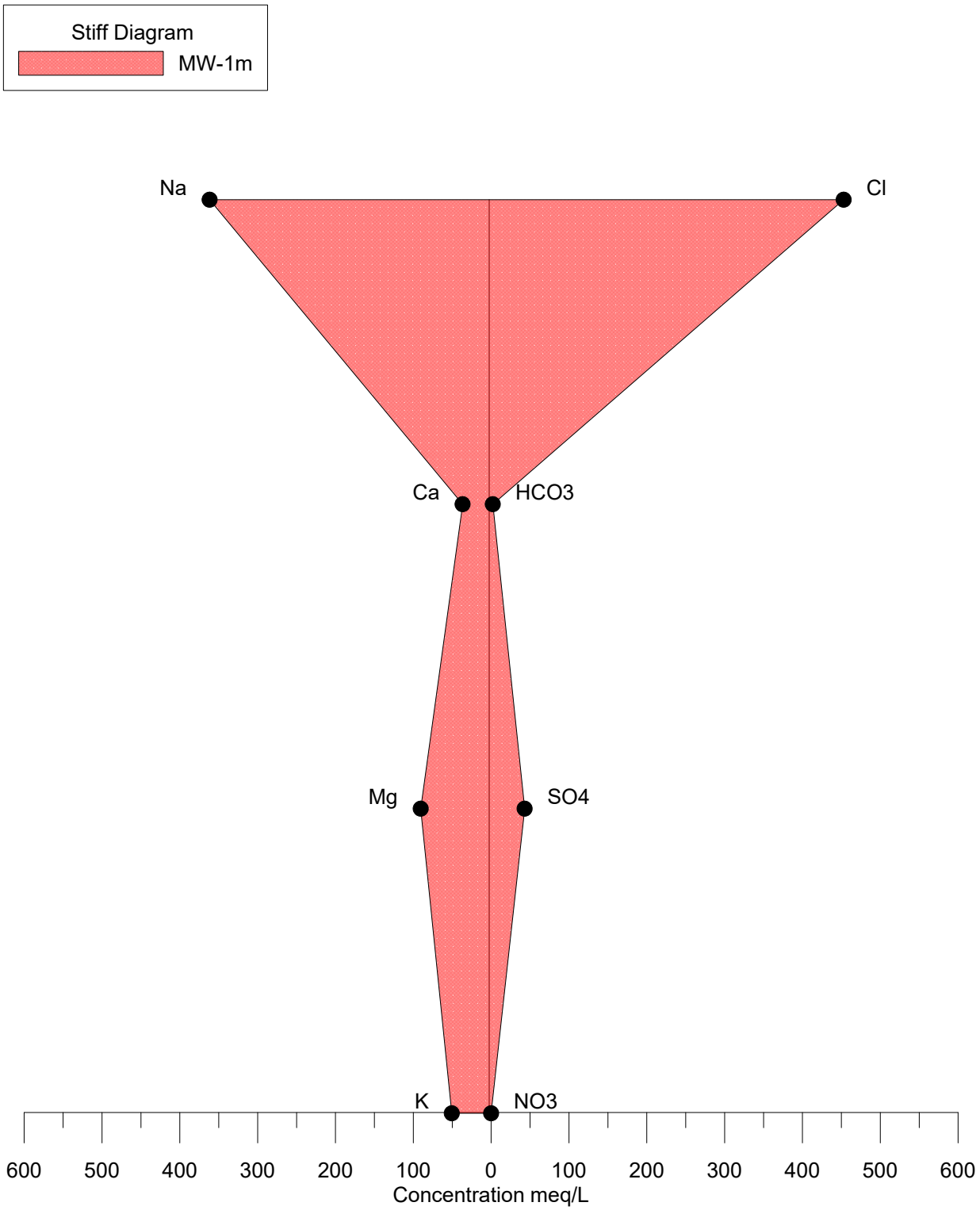
620 Arrow Highway, Suite 2000, La Verne, CA 91750 | Mailing: P.O. Box 220, Claremont, CA 91711

APPENDIX F

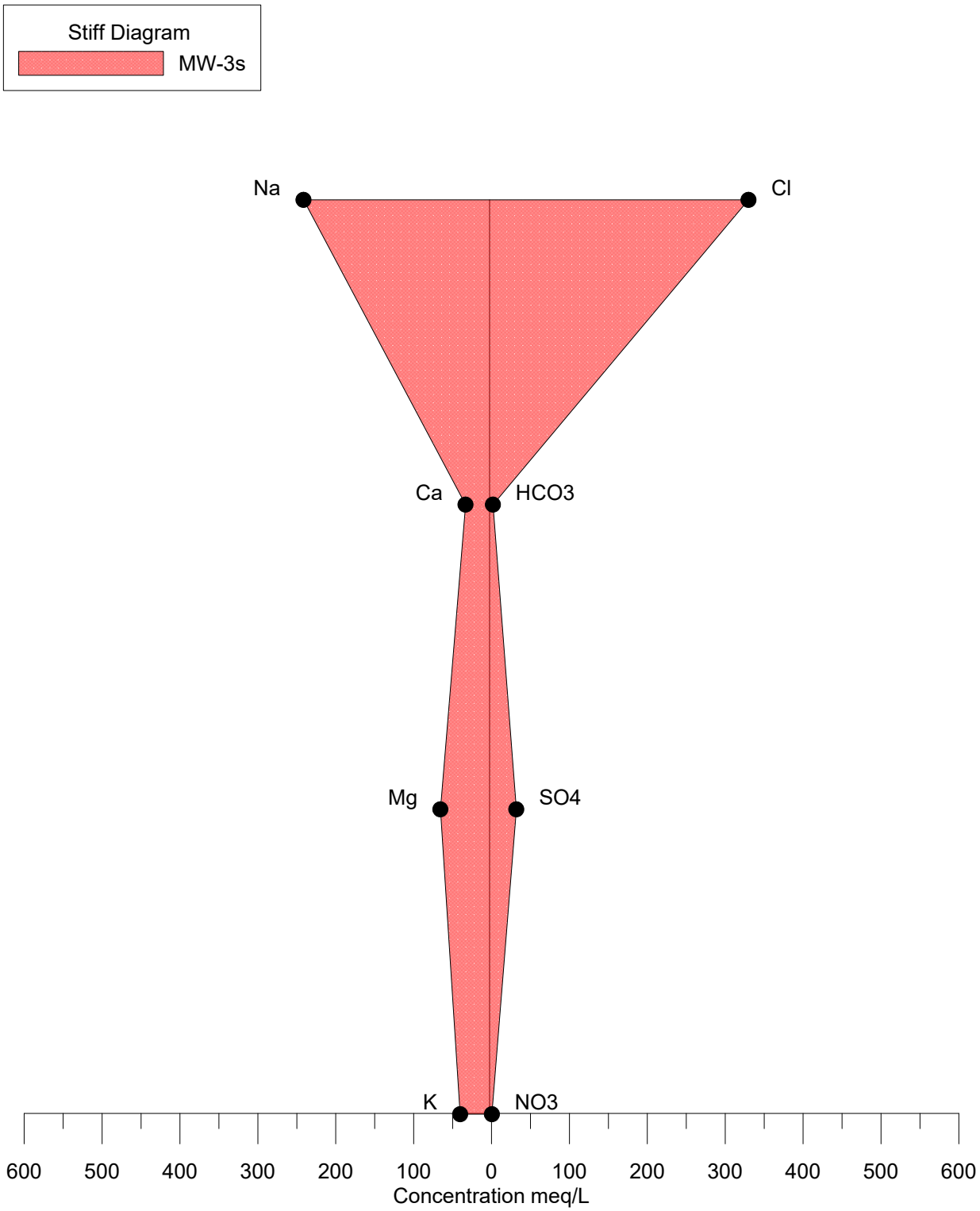
Stiff Diagrams - MPWSP Monitoring Well Water Quality



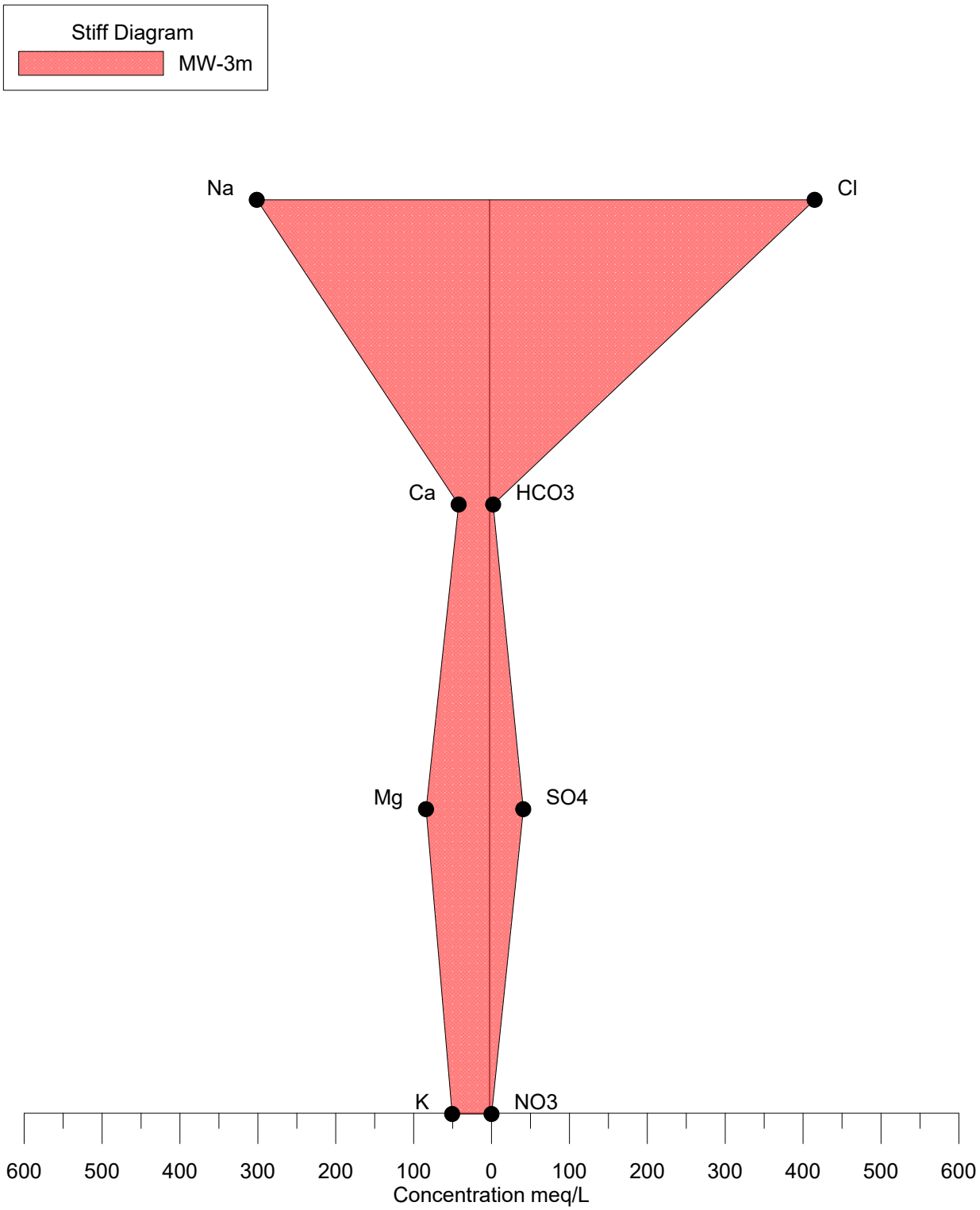
Stiff Diagram for MW-1s



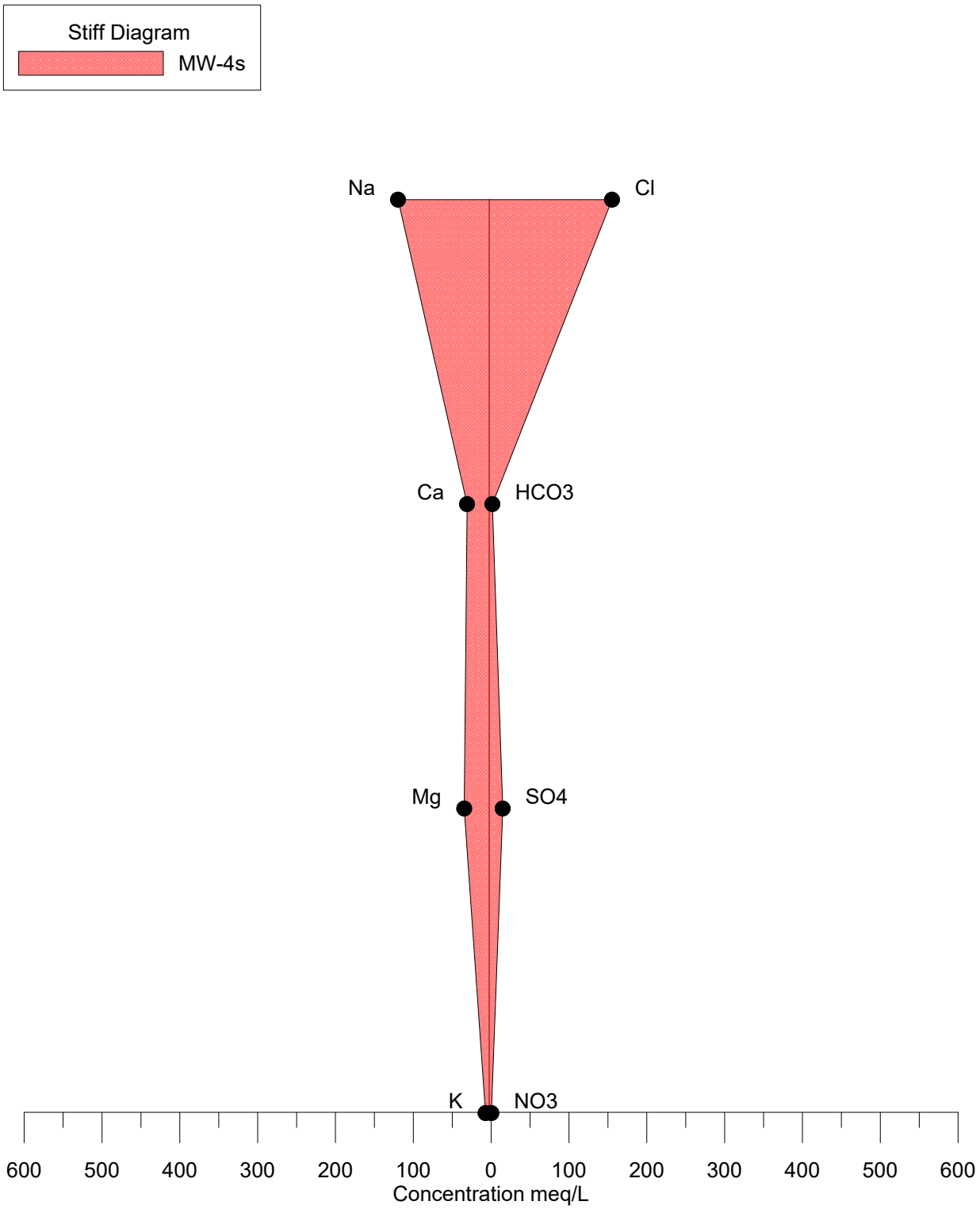
Stiff Diagram for MW-1m



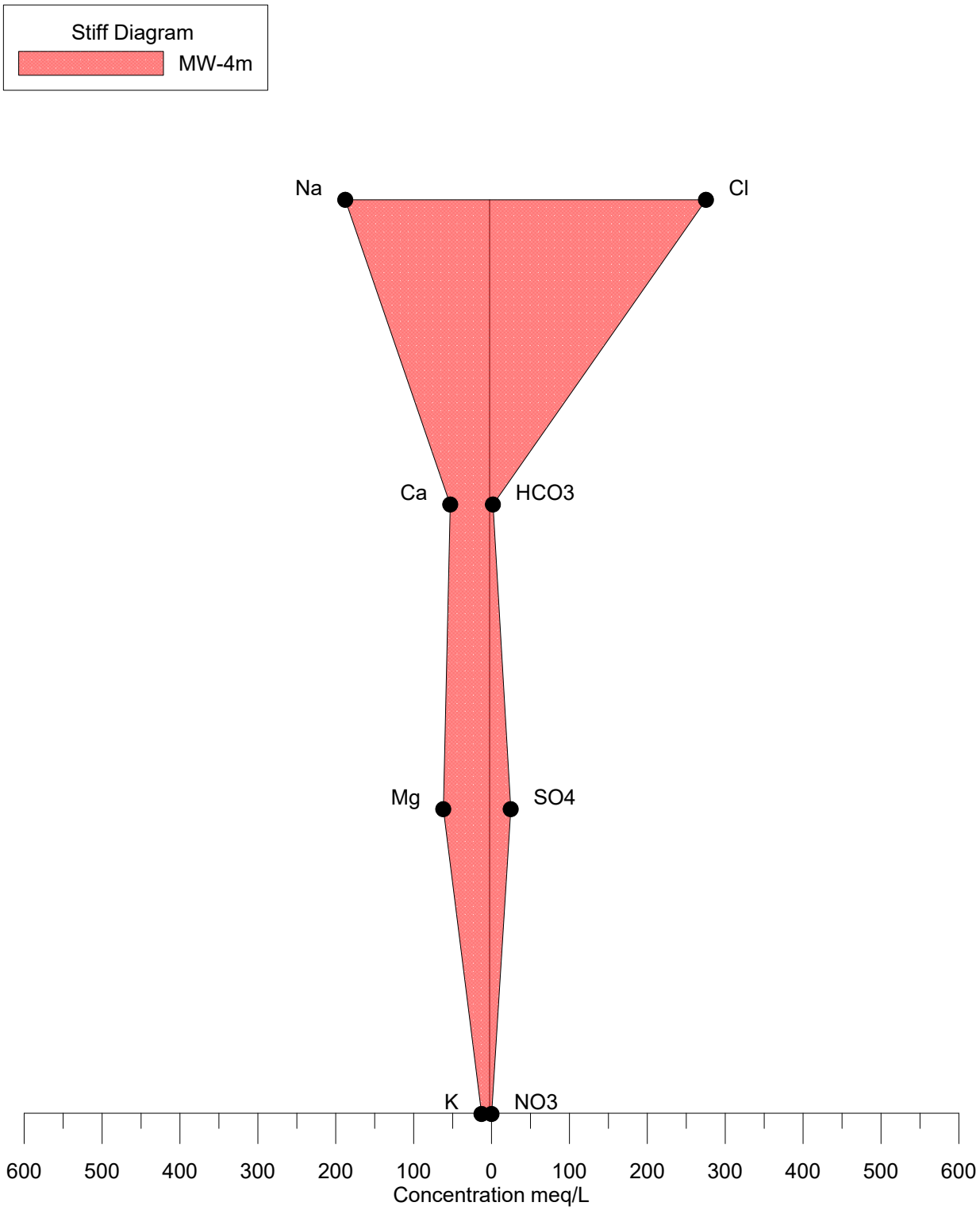
Stiff Diagram for MW-3s



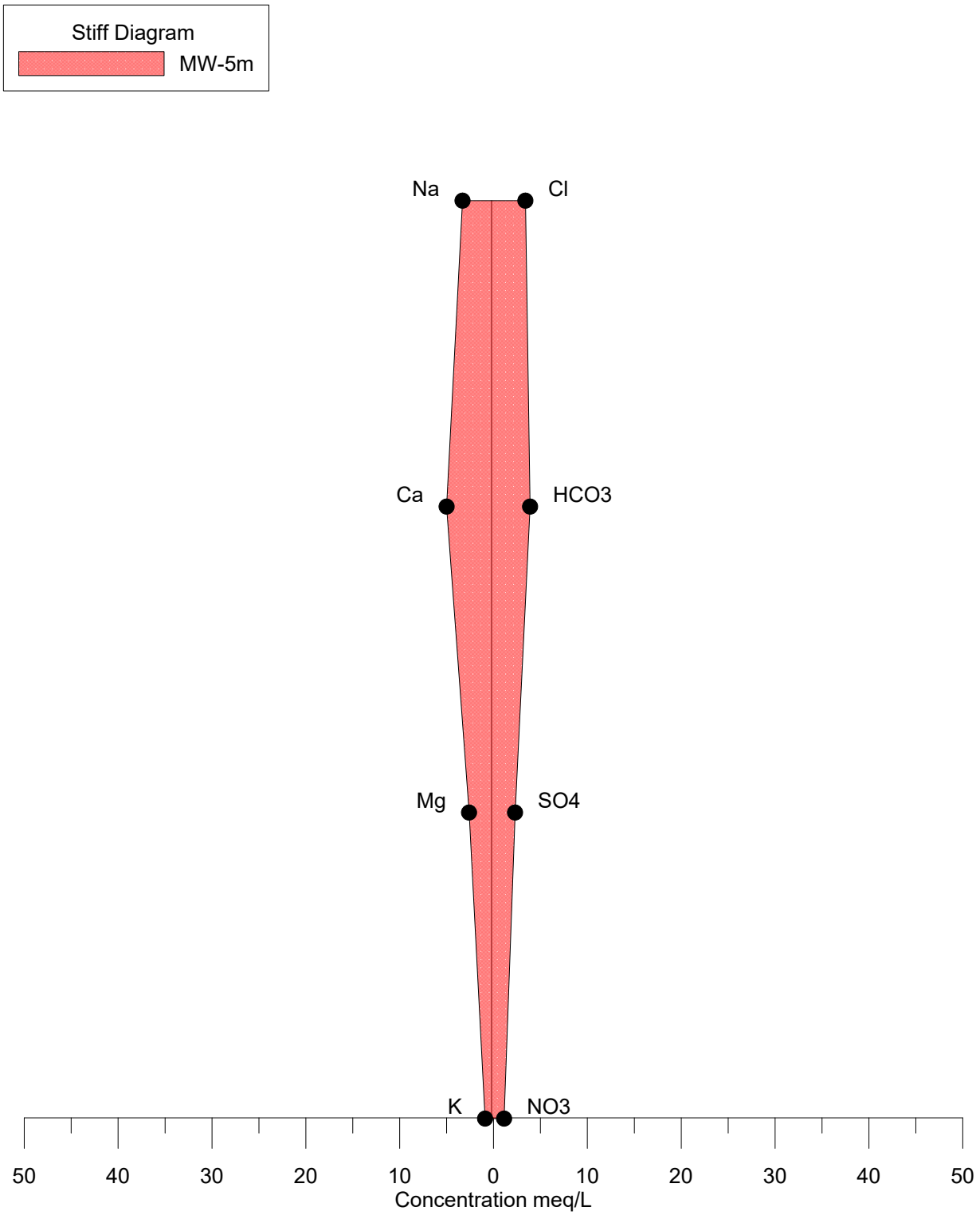
Stiff Diagram for MW-1m



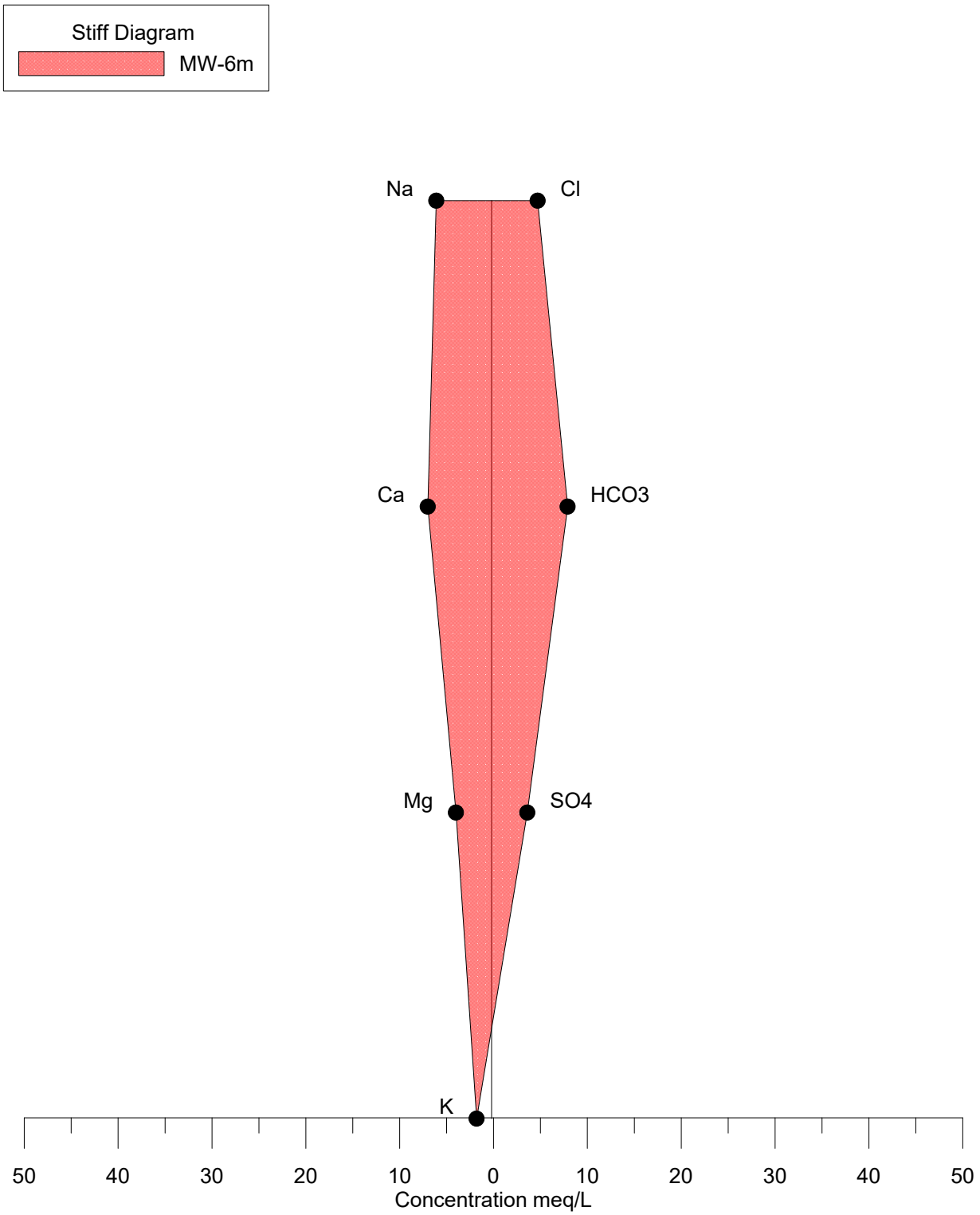
Stiff Diagram for MW-4s



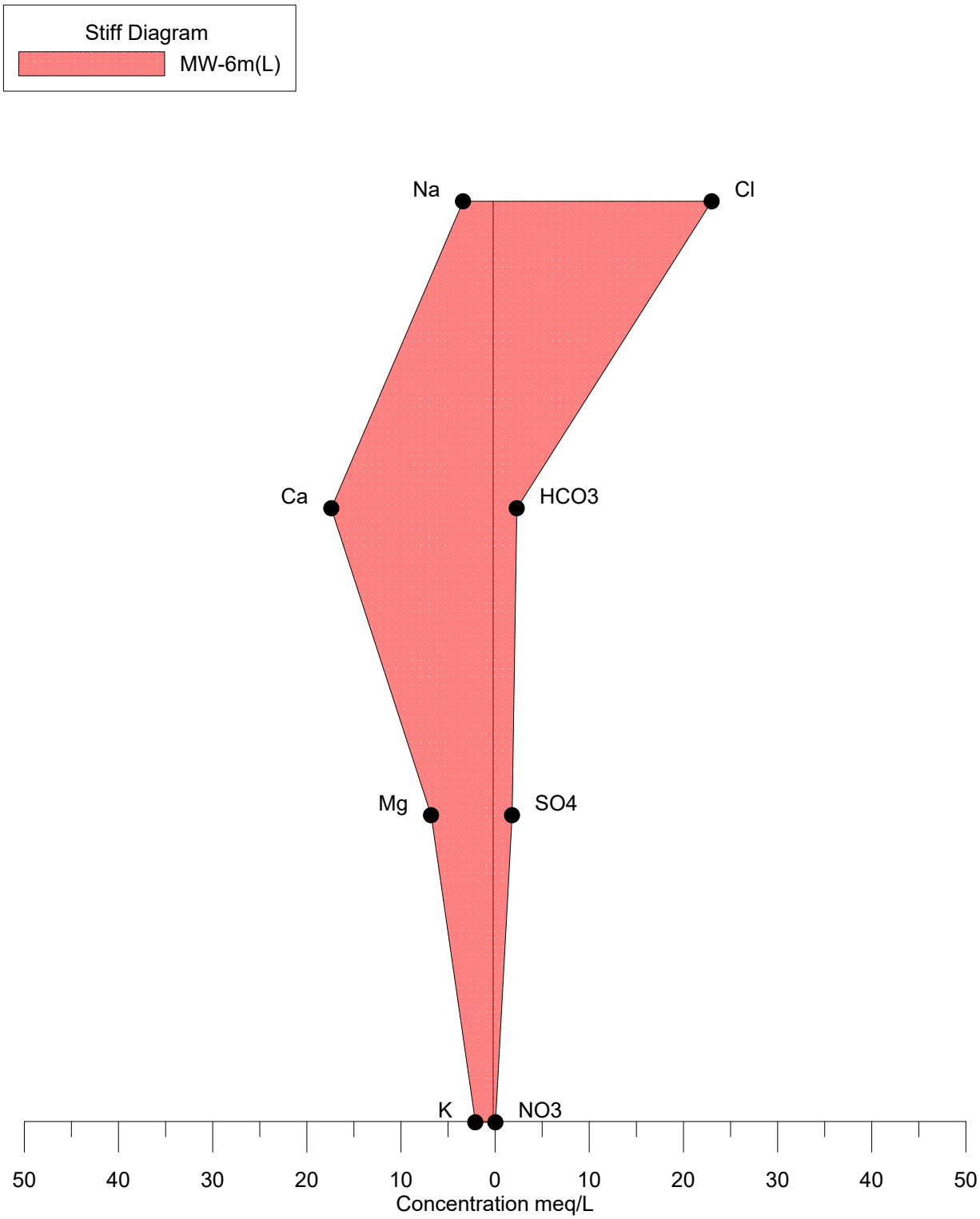
Stiff Diagram for MW-4m



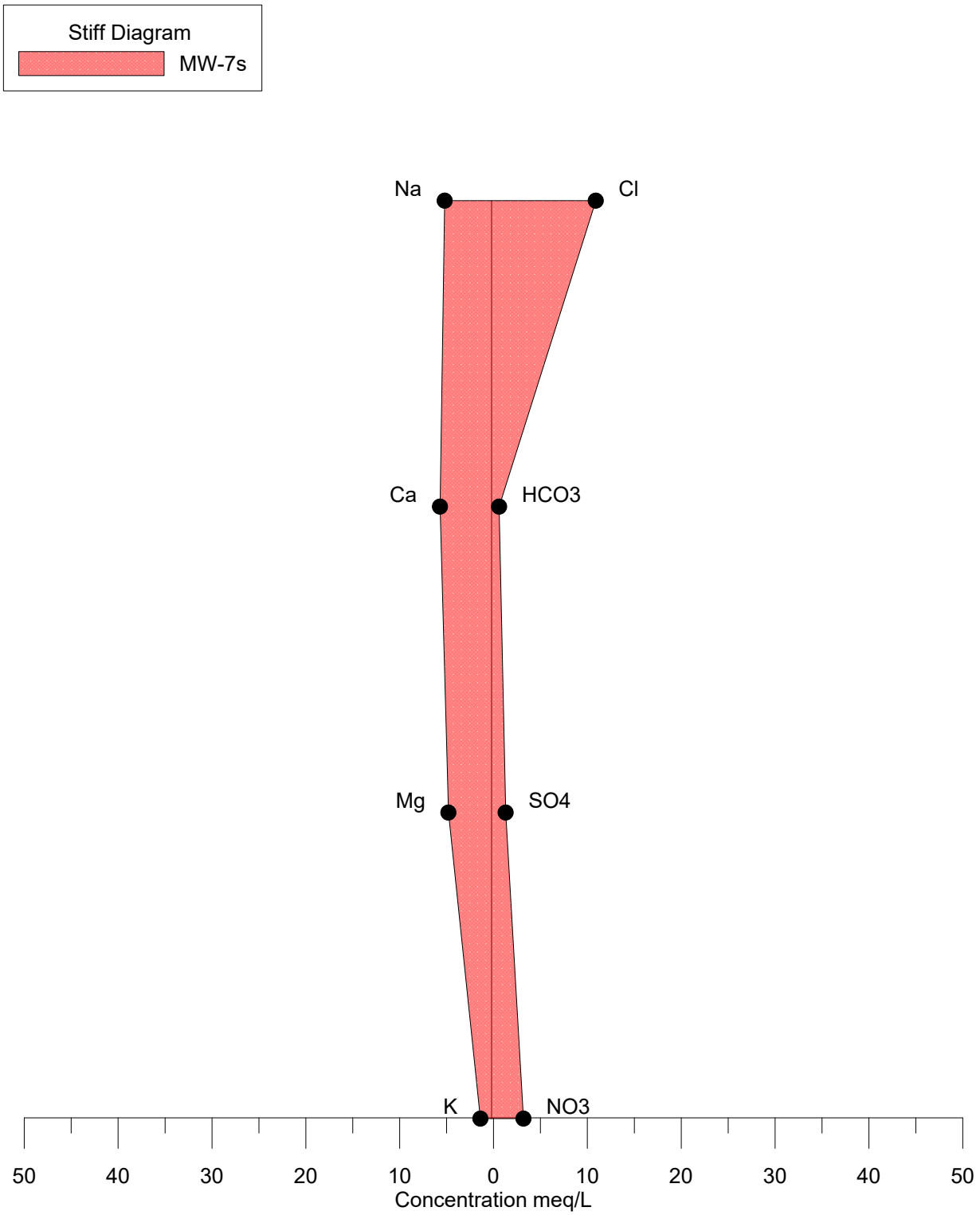
Stiff Diagram for MW-5m



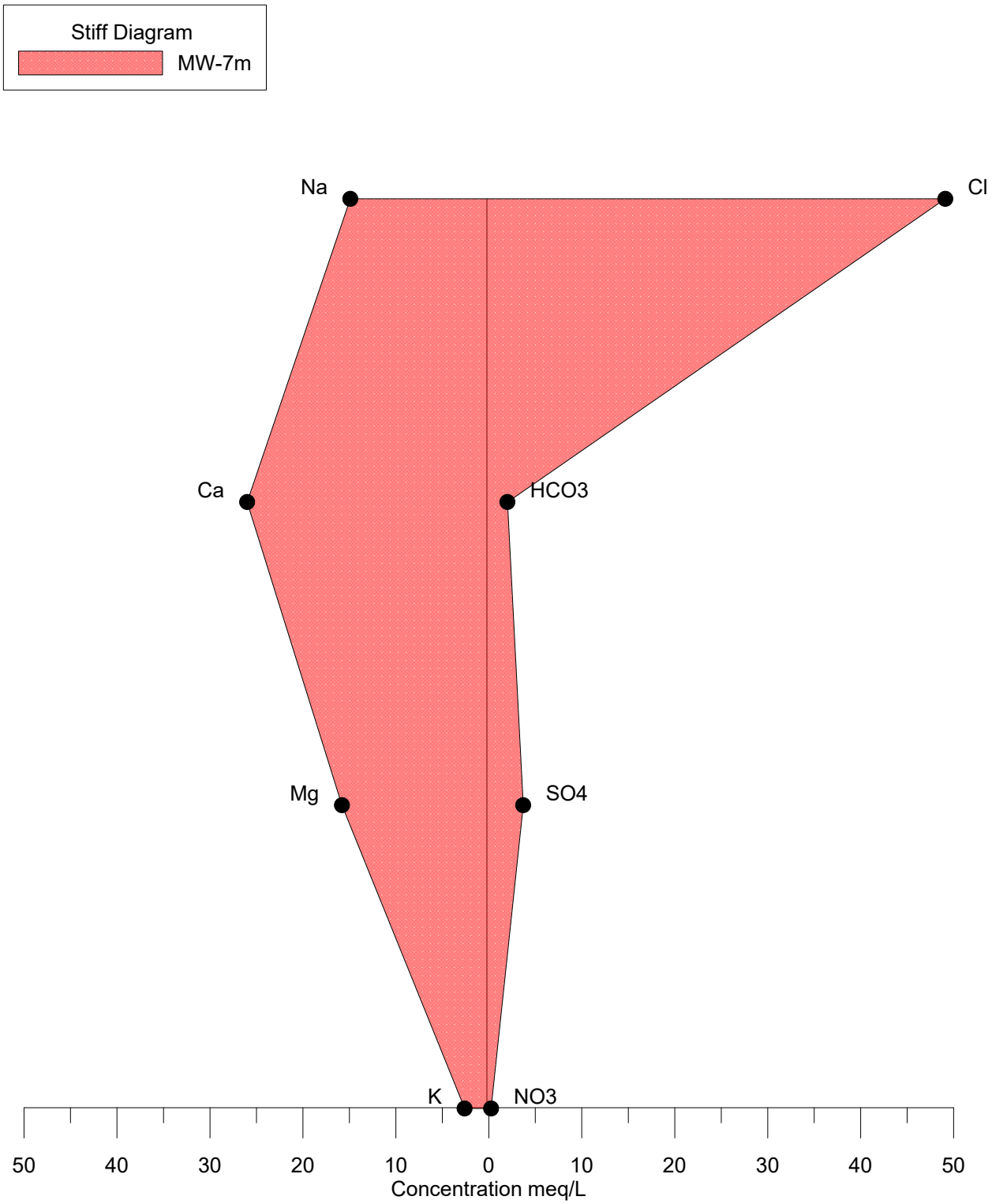
Stiff Diagram for MW-6m



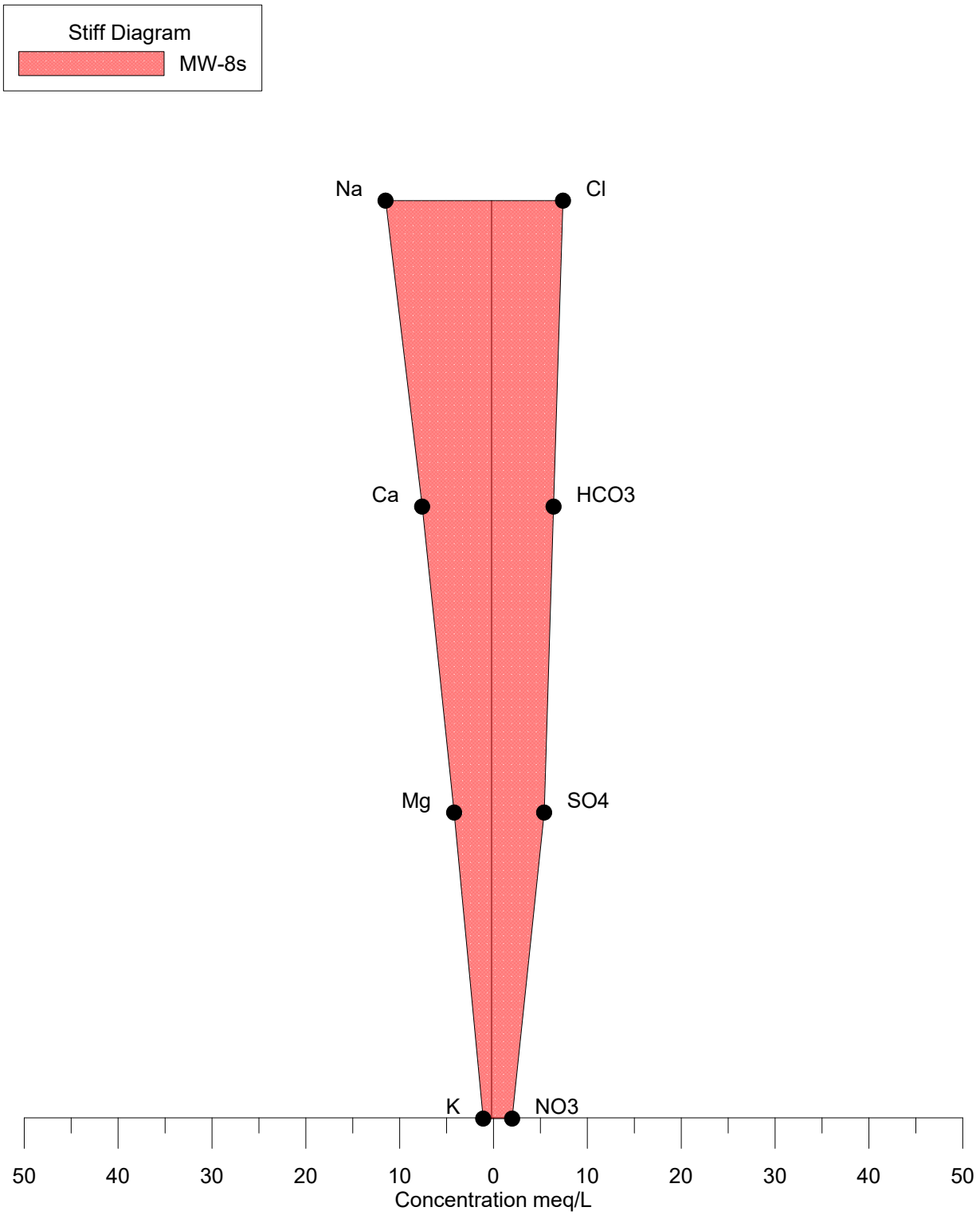
Stiff Diagram for MW-6m(L)



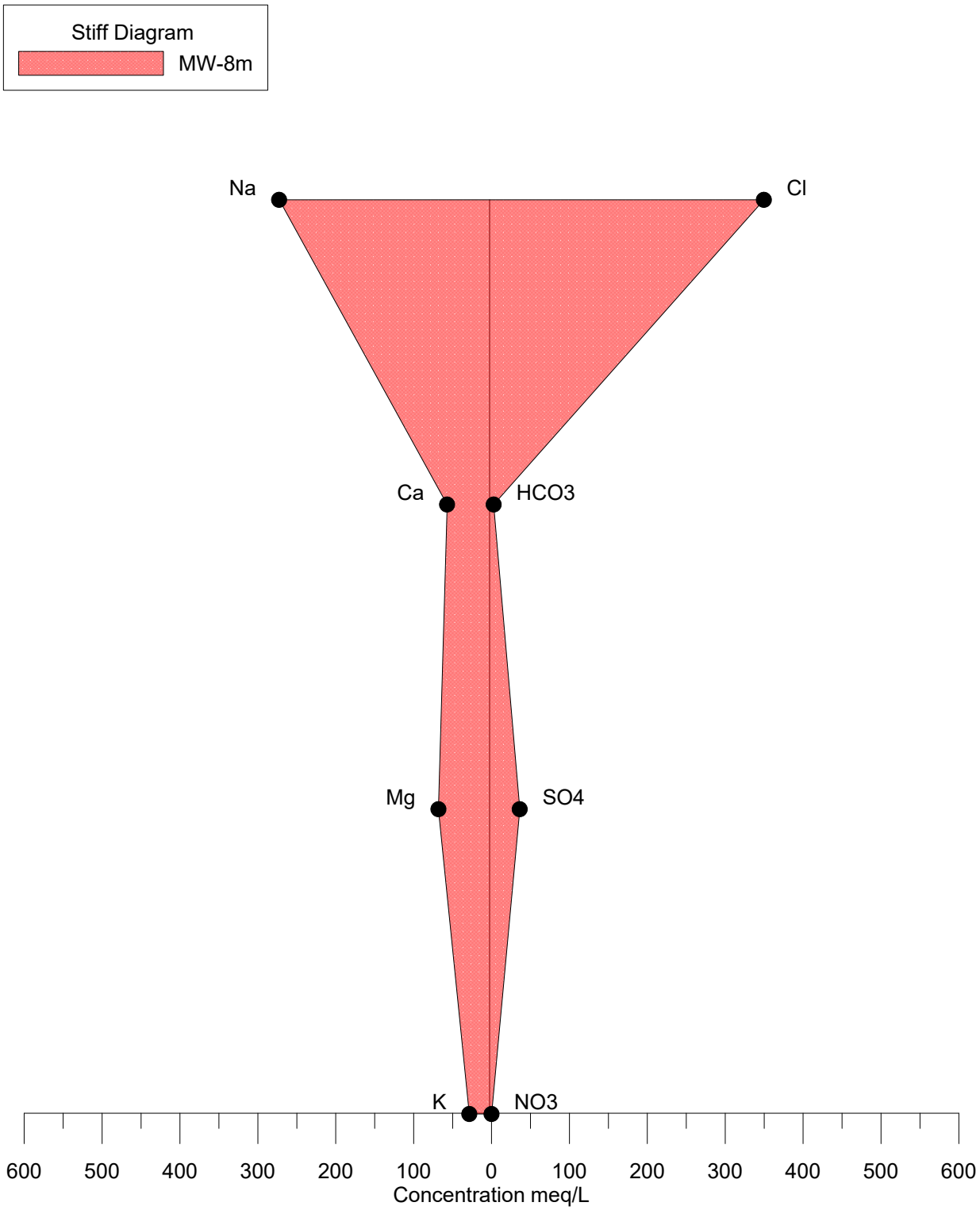
Stiff Diagram for MW-7s



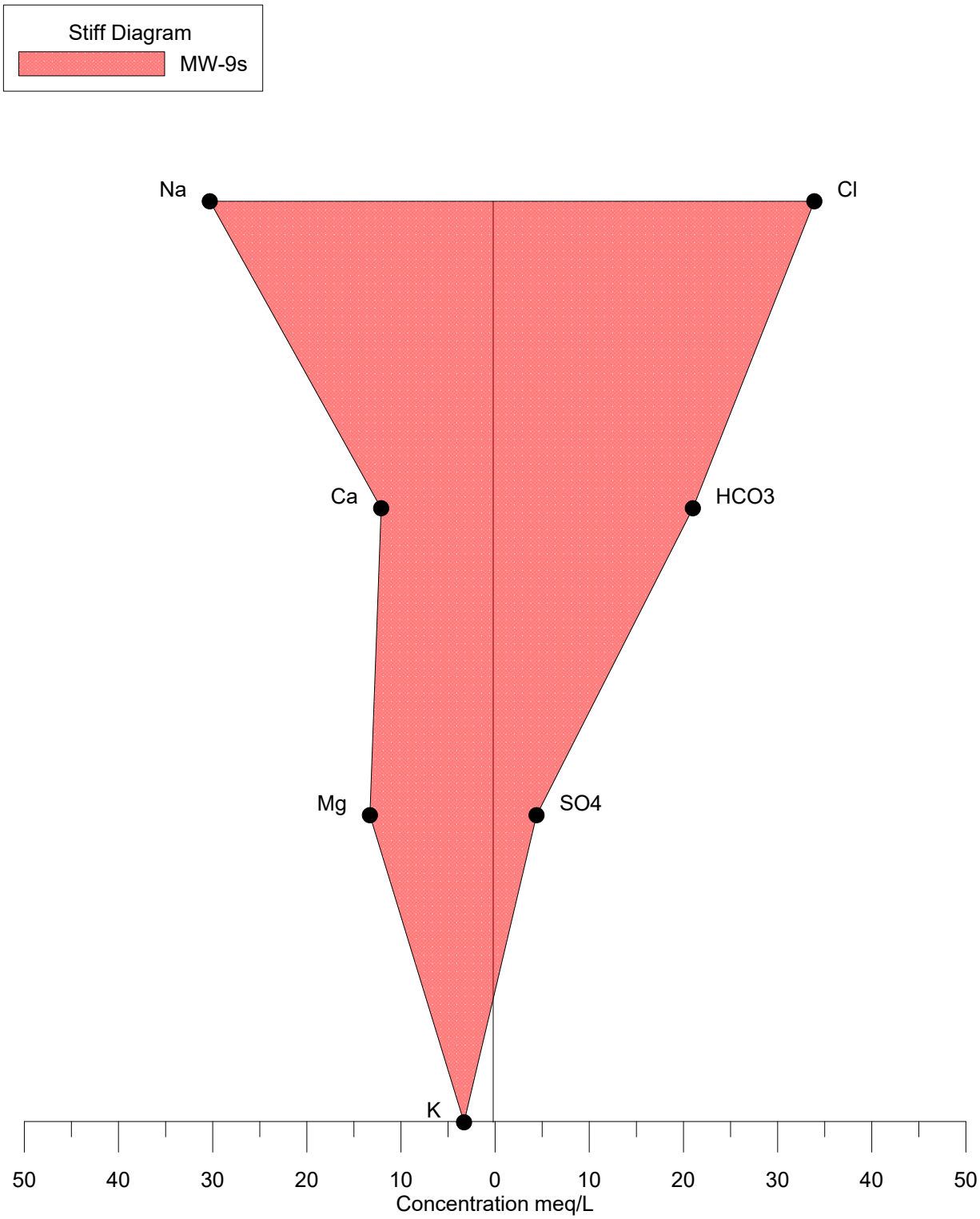
Stiff Diagram for MW-7m



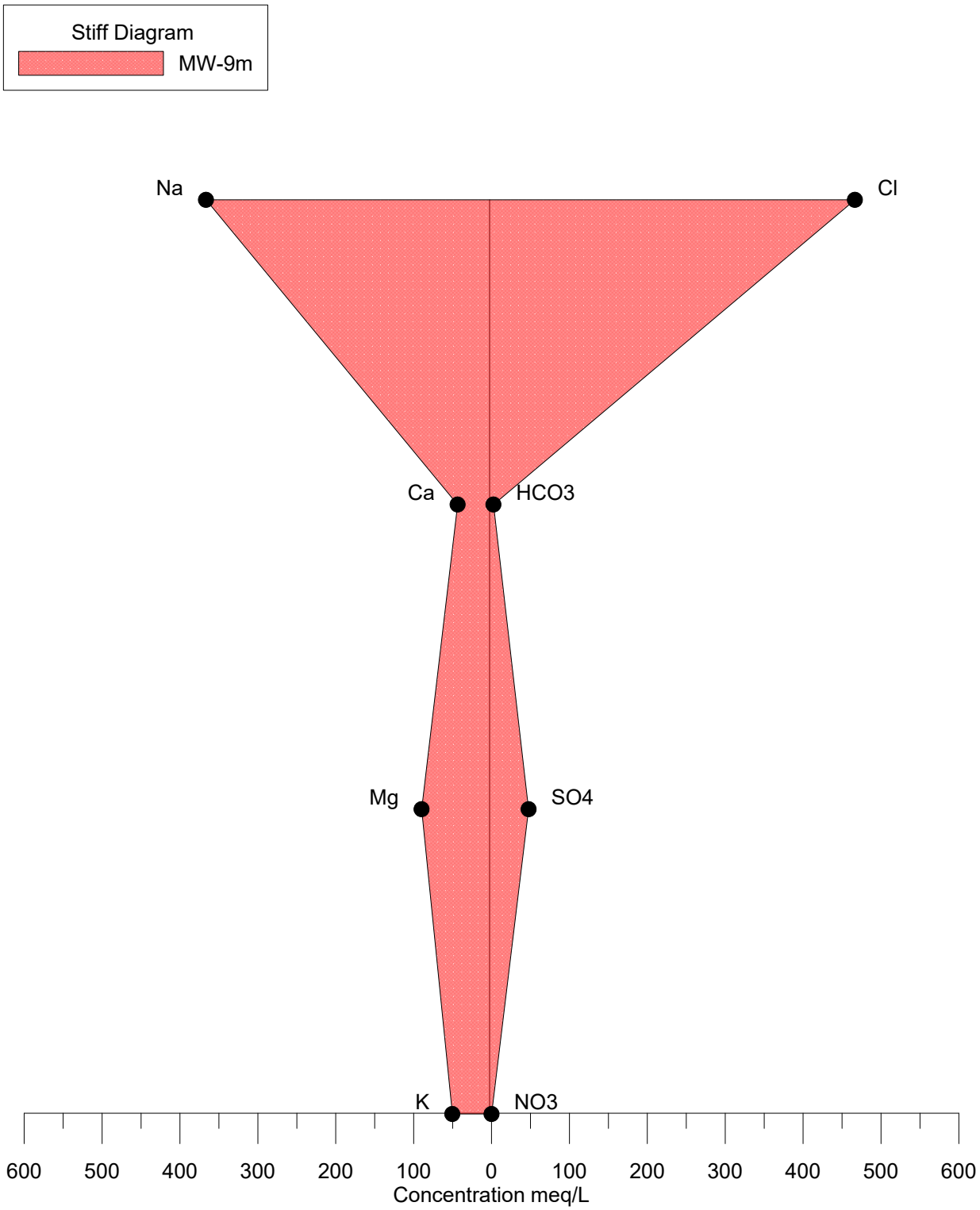
Stiff Diagram for MW-8s



Stiff Diagram for MW-8m



Stiff Diagram for MW-9s



Stiff Diagram for MW-9m

APPENDIX G

HWG Interim Work Products

APPENDIX G-1

TECHNICAL MEMORANDUM

Monterey Peninsula Water Supply Project

Baseline Water and Total Dissolved Solids Levels

Test Slant Well Area

April 20, 2015

TECHNICAL MEMORANDUM

Monterey Peninsula Water Supply Project
Baseline Water and Total Dissolved Solids Levels
Test Slant Well Area

Submi. ed to the Hydrogeologic Working Group

April 20 2015

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TECHNICAL MEMORANDUM

Monterey Peninsula Water Supply Project
Baseline Water and Total Dissolved Solids Levels
Test Slant Well Area

Submitted to the Hydrogeologic Working Group

APRIL 20, 2015

GEOSCIENCE

GEOSCIENCE SUPPORT SERVICES INCORPORATED
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THIS REPORT HAS BEEN PREPARED BY OR UNDER THE DIRECTION OF THE FOLLOWING DESIGN PROFESSIONAL LICENSED BY THE STATE OF CALIFORNIA AND BASED ON THE MOST RECENT AVAILABLE INFORMATION.

_____

Dennis E. Williams, Ph.D., PG, CHG
President

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CONTENTS

FIGURES

TABLES

APPENDIX

	Description
A	Coastal Development Permit #A-3-MRA-14-0050

TECHNICAL MEMORANDUM
MONTEREY PENINSULA WATER SUPPLY PROJECT
BASELINE WATER AND TOTAL DISSOLVED SOLIDS LEVELS TEST SLANT WELL AREA

SUBMITTED TO THE HYDROGEOLOGIC WORKING GROUP

1.0 GENERAL

1.1 Purpose and Scope

Coastal Development Permit #A-3-MRA-14-0050 dated 8-Dec-14 granted California American Water Company (Cal-Am) permission for development consisting of: Construction, operation and decommissioning of a test slant well at the CEMEX sand mining facility in the City of Marina and beneath Monterey Bay in the County of Monterey. Special condition 11 "Protection of Nearby Wells", requires the Hydrogeologic Working Group (HWG) to establish baseline water and TDS levels prior to commencing long term pumping tests. This Technical Memorandum summarizes activities to date regarding construction and preliminary testing of the Test Slant Well in the CEMEX area.

2.0 COASTAL DEVELOPMENT PERMIT #A-3-MRA-14-0050

On November 12, 2014, by a vote of 11-0, the California Coastal Commission granted to California American Water Company (Cal-Am) Coastal Development Permit #A-3-MRA-14-0050 subject to the standard and special conditions, for development consisting of: Construction, operation, and decommissioning of a test slant well at the CEMEX sand mining facility in the City of Marina and beneath Monterey Bay in the County of Monterey Issued on behalf of the Coastal Commission on December 8, 2014 (see Appendix A).

2.1 Special Condition No. 11 of CDP #A-3-MRA-14-0050

Special Condition 11 of the above referenced CDP entitled *Protection of Nearby Wells* and requires the following:

1. Prior to starting project-related pump tests, the permittee shall install monitoring devices in a minimum of four wells on the CEMEX site within 2,000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells.

2. Prior to commencement of long term pumping tests, the HWG shall establish baseline water and Total Dissolved Solids (TDS) levels in those monitoring wells and recommend these levels to the Executive Director of the California Coastal Commission

3. During the project pumping tests, the Permittee (Cal-Am) shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices.

4. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request.

5. If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pumping test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and will submit its determination to the Executive Director.

6. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit.

3.0 CEMEX TEST SLANT WELL AND MONITORING WELL CONSTRUCTION

3.1 Test Slant Well

The first Phase of Test Slant Well Investigation commenced with construction of a 724 ft Test Slant Well (TSW) at an angle of 19 degrees below horizontal at the CEMEX site. Construction began on December 27th, 2014 and was completed through the five-day pumping test on April 8, 2015. The second phase of the Test Slant Well Investigation will include a long-term pumping test once baseline water and TDS levels have been established. The table below provides a brief overview of the TSW construction and short-term testing chronology:

Test Slant Well Construction and Testing Chronology

Dates	TSW Construction Phase
December 27 through January 28, 2014	Pilot Borehole Drilling to a measured depth (MD) of 724 feet.
January 30 through February 2, 2015	Installation of 14-inch Well Screen
February 2 through February 21	Filter Pack Installation of 14-inch Well Screen
February 22 through March 11	Installation of 18-inch Well Screen
March 11 through March 14	Filter Pack Installation of 18-inch Well Screen
March 14	Installation of Sanitary Seal
March 14 through March 16	Installation of Stainless Steel Submersible Pump
March 20	NPDES Sampling-Pumped well for 2-Hours
March 20 through Match 24	Well was Idle
March 24 through March 31	Well Development using Submersible Pump
March 31 through April 2	Well was Idle
April 2	Step-Drawdown Pump Testing
April 3 through April 8, 2015	5-Day Constant Rate Pumping Test

The chronology of well construction and preliminary pumping tests are shown in timeline format on Figure 1-2. Figure 1-3 shows the as built cross section of the test slant well along with the geologic formations encountered.

3.2 Monitoring Well Construction

Per the Hydrogeologic Investigation Workplan, monitoring wells have been constructed on the CEMEX property in the vicinity of the Test Slant Well to provide information on hydrology and water quality. The locations of the monitoring wells are shown on Figure 1-1 and technical details summarized in Table 1. Initially four sets of monitoring wells were proposed for the CEMEX property. However, due to time constraints and the limitation of the working area near the test slant well, the MW-2 series was not constructed during the period that equipment access was allowed in the project area. The MW-5 and MW-6 series (shown on Figure 1-1) were selected by CalAm to provide water level and water quality data at farther distances from the test slant well site. Subsequently, Monterey County Water Resources Agency requested four additional monitoring well clusters (MW-7, MW-8, MW-9 and MW-10[1]) at various locations. These sites are also shown on Figure 1-1 and are in process to be constructed. The monitoring wells were drilled using the Sonic Drilling method and completed in the various underlying aquifers at each location. At the CEMEX site, monitoring wells were completed in the Dune Sand Aquifer, 180-Foot Aquifer, and 400-Foot Aquifer. Monitoring well cluster MW-6 near the Salinas River

[1] Currently MW-10 shown on Figure 1-1 is inaccessible and may be moved.

was recently completed and (MW-8, and MW-9) are anticipated to be completed in the "Perched A", 180-Foot Aquifer, and the 400-Foot Aquifer. Each monitoring well within a monitoring well cluster was (and will be) constructed in separate boreholes (i.e., one screen interval per well) to ensure proper sealing and separation between aquifers, and to ensure that representative aquifer sampling. A summary of information for the monitoring wells is provided in Table 1. A complete report of monitoring well construction will be prepared after all monitoring wells have been constructed. The table below provides a summary of construction dates for the monitoring wells to date.

Monitoring Well Construction Chronology		
Monitoring Well Series	**Monitoring Well I.D.**	**Construction/Development Dates**
MW-1	MW-1S	1/24/15-2/13/15
	MW-1M	1/20/15-2/13/15
	MW-1D	12/10/14-12/19/14
MW-3	MW-3S	2/18/15-2/24/15
	MW-3M	2/9/15-2/24/15
	MW-3D	2/2/15-2/21/15
MW-4	MW-4S	2/10/15-3/7/15
	MW-4M	2/6/15-3/6/15
	MW-4D	12/20/14-1/19/15
MW-5	MW-5S	1/28/15-3/10/15
	MW-5M	1/21/15-3/8/15
	MW-5D	12/16/14-2/17/15
MW-6	MW-6S	3/21/15-4/5/15
	MW-6M	3/1/15-4/4/15
	MW-6D	2/18/15-4/2/15

4.0 MONITORING WELL NETWORK

During the period from December 2014 to April 5, 2015 five monitoring well clusters were constructed (MW-1, MW-3, MW-4, MW-5 and MW-6) with each cluster consisting of three monitoring wells completed at different depth intervals. In addition, one monitoring well cluster (MW-6) was recently completed (5-Apr-15) and four more clusters are planned for construction (MW-7, MW-8, MW-9, and MW-10). The naming convention for the monitoring wells in each cluster is as follows: MW-1S, MW-1M and MW-1D refer to shallow, middle and deep monitoring zones respectively for monitoring well cluster MW-1. In addition, there are several existing wells which are being monitored or are planned to be

monitored for water level and salinity: two wells[2] at the Monterey Regional Water Pollution Control Agency Plant (MRWPCA Well 1 and Well 2); and two existing wells[3] on the CEMEX property. In addition to the already constructed, planned and existing groundwater monitoring wells, a stilling well installed at the north end of the CEMEX's dredge pond is also being monitored.

5.0 MONITORING DURING THE PERIOD 19-FEB-15 THROUGH 10-APR-15

Data monitoring began on 19-Feb-15 and since the start of monitoring five monitoring reports have been prepared:

- Monitoring Report No. 1, dated March 16, 2015 covers the period 19-Feb-15 - 13-Mar-15.
- Monitoring Report No. 2, dated March 23, 2015 covers the period 13-Mar-15 - 20-Mar-15.
- Monitoring Report No. 3, dated March 30, 2015 covers the period 20-Mar-15 - 27-Mar-15.
- Monitoring Report No. 4, dated April 6, 2015 covers the period 27-Mar-15 - 3-Apr-15.
- Monitoring Report No. 5, dated April 13, 2015 covers the period 3-Apr-15 -10-Apr-15.

These reports are posted on the project website: www.watersupplyproject.org

This report contains figures from the latest monitoring report (Monitoring Report No. 5). Figures 2-1 to 2-4 show graphical plots of groundwater elevations for the four monitoring well clusters (MW-1, MW-3, MW-4 and MW-5). Figure 2-5 shows groundwater elevations for existing wells MRWPCA Well 1 and Well 2. Similarly, Figures 3-1 through 3-5 show corresponding graphical plots of the TDS (based on EC measurements) for the above-mentioned wells. Figure 2-6 and 3-6 are water levels and TDS for the CEMEX dredge pond respectively. Figure 2-7 are water levels for the CEMEX north well and Figures 2-8 and 3-7 are water levels and TDS respectively for the Test Slant Well.

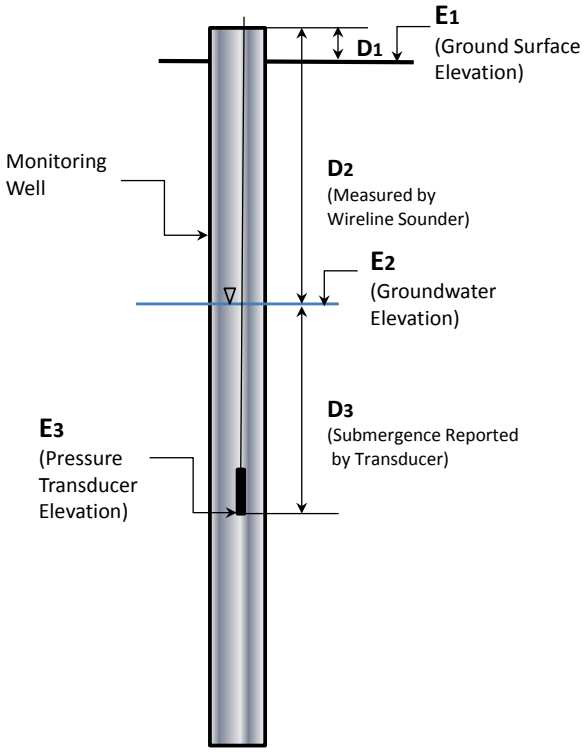
[2] MCPCA Wells No. 1 and 2 were equipped with pressure transducers on 19-Feb-15. Both wells are screened over the same depth interval, however water levels indicated by the transducers were 70 ft apart. Since there is a thick layer of oil in Well No. 2, these readings were interpreted as being inaccurate and further readings were suspended.
[3] The CEMEX North Well was equipped with a pressure transducer on 2-Apr-15 and will continue to be part of the monitoring program.

5.1 Type of Monitoring Performed

5.1.1 Groundwater Elevations

5.1.1.1 Data Loggers

In order to monitor groundwater elevations, In-Situ AquaTROLL 200 Data Loggers have been installed in the monitoring wells at the depths shown on Table 1. These instruments include pressure transducers, conductivity and temperature sensors, and have continuous data recording capability. As the pressure transducers only record pressure, groundwater elevations (E2) are calculated by dividing the transducer pressure by temperature corrected specific weight[4] of water and adding this depth (D3) to the elevation of the transducer(E3). The data loggers are programed to record pressure every 15 minutes, and are downloaded on a weekly basis. The transducer measurements are verified with hand measured water levels when the data loggers are downloaded. Instruments that report groundwater elevations that are inconsistent with hand levels are removed from the well and serviced or replaced.



5.1.1.2 Hand Levels

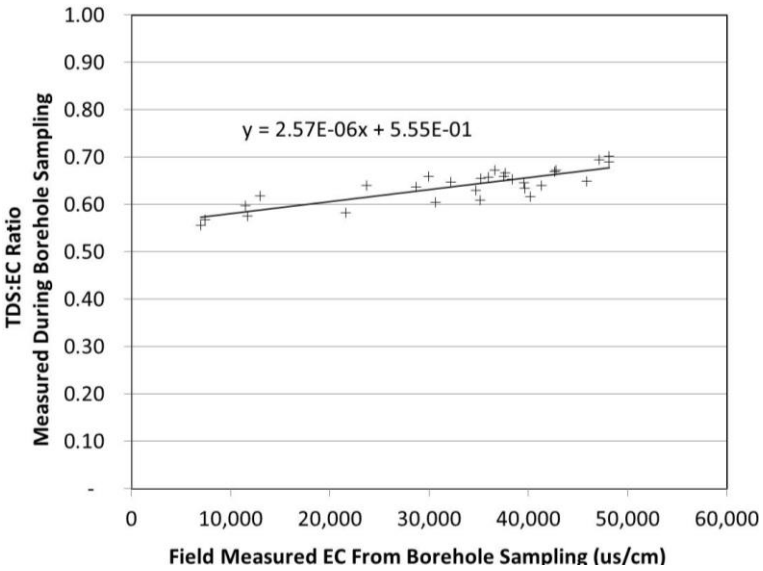
Groundwater elevations in the CEMEX area monitoring wells are measured manually during the weekly data logger downloads or daily when a transducer is removed or repaired. An electric wire line water level indicator is used to measure the depth to water below the surveyed reference point (at the top of the PVC casing of each well-see Table 1). The reference point for each well is measured and Manual measurements are taken more frequently during pumping tests and in wells that are not equipped with data loggers. During the five day pumping test, ground water elevations in the CEMEX area wells were measured multiple times per day. Ground water elevations in wells farther from CEMEX were measured

[4] The specific weight (γ), also known as the unit weight, is the weight per unit volume of a material. The specific weight of water is the density x specific gravity. For fresh water, γ = 62.43 lbs/ft^3, for seawater with a specific gravity of 1.024, the specific weight =63.93 lbs/ft3.

at least once per day. Depth to water in each of the monitoring wells (with the exception of the MRWPCA Well No. 1) were measured daily during the long term pumping test. The hand level measurements were used to verify transducer data. If transducer measured ground water elevations were not consistent with hand level groundwater elevations, the transducer was removed and serviced (or replaced).

5.1.2 Total Dissolved Solids

The AquaTROLL 200 data loggers from In-Situ were installed in the CEMEX area wells and measure pressure, specific electrical conductance (conductivity or EC) and temperature. Total dissolved solids are estimated by multiplying the temperature corrected EC by a conversion factor determined for the CEMEX area (see inset chart on the right). The conversion factor (TDS:EC ratio), was calculated from laboratory analyses of borehole water quality samples in the CEMEX area.



Conductivity reported by the AquaTroll level loggers were verified by daily down hole conductivity measurements recorded by a Solinst Model 107 TLC meter. If the data logger data cannot be verified, the instrument was removed and serviced. If a currently installed Aqua troll cannot be calibrated to meet laboratory or TLC measurements, it is replaced. Periodically, bailed and pumped samples are also taken for laboratory analysis.

5.1.3 Groundwater Samples Collected by Pumping

Groundwater Quality samples were collected from the Test Slant Well for NPDES requirements on March 20 and Match 24, 2015. Groundwater Samples were also collected from the TSW at the end of the 5-Day Short-term Pumping Test. The water quality data are summarized in Table 2. Water Quality samples from all of the monitoring wells were collected at the end of development process for each well. A second set of water quality samples were collected from Monitoring Wells MW-4 and MW-5 before the 5-Day constant rate pumping test and from MW-1 and MW-3 immediately after the 5-day pumping test. The results of the full water quality analysis for the monitoring wells are also tabulated in

Table 2. Groundwater samples were collected by pumping after a minimum of three well volumes were pumped and that the field parameters of Dissolved oxygen, turbidity, temperature, electrical conductivity, and pH remained stable over three consecutive 5-minute readings. The table below provides a summary of TDS concentrations from the water quality data.

Table 2. Summary of Laboratory TDS Concentrations from Test Slant Well and Monitoring Wells

Well Name	Screen Interval (ft bgs)	Sample Date	Total Diss. Solids, mg/L
Test Slant Well	140 - 245, 400 - 710 (MD), (44.4-101.5, 126.9-225.3 ft True Vertical Depth)	3/20/15	25,300
		3/24/15	24,400
		4/8/15	25,400
MW-1S	55 - 95	2/13/15	26,600
		4/9/15	27,500
MW-1M	115 - 225	2/14/15	30,900
		4/9/15	28,300
MW-1D	277 - 327	2/14/15	29,100
		4/9/15	28,700
MW-3S	50 - 90	2/25/15	23,400
		4/10/15	23,300
MW-3M	105 - 215	2/24/15	28,500
		4/10/15	28,300
MW-3D	280 - 330	2/21/15	32,600
		4/10/15	28,600
MW-4S	50 - 90	3/7/15	11,900
		4/2/15	12,800
MW-4M	100 - 230	3/6/15	17,900
		4/2/15	17,500
MW-4D	280 - 330	2/19/15	27,500
		4/2/15	27,600
MW-5S	50 - 90	3/10/15	1,166
		4/2/15	1,117
MW-5M	100 - 325	3/3/15	663
		4/2/15	454
MW-5D	380 - 430	2/17/15	2,616
		4/2/15	2,437

5.1.4 Bailed Samples Collected during the 5-Day constant Rate

Groundwater Samples were collected using a low density polyethylene (LDPE) bailer from the monitoring wells during the 5-Day constant rate test to provide additional electrical conductivity data

for the monitoring wells. The bailer was allowed to descend to the depth at which each transducer was set to collect a sample from the specific depth interval. The table below summarizes the frequency of the sample collection using the bailer during the 5-Day constant rate test.

Bailed Samples Collected During 5-Day Constant Rate Test					
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**
MW-1	✓	✓	✓	1M only	✓
MW-3	✓	✓	✓		✓
MW-4	✓	✓	✓	✓	✓
MW-5	✓	✓	✓		

Water samples collected using the pump represent a mix of water from the entire well screen, the volume contribution determined by the transmissivity associated with individual lithologic units. Bailed samples most likely represent the aquifer at the depth the bailer is stopped (in the bottom portion of the bailer) as well as aquifer materials higher in the screen interval as the bailer is pulled up through the water column. Since the MW-4 series monitoring wells provide the threshold measurements for evaluating potential off-site impacts to the 180-FTE and 400-Foot Aquifers, determination of the baseline water quality and water levels in these monitoring wells is the focus of the following discussion.

The conductivity values from the bailed samples from the MW-4 series varied from both laboratory results of samples collected by pumping and the from transducer readings. In general the conductivity values were lower than from the pump collected samples, suggesting TDS concentrations are stratified in the aquifer resulting in vertical variation TDS concentrations in the aquifer units opposite the well screen. This also reflects that there is some downward transition of water quality from the Dune Sand Aquifer to the top of the 180-FTE.

Specifically:

- The temperature log obtained after drilling the borehole for MW-4D shows marked temperature changes in the borehole at various depths,
- TDS calculated from the borehole resistivity log suggests a vertical variation in TDS with depth.
- Zone Test Samples collected during the Borehole Investigation also showed a variation in TDS concentrations with depth.

Due to the apparent vertical stratification of TDS concentrations in the MW-4 borehole, the use of changes in TDS concentrations in the MW-4 series to assess impacts from test slant well long-term pumping should include at a minimum of three separate approaches to validate TDS changes. Recommendations for water quality monitoring of MW-4 series are discussed below.

6.0 SUMMARY OF BASELINE AND TDS LEVELS

6.1 Summary of Water levels During Baseline Period

Ground water levels have been collected from monitoring wells after completion. Weekly monitoring reports presenting groundwater level and TDS concentrations in monitoring wells, the CEMEX Dredge Pond, CEMEX North Well, and from the Test Slant Well have been provided for public review on the CalAm website. A total of five monitoring reports have been submitted with Monitoring Report No. 1 submitted on March 16, 2015 and Monitoring Report submitted on April 13, 2015. New data has been added to the weekly reports as it becomes available each week. The groundwater level plots provided in Monitoring Report No. 5 are included in this report as Figures 2-1 through 2-8. The table below provides a summary of water level trends in the monitoring wells.

Baseline Groundwater Level Trend Observations – MPWSP Monitoring Wells

Monitoring Well I.D.	Beginning of Record	Figure Number	Observation of Groundwater Level Trends
MW-1S	2/19/15	**Figure 2-1**	Groundwater Levels are influenced by tidal changes. Hand level measurements indicate a slight overall downward trend after levels are corrected for tides.
MW-1M	2/19/15		Groundwater Levels are influenced by tidal changes. Hand level measurements indicate a stable trend after levels are corrected for tides.
MW-1D	2/18/15		Due to confined condition in the deep completion, groundwater Levels show the greatest are influence by tidal changes. Hand level measurements indicate a downward trend beginning March 4, 2015 approximately three weeks prior to first pump discharge (March 20, 2015).
MW-3S	3/4/15	**Figure 2-2**	Hand level measurements indicate a stable trend.
MW-3M	3/4/15		Hand level measurements indicate a stable trend.
MW-3D	3/4/15		Due to confined condition, groundwater Levels show the greatest are influence by tidal changes. Hand level measurements indicate a downward trend beginning March 10, 2015 approximately two weeks prior to first pump discharge (March 20, 2015).
MW-4S	3/10/15	**Figure 2-3**	Hand level measurements indicate a stable trend
MW-4M	3/10/15		Hand level measurements indicate a slight downward trend from March 9 through March 27 and are stable through the remaining period
MW-4D	2/20/15		Due to confined conditions in the aquifer, groundwater levels show some influence from tidal changes. Hand level measurements indicate a downward beginning March 4, 2015 approximately three weeks prior to first pump discharge (March 20, 2015) and show an slight upward trend approximately two days in to the 5-Day Constant Rate Pumping Test.
MW-5S	3/10/15	**Figure 2-4**	Hand level measurements indicate a stable trend
MW-5M	3/10/15		Hand level measurements indicate a slight downward trend from March 9 through March 27 and are stable through the remaining period
MW-5D	2/19/15		Groundwater levels show very muted response to tidal changes. Hand level measurements indicate a downward beginning March 6, 2015 approximately three weeks prior to first pump discharge (March 20, 2015) and and fluctuate both downward and upward until the end of the current recording period.
CPCA Well No.	2/18/15	**Figure 2-5**	The groundwater levels show a very slight downward trend form immediately after installation of the transducer. The trend appears to be consistent with water levels in the deep completions of the monitoring wells.

In summary, the monitoring well completions in the 400-Foot Aquifer show a slight downward trend or fluctuating trend beginning a minimum of two weeks before the first pumping of the test slant well. This trend in the deep completions is due to regional conditions in the aquifer including localized pumping from wells near the MW-5 series. It is anticipated that groundwater levels in the deep completions will continue to decline with the approach of the summer climactic conditions.

6.2 Summary of TDS Concentrations in Wells During Baseline Period

Water quality samples were collected from each monitoring well after development and again prior to the 5-Day Constant Rate pumping test. The laboratory results are summarized on the table shown on Page 9 of this technical memorandum. In addition downhole pressure transducers with the capability to measure electrical conductivity were installed in all monitoring wells, the TSW, the CEMEX north well, CEMEX dredge pond, and the MCRPCA Well No. 1. The weekly monitoring reports have presented TDS concentrations in monitoring wells, the CEMEX Dredge Pond, CEMEX North Well, and from the Test Slant Well have been provided for public review on the CalAm website. A total of five monitoring reports have been submitted with Monitoring Report No. 1 submitted on March 16, 2015 and Monitoring Report submitted on April 13, 2015. New data has been added to the weekly reports as it becomes available each week. The TDS concentration plots provided in Monitoring Report No. 5 are included in this report as Figures 3-1 through 3-7. The table below provides a summary of TDS trends in the monitoring wells and the MCRPCA ell No. 1 during the baseline period.

Baseline TDS Concentration Trend Observations – MPWSP Monitoring Wells

Monitoring Well I.D.	Beginning of Record	Figure Number	Observation of TDS Trends
MW-1S	2/19/15	**Figure 3-1**	TDS concentration trend is influenced by tidal changes. The TDS trend is stable until initiating discharge from the TSW pump. After initiaiting of pumping, TDS concentrations have increased.
MW-1M	2/19/15		TDS concentration is influenced by tidal changes, but much less than MW-1S. The TDS trend is stable until approximately three days of pump development have occurred (March 27, 2015). TDS concentrations increase through pump development and increase at a higher rate after initiation of the 5-Day Constant Rate Pumping Test.
MW-1D	2/18/15		TDS concentration is largely influenced by tidal changes and shows a cyclic overprint on the daily tidal change of approximately 8-9 days. The TDS concentration change shows no influence from the initiation of pump discharge or the 5-Day Constant Rate Test
MW-3S	3/4/15	**Figure 3-2**	The transducer plot was stable for approximately two weeks after installation showing a muted response to daily tidal changes. On March 20, 2015, the transducer was removed and cleaned. The result was drop in TDS reporting and an increase in the recording of daily titdal changes.
MW-3M	3/4/15		TDS concentration shows a stable trend
MW-3D	3/4/15		TDS concentration plot indicates a rise in TDS concentration for approximately seven days after installation and then a steady decrease in concentration for the remainder of the record. Both trends may likely be transducer drift. The trend shows a muted response to daily tidal changes. The TDS concentrations stabilize immediately after initiation of the 5-Day Constant Rate Pumping Test and show an apparent rise in TDS immediately after the test is completed
MW-4S	3/10/15	**Figure 3-3**	The TDS concentration in MW-4S appears to be stable.
MW-4M	3/10/15		The tranducers in MW-4M showed an obvious upward drift and was replaced on April 2, 2015 prior to the 5-Day Constant Rate Pumping Test. After replacement, the TDS concentration plots remain stable through the end of the period.
MW-4D	2/20/15		The transducer in MW-1D was replaced prior to the 5-Day pumping test due to what appears as transducer drift. After replacment, the TDS concentration show a downward trend until the end of the 5-Day test and appear to stabilizeb for the remainder of the period.
MW-5S	3/10/15	**Figure 3-4**	The TDS concentration in MW-5S appears to be stable.
MW-5M	3/10/15		The TDS concentration in MW-5S appears to be stable.
MW-5D	2/19/15		The TDS concentration plot shows an erratic trend from approximately 12 days prior the intial discharge from the test slant well pump. The trend is likely due to the combined pumping of wells in the vicinity screened in the 400-Foot Aquifer that operate on various overlapping schedules
MCPCA Well No.	2/18/15	**Figure 3-5**	The TDS concentration in the MCPCA Well No. 1 shows a slight upward trend (150 mg/L) during the period of record (51 days). The very slight upward trend began immediately after transducer installation on February 18, 2015.

7.0 RECOMMENDED MONITORING OF BASELINE AND TDS LEVELS

7.1 Monitoring of Groundwater Levels in MW-4 Series

Groundwater level measurements will be collected daily using a hand operated electric sounder in addition to pressure transducers. Groundwater levels will be measured daily by hand to validate the electronic logging devices to such time that the devices are deemed to be providing consistent accurate data. After this time, hand levels will be collected biweekly, then monthly when transducer data is downloaded.

If ground water levels at MW-4 show a continuing downward trend but prior to reaching the threshold prescribed by CDP Condition 11, the test slant well will be voluntarily shut off. If the test slant well is the cause of the downward trend in groundwater levels at MW-4, then groundwater levels will show a recovering trend. If the groundwater levels do not recover, then this is indicative of regional and climatic impacts. The data will be reviewed by the HWG for confirmation and the test slant well will resume pumping. If the ground water levels continue to decline after start up, then the data indicative of impacts other the slant well will be submitted to the Coastal Commission Executive Director, prior to reaching the threshold.

7.2 Monitoring of TDS Concentration Changes in MW-4 Series

Due to the apparent vertical stratification of TDS concentrations in the MW-4 borehole, the use of changes in TDS concentrations in MW-4 series to assess impacts from test slant well long-term pumping should include at a minimum three forms of validation of TDS changes:

1) Samples will be collected using a pump set at the same depth, pumped at the same rate and for the approximate same time interval before sample collection. Samples should be submitted for laboratory analysis. Laboratory results should be compared to previous laboratory results collected from the MW-4 series. Samples in MW-4 will be collected using dedicated pumps set in each of the MW-4 series monitoring wells
2) Transducers recording water levels and electrical conductivity will be set and remain at the same depth in each monitoring well. The conductivity input should be checked and re-calibrated if necessary using a down hole conductivity meter daily when water levels are hand measured, and
3) A down whole conductivity meter will be used to collect conductivity from a minimum of two selected depths daily when the hand levels are collected from each well.

Each method prescribed above will be compared with the data collected by that method to determine whether TDS concentrations remain within acceptable levels or show an increasing trend. Seasonal changes in TDS may result from potential seasonal changes in ground water levels aside from changes potentially induced by groundwater extraction from the test slant well. Changes in TDS will also be compared to changes in groundwater levels to evaluate whether TDS changes represent seasonal water quality change in the underlying aquifers.

If two of the three methods used indicate a rising trend in the MW-4 series monitoring wells, the data will be submitted to the HWG for review prior to reaching the threshold prescribed by CDP Condition 11. The HWG will evaluate the data to determine whether rising TDS, should it occur, is a result of TSW pumping or from some other cause.

8.0 COMPLIANCE WITH CDP SPECIAL CONDITION 11

The following summarizes to date CalAm's compliance with Special Condition 11 of the above referenced CDP Protection of Nearby Wells. Specifically:

1. Prior to starting project-related pump tests, the permittee shall install monitoring devices in a minimum of four wells on the CEMEX site within 2,000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells. ***Cal-Am has Complied.***

2. Prior to commencement of long term pumping tests, the HWG shall establish baseline water and Total Dissolved Solids (TDS) levels in those monitoring wells and recommend these levels to the Executive Director of the California Coastal Commission. ***Cal-Am has Complied upon completion of the HWG Review Process of this TM.***

3. During the project pumping tests, the Permittee (Cal-Am) shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. ***Cal-Am has Complied during the short term tests and will comply during the long term testing.***

4. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. ***Cal-Am has Complied and will continue to comply.***

5. If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pumping test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and will submit its determination to the Executive Director. ***Cal-Am has Complied as during the short term testing these threshold levels were not reached. Cal Am will continue to monitor and comply during the long term testing.***

6. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit. ***Cal-Am will Comply.***

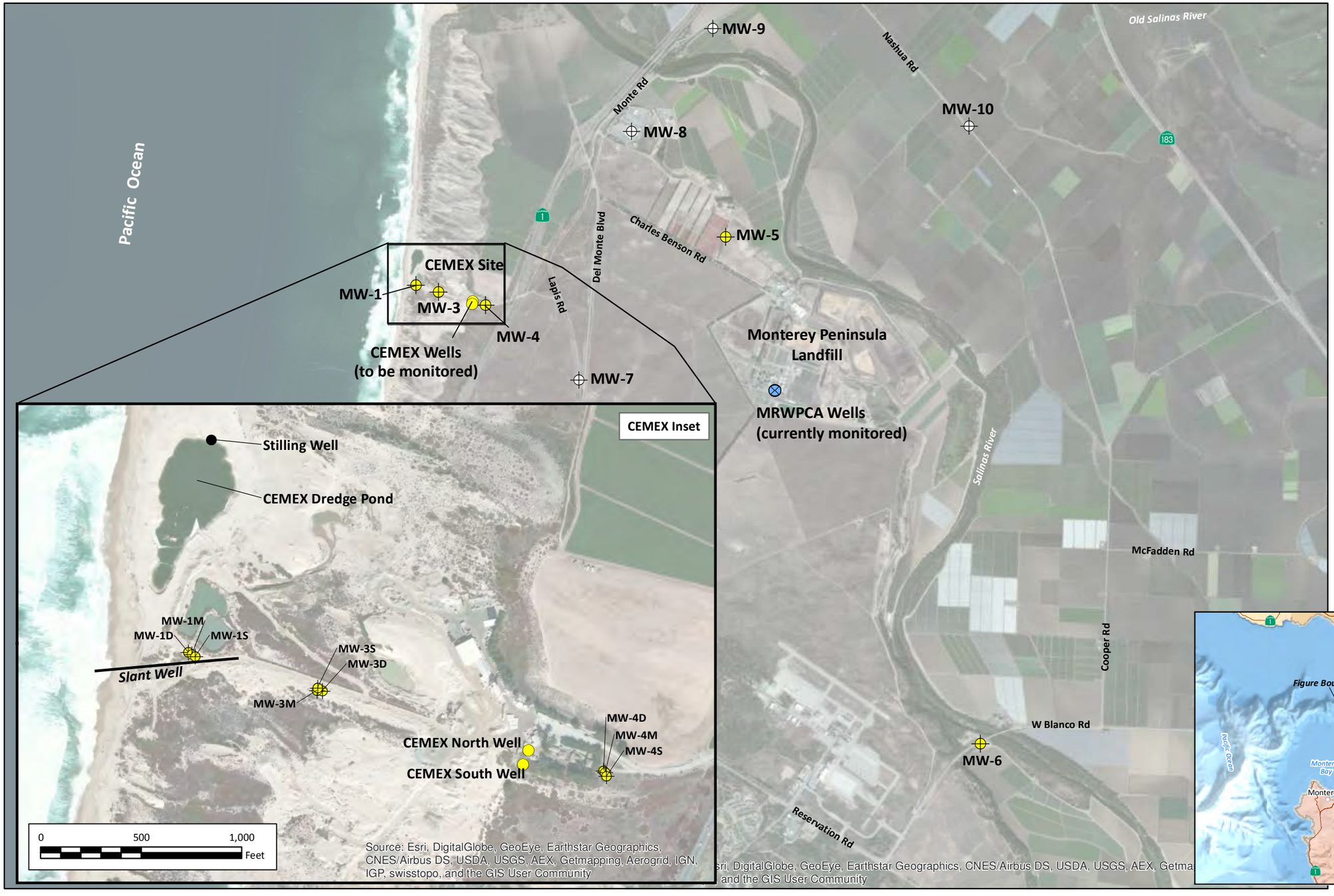
FIGURES

GEOSCIENCE

CALIFORNIA AMERICAN WATER

MONTEREY PENINSULA WATER SUPPLY PROJECT

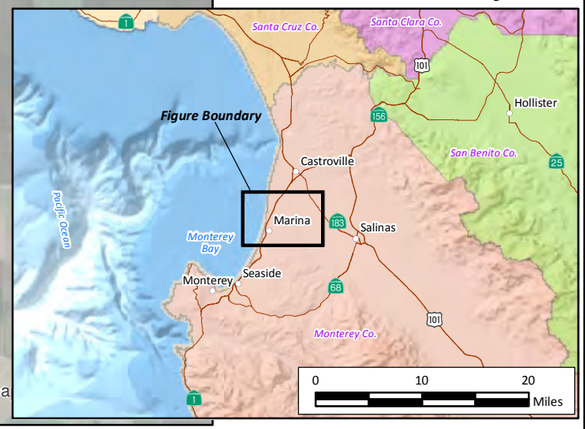
WELLS MONITORED FOR PERMIT COMPLIANCE



EXPLANATION

- Existing Monitoring Well Cluster
- Proposed Monitoring Well Cluster
- Existing Production Well
- CEMEX Wells
- Slant Well

Regional Inset



15-Apr-15

Prepared by: DWB. Map Projection: State Plane 1983, Zone IV.

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NORTH

0 1,500 3,000 6,000
Feet

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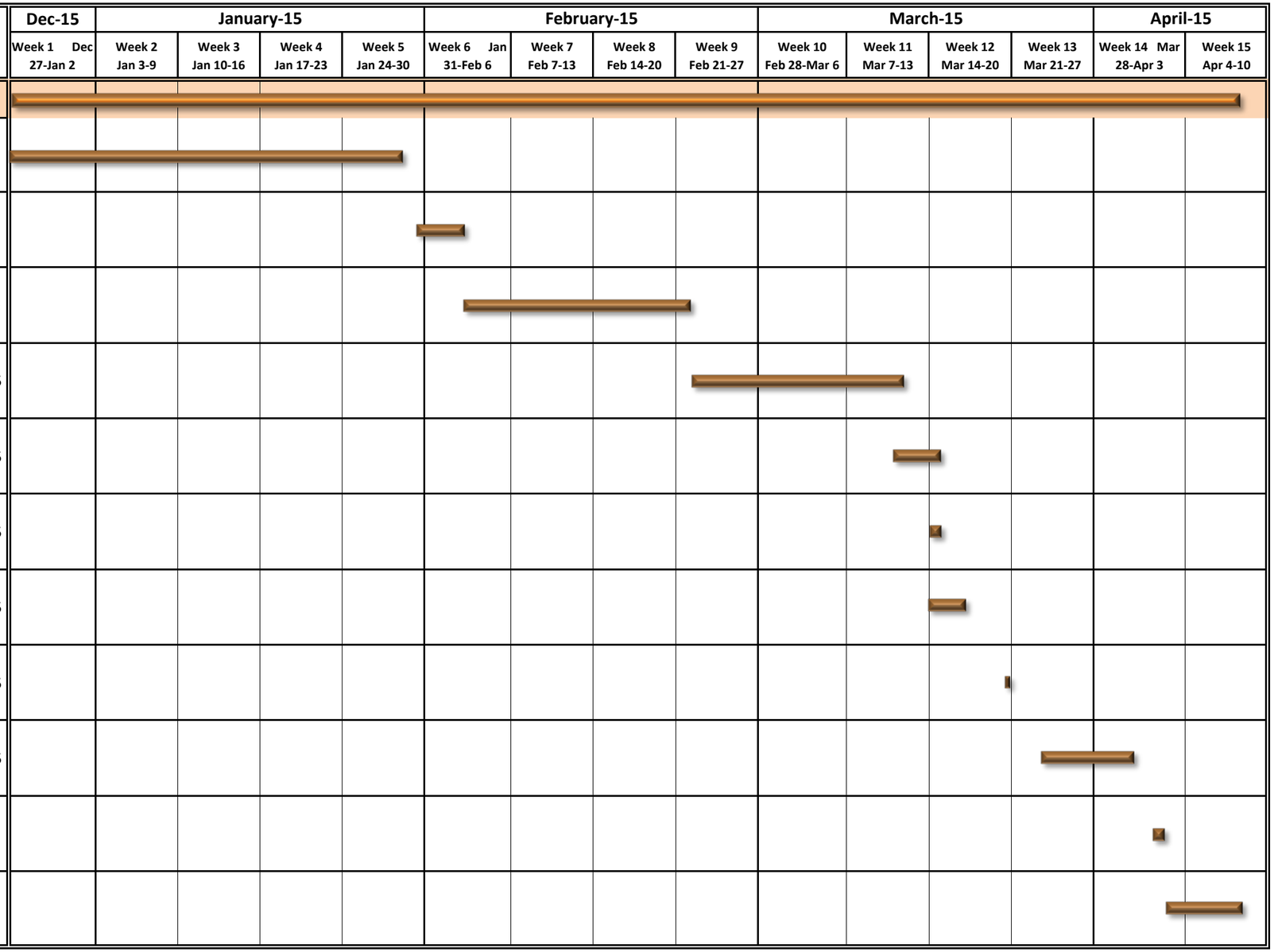
Figure 1-1

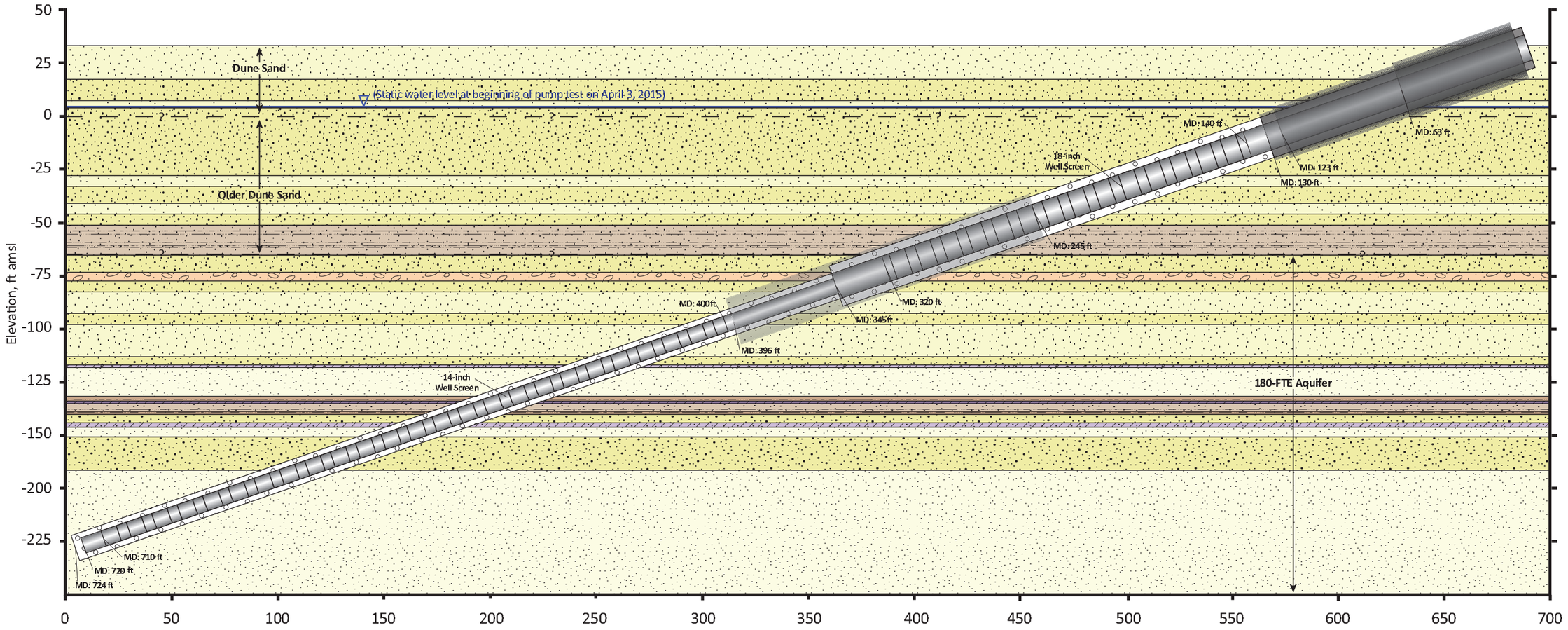
GIS_proj/mcwsp_cal_am/rbf_wl_monitoring/Monitoring_Rpt_No4_4-6-15/1_Fig_1-1_MonWells_used_4-15-15.mxd

Test Slant Well Construction and Preliminary Testing Chronology

TASK NAME	Duration	Start	Finish
Test Slant Well	103 days	27-Dec-14	8-Apr-15
Pilot borehole drilling to a measured depth (MD) of 724 ft.	33 days	27-Dec-14	28-Jan-15
Installation of 14-inch well screen	4 days	30-Jan-15	2-Feb-15
Installation of filter pack for 14-inch well screen	20 days	2-Feb-15	21-Feb-15
Installation of 18-inch well screen	18 days	22-Feb-15	11-Mar-15
Installation of filter pack for 18-inch well screen	4 days	11-Mar-15	14-Mar-15
Installation of sanitary seal	1 day	14-Mar-15	14-Mar-15
Installation of stainless steel submersible pump	3 days	14-Mar-15	16-Mar-15
NPDES Sampling: 2 hour well pumping	2 hours	20-Mar-15	20-Mar-15
Well development using submersible pump	8 days	24-Mar-15	31-Mar-15
Step-drawdown pump testing	1 day	2-Apr-15	2-Apr-15
5-day constant rate pump testing	6 days*	3-Apr-15	8-Apr-15



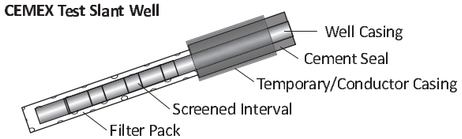
(WEST) (EAST)



Explanation

- Sand with Gravel (SP)
- Fine to Coarse Grained Sand (SP)
- Fine to Medium Grained Sand (SP)
- Fine Grained Sand (SP)
- Sand with Silt (SP-SM)
- Silt or Silt with Sand (ML/SM)
- Clayey Sand (SC)
- Clay (CL)
- — ? — Geologic Contact (approximate)

CEMEX Test Slant Well



MD = Measured (Lineal) Depth

0 50 100
Approximate Scale Feet

DRAFT

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CALIFORNIA AMERICAN WATER

CEMEX TEST SLANT WELL LITHOLOGY

Drawn: LC
Checked:
Approved:
Date: 15-Apr-15

Figure 1-3

X:\Projects\MONTEREY AREA DESAL STUDIES\01a) Test Slant Well Project\0) Baseline Data TM\Fig_1-3_x-section_SlantWell_Apr-15.ai

Groundwater Elevation in MPWSP MW-1

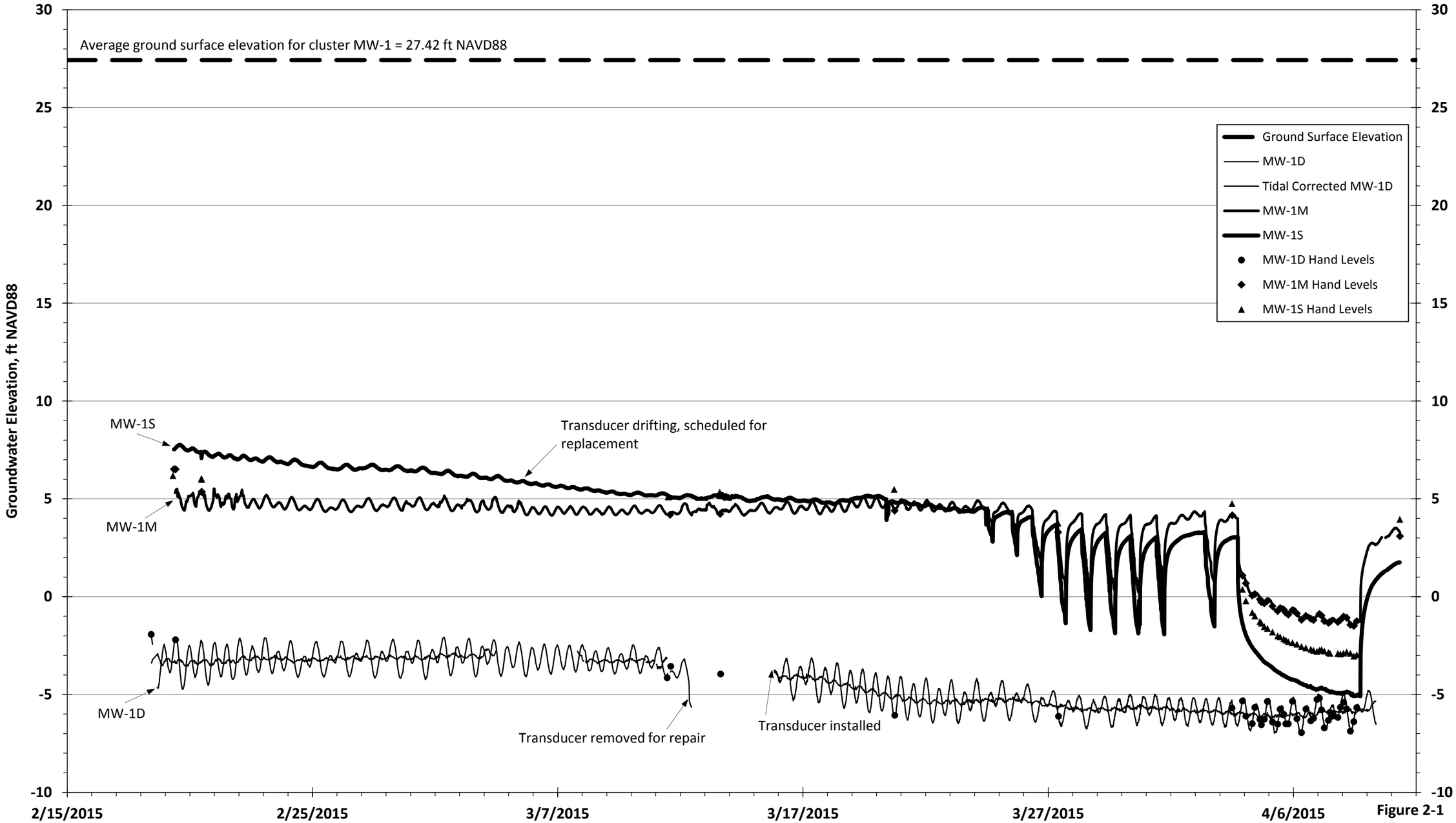


Figure 2-1

Groundwater Elevation in MPWSP MW-3

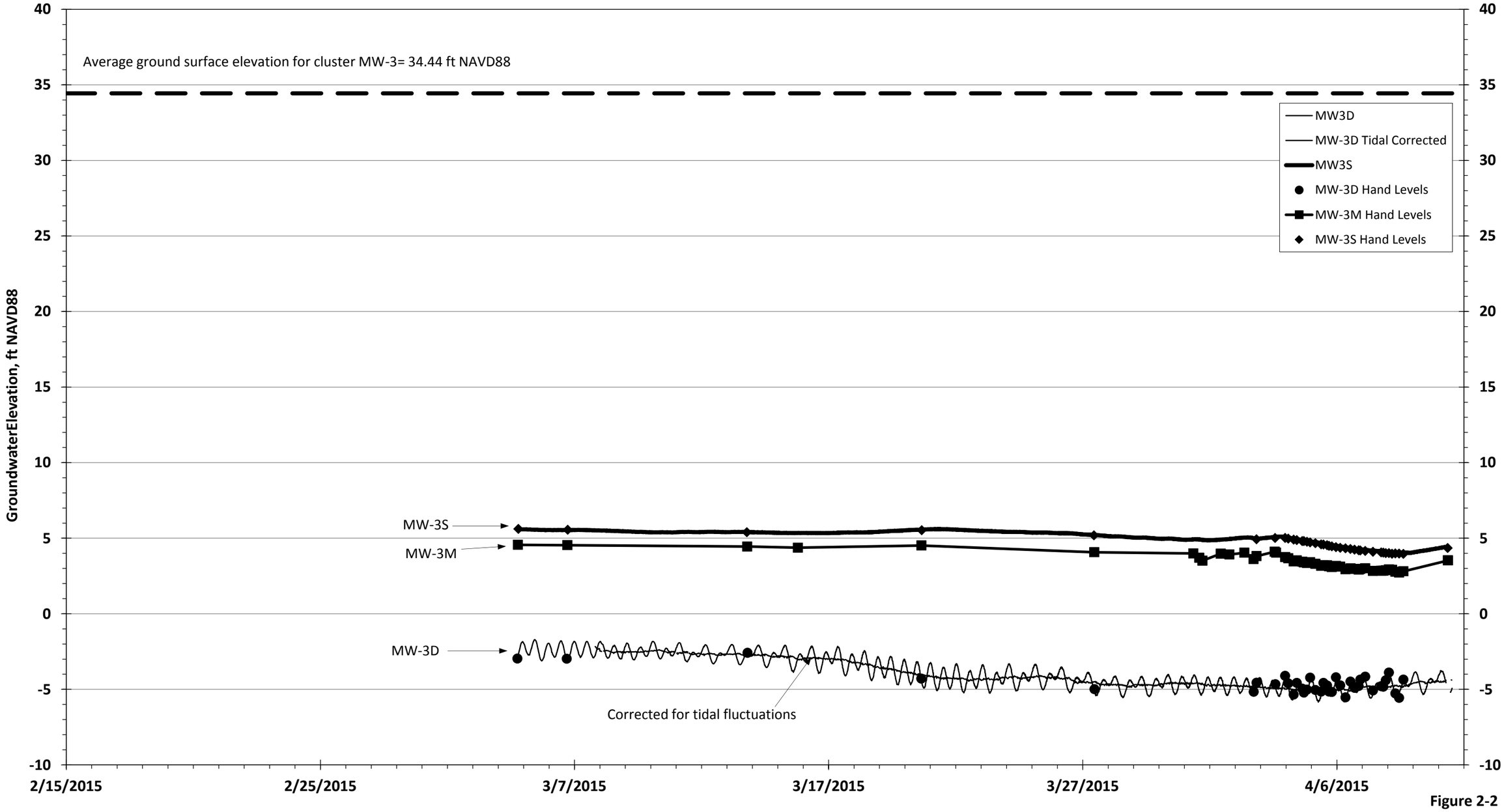


Figure 2-2

Groundwater Elevation in MPSWP MW-4

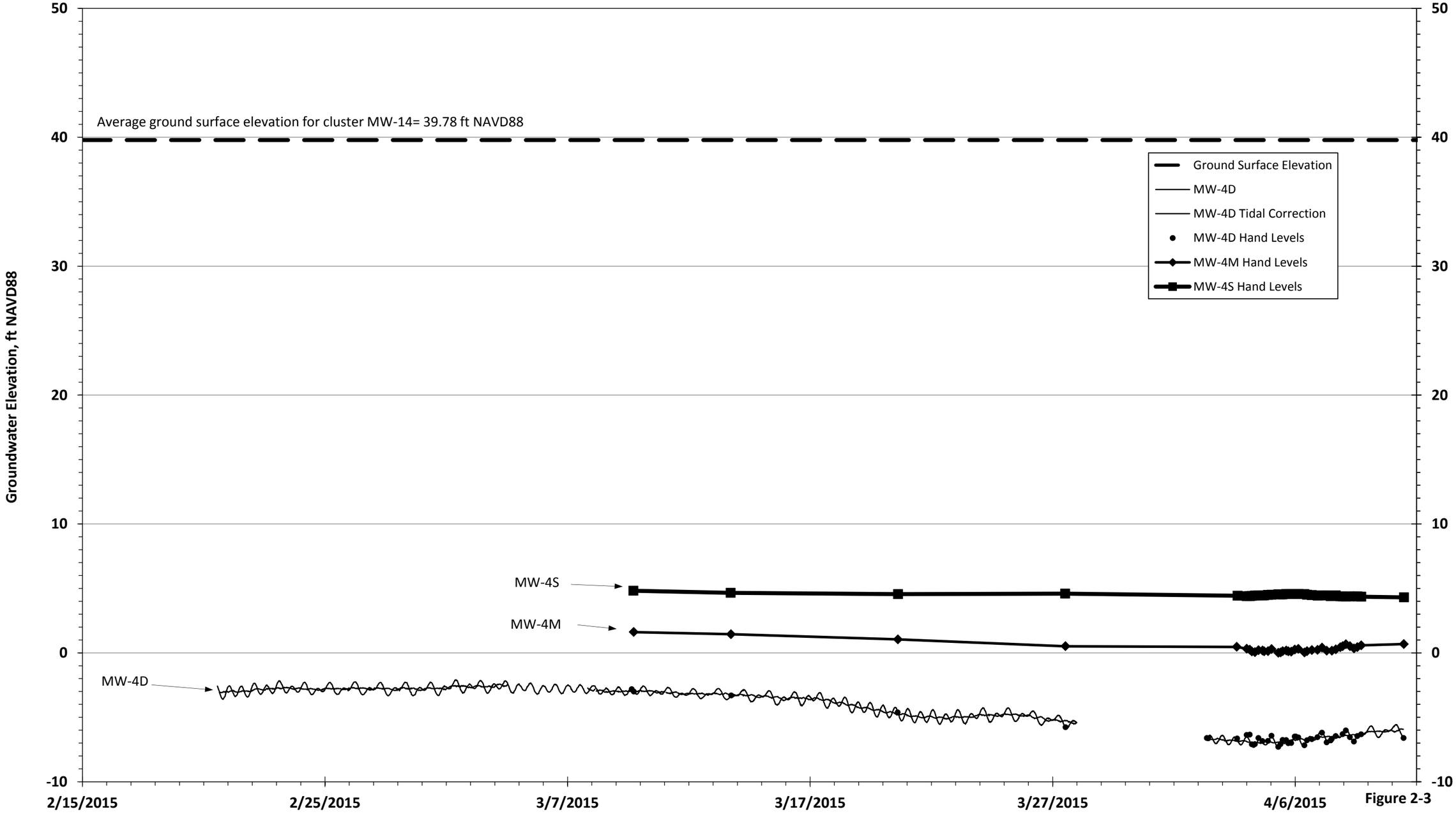


Figure 2-3

Groundwater Elevation in MPWSP MW-5

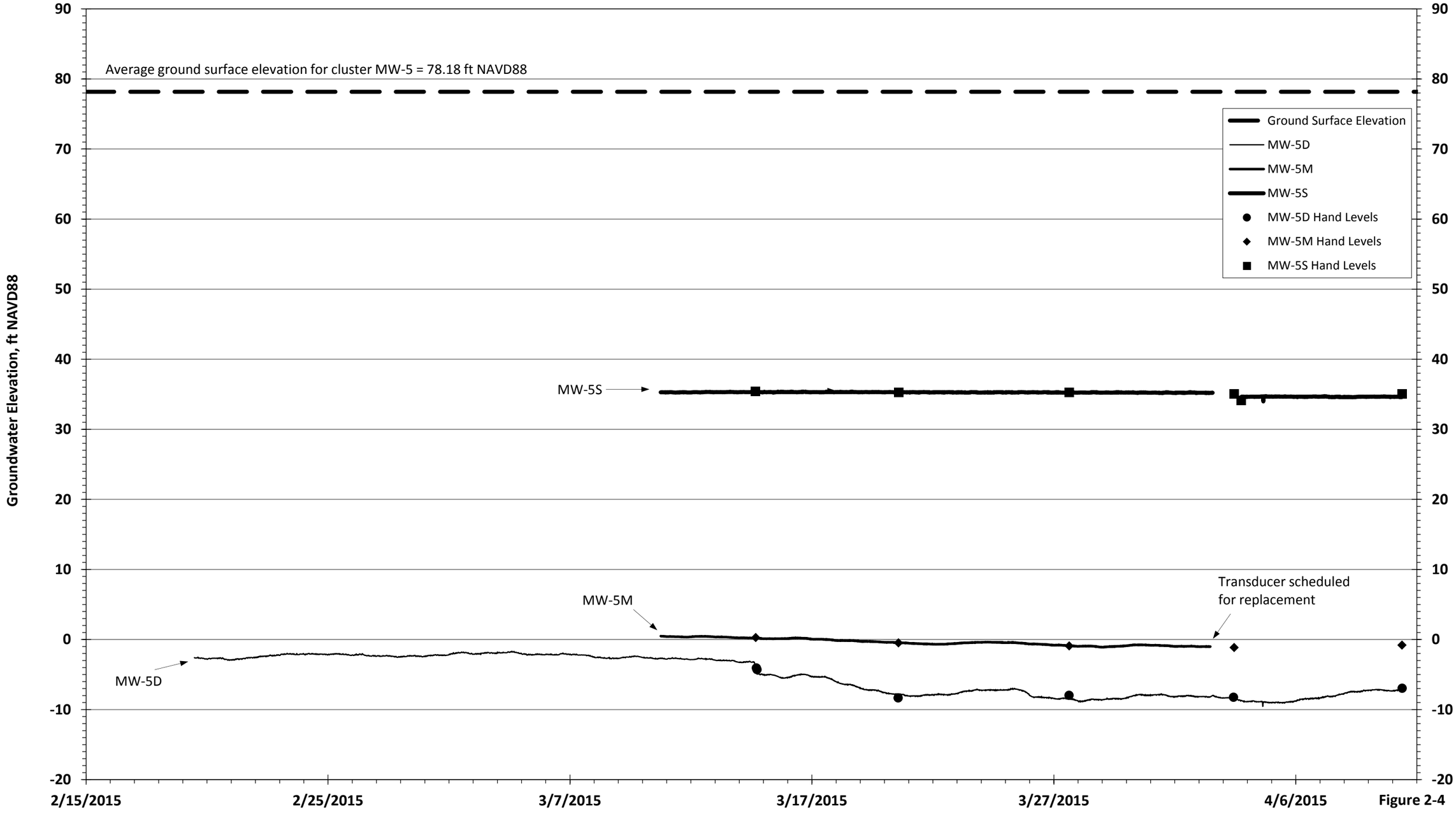


Figure 2-4

Groundwater Elevation in Monterey Regional Water Pollution Control Agency Wells

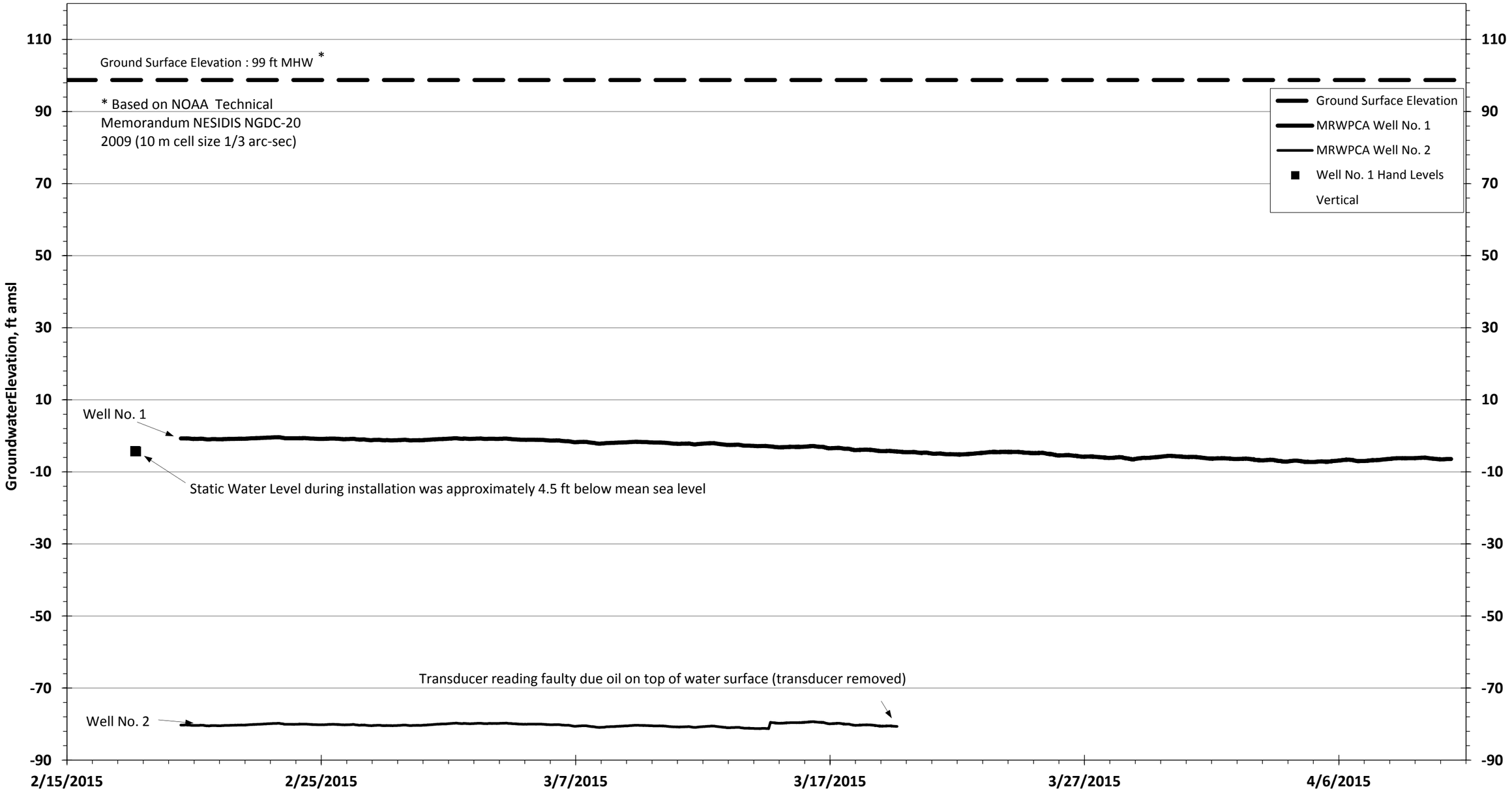


Figure 2-5

Water Elevation in CEMEX Dredge Pond

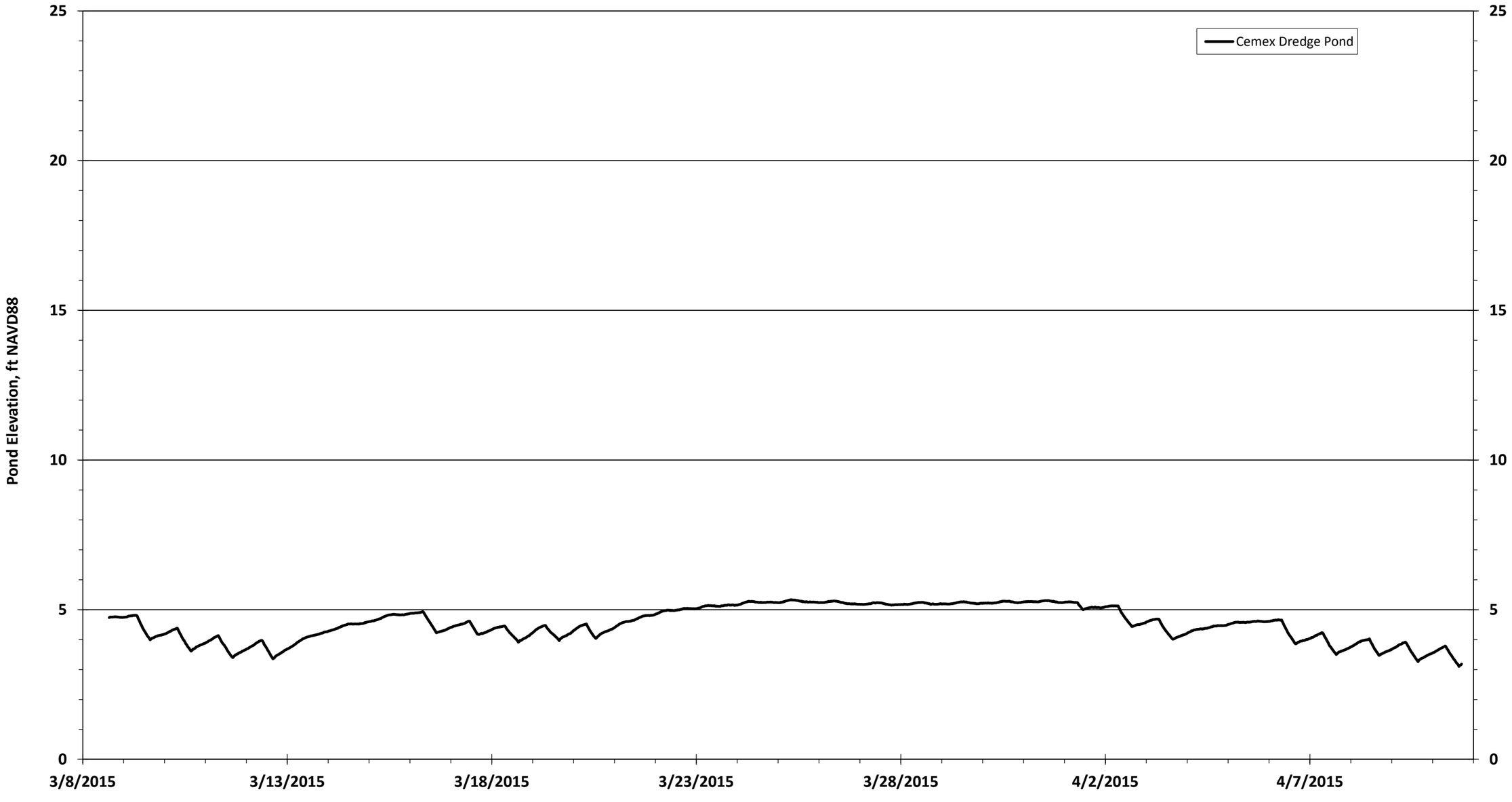


Figure 2-6

Groundwater Elevation in CEMEX North Well

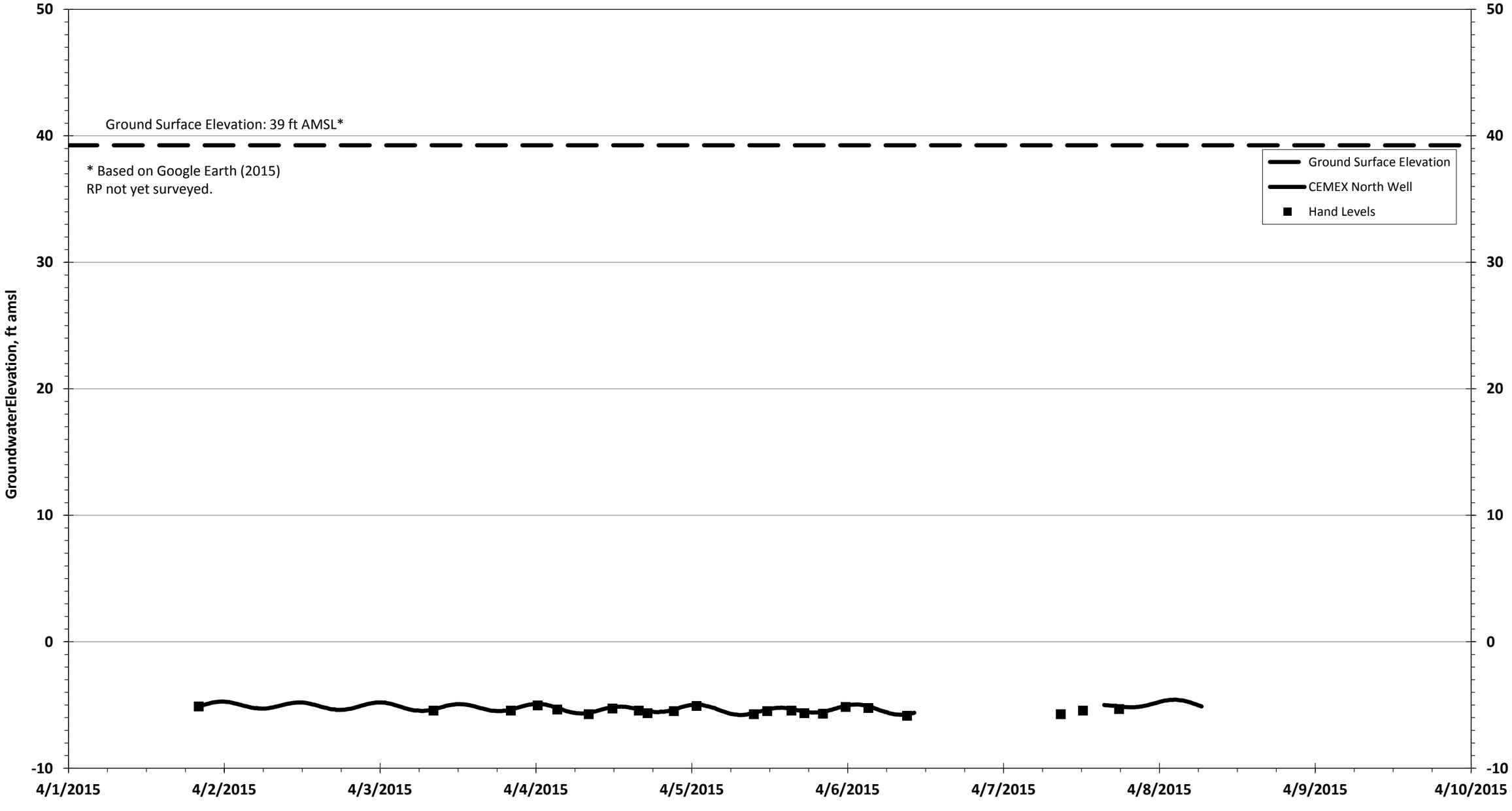


Figure 2-7

Groundwater Elevation Test Slant Well

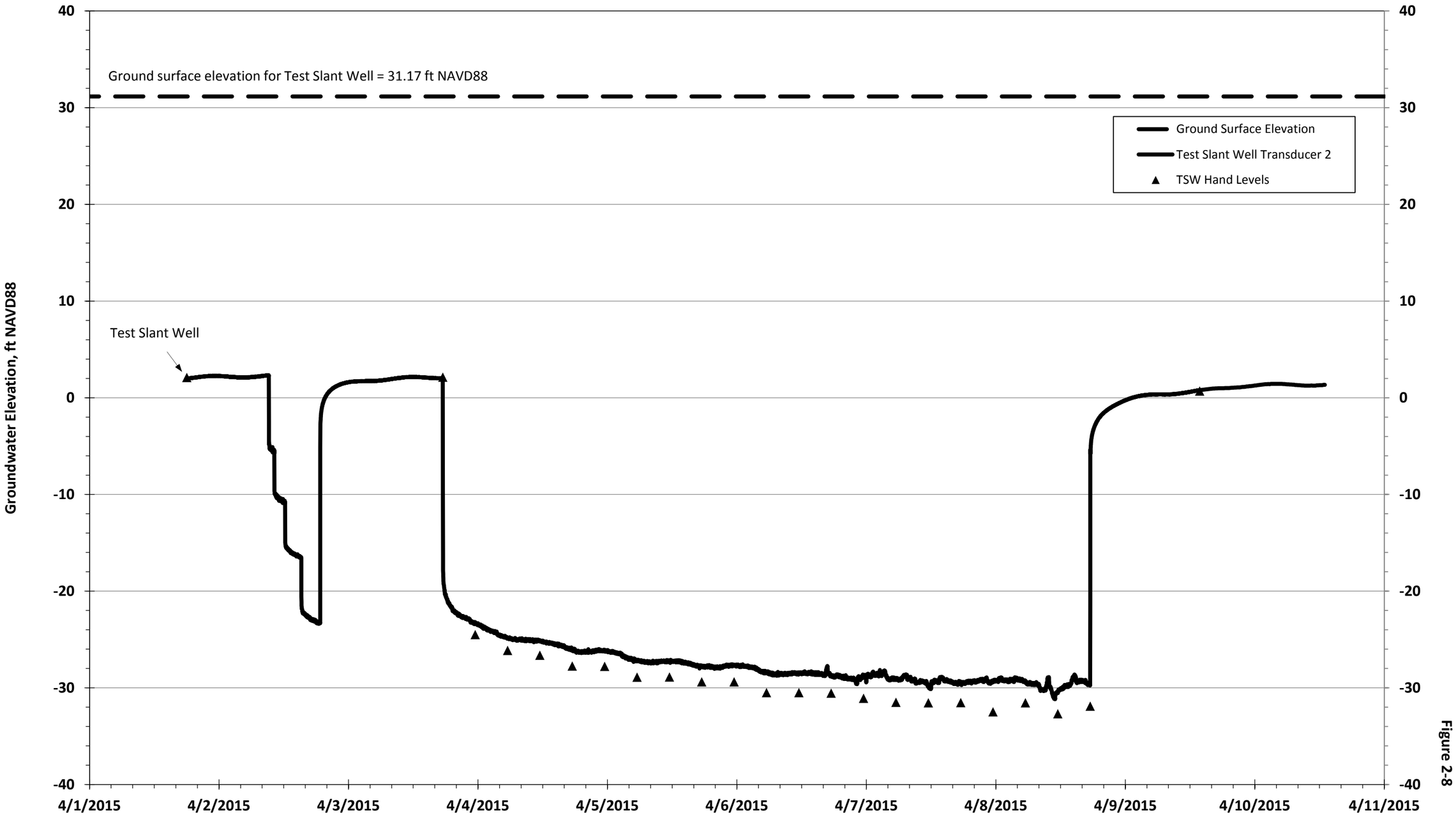


Figure 2-8

Total Dissolved Solids in MPWSP MW-1

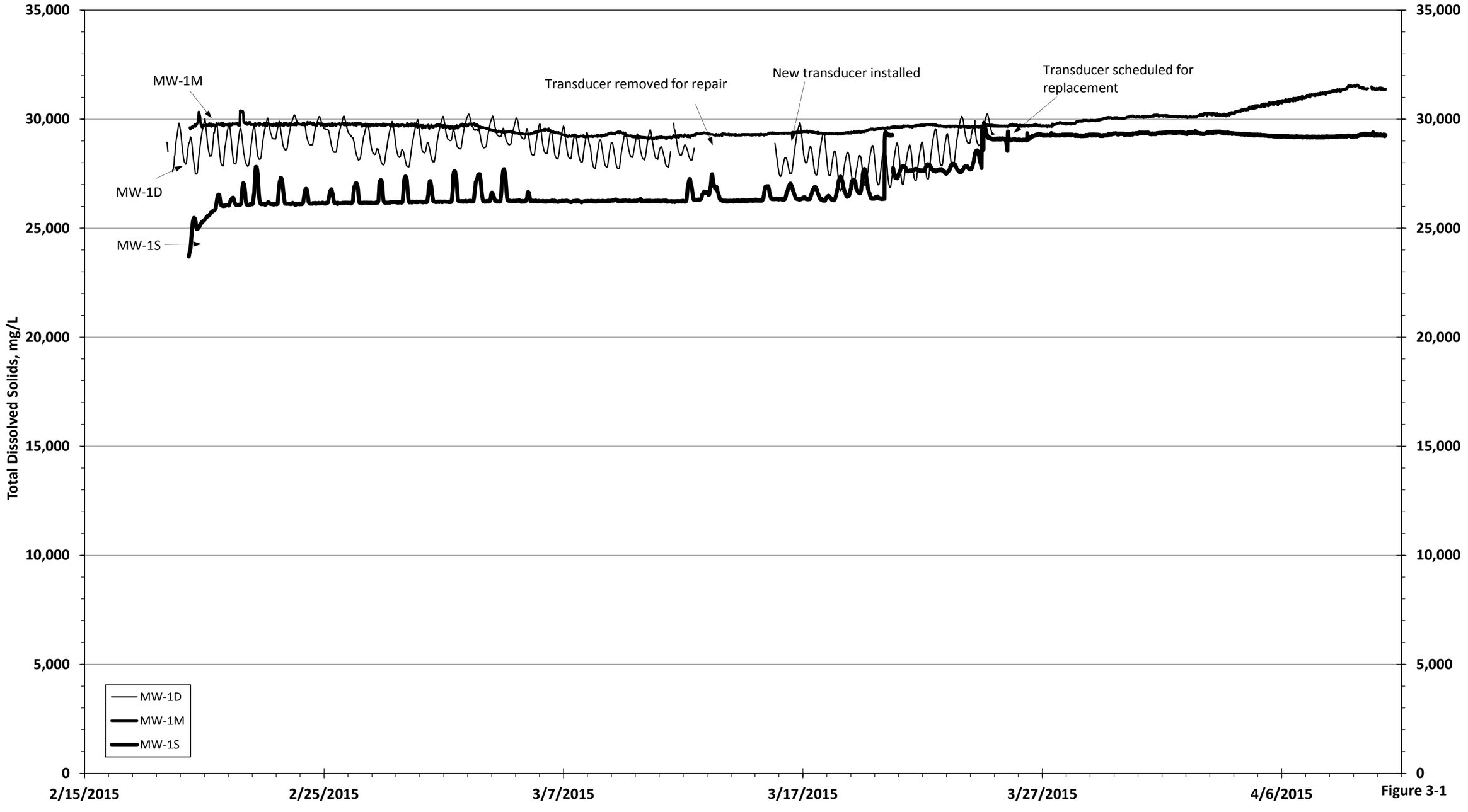


Figure 3-1

Total Dissolved Solids in MPWSP MW-3

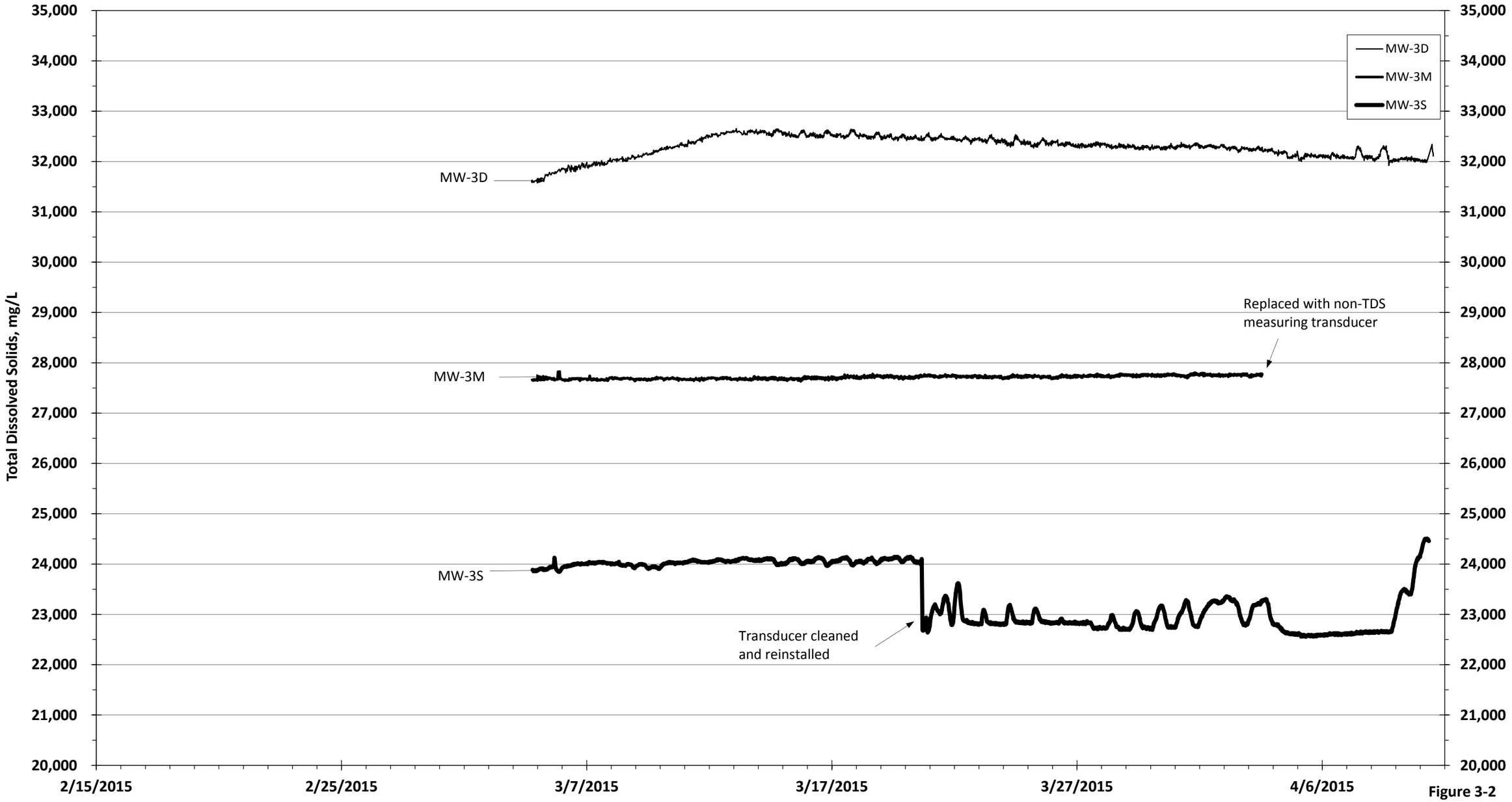


Figure 3-2

Total Dissolved Solids in MPSWP MW-4

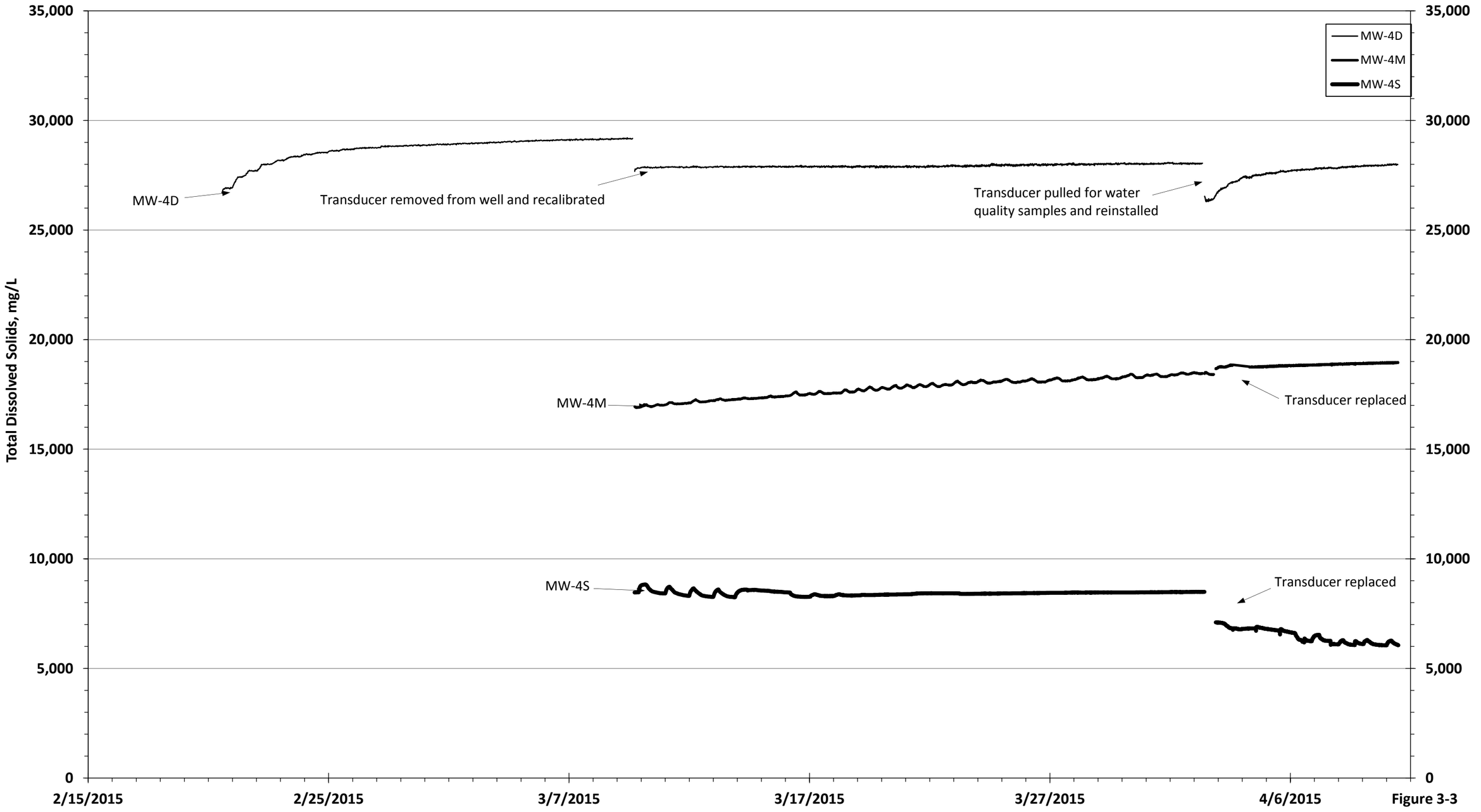


Figure 3-3

Total Dissolved Solids in MPWSP MW-5

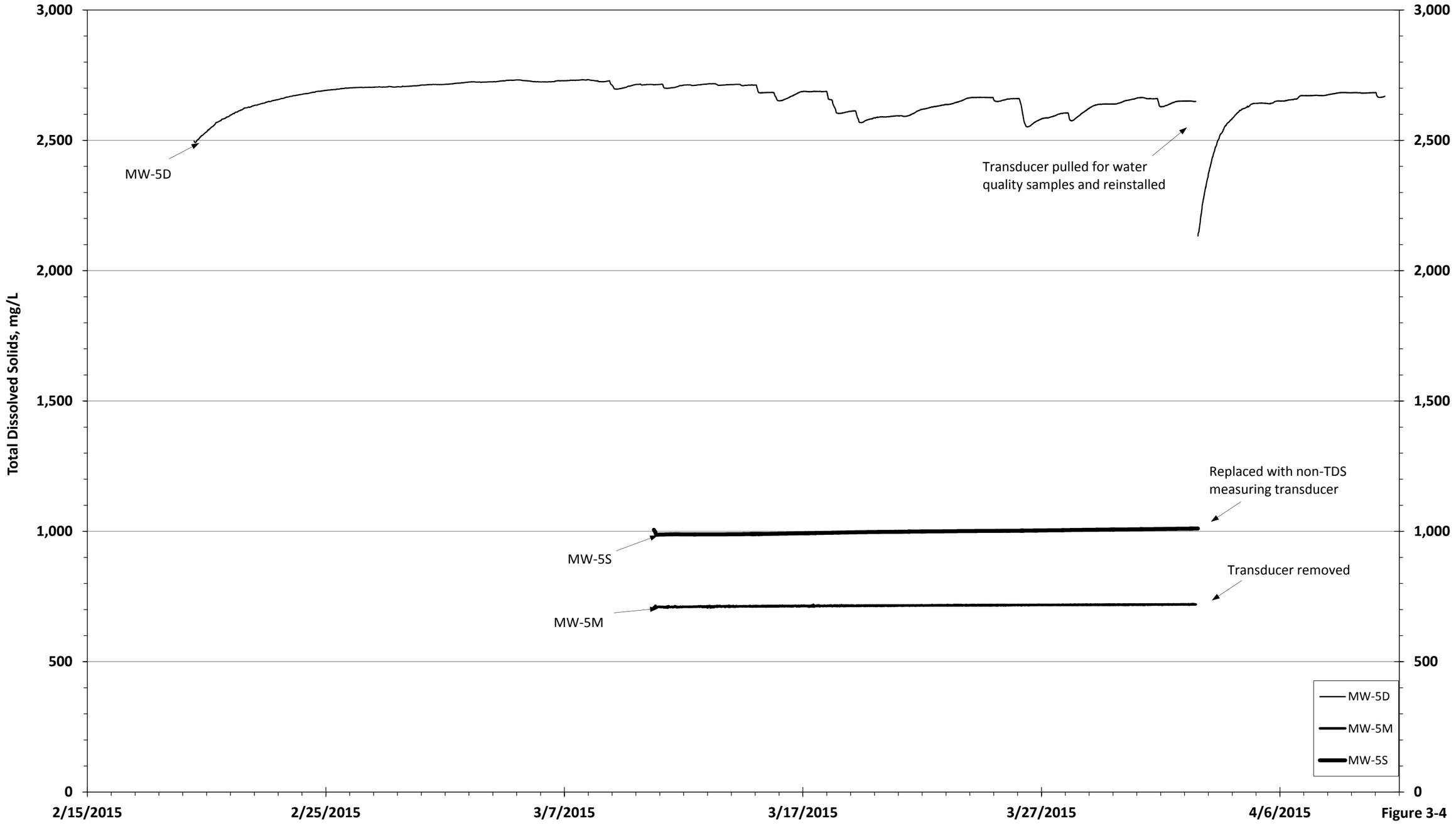


Figure 3-4

Total Dissolved Solids in Monterey Regional Water Pollution Control Agency Wells

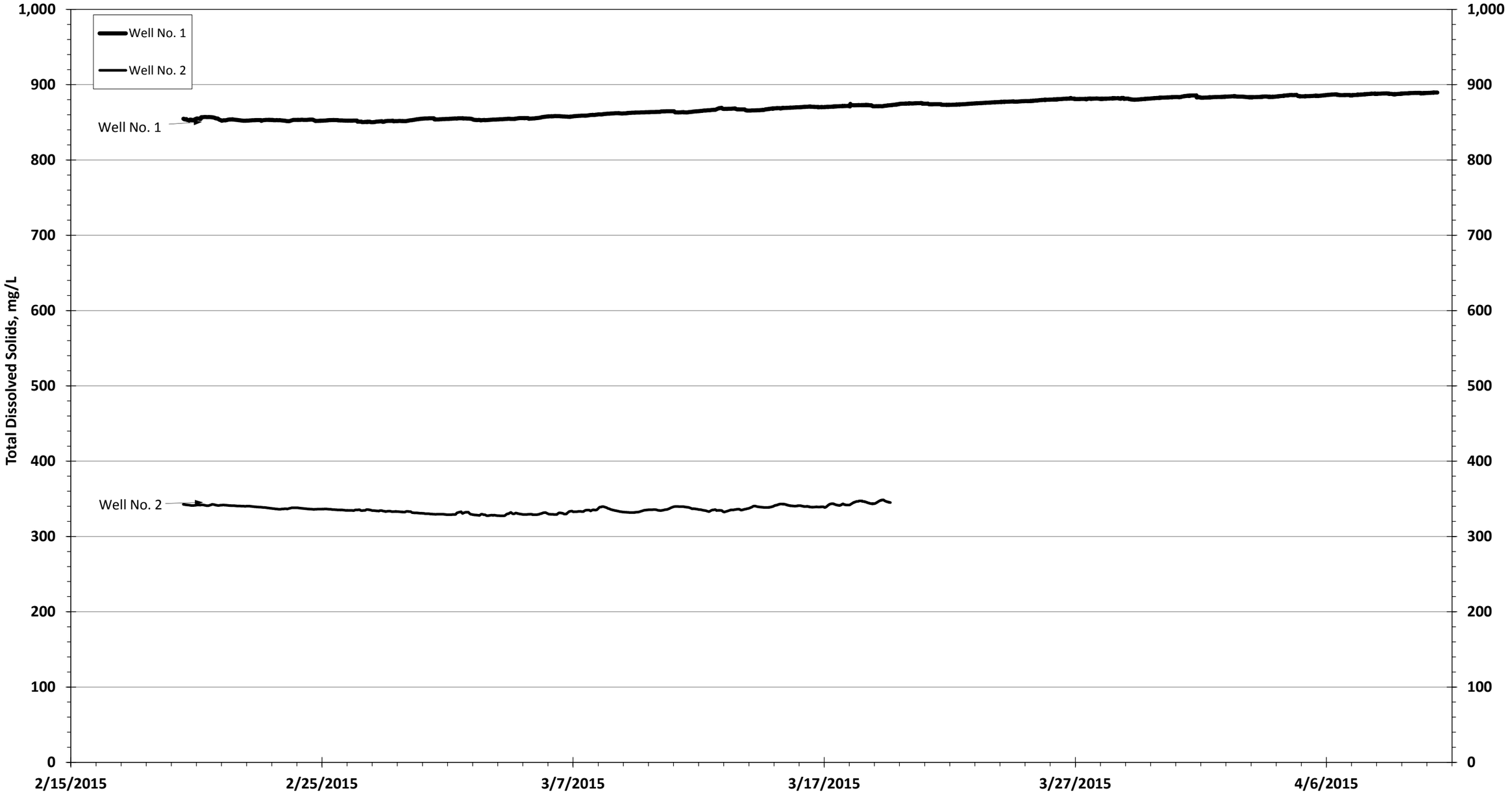


Figure 3-5

Total Dissolved Solids in CEMEX Dredge Pond

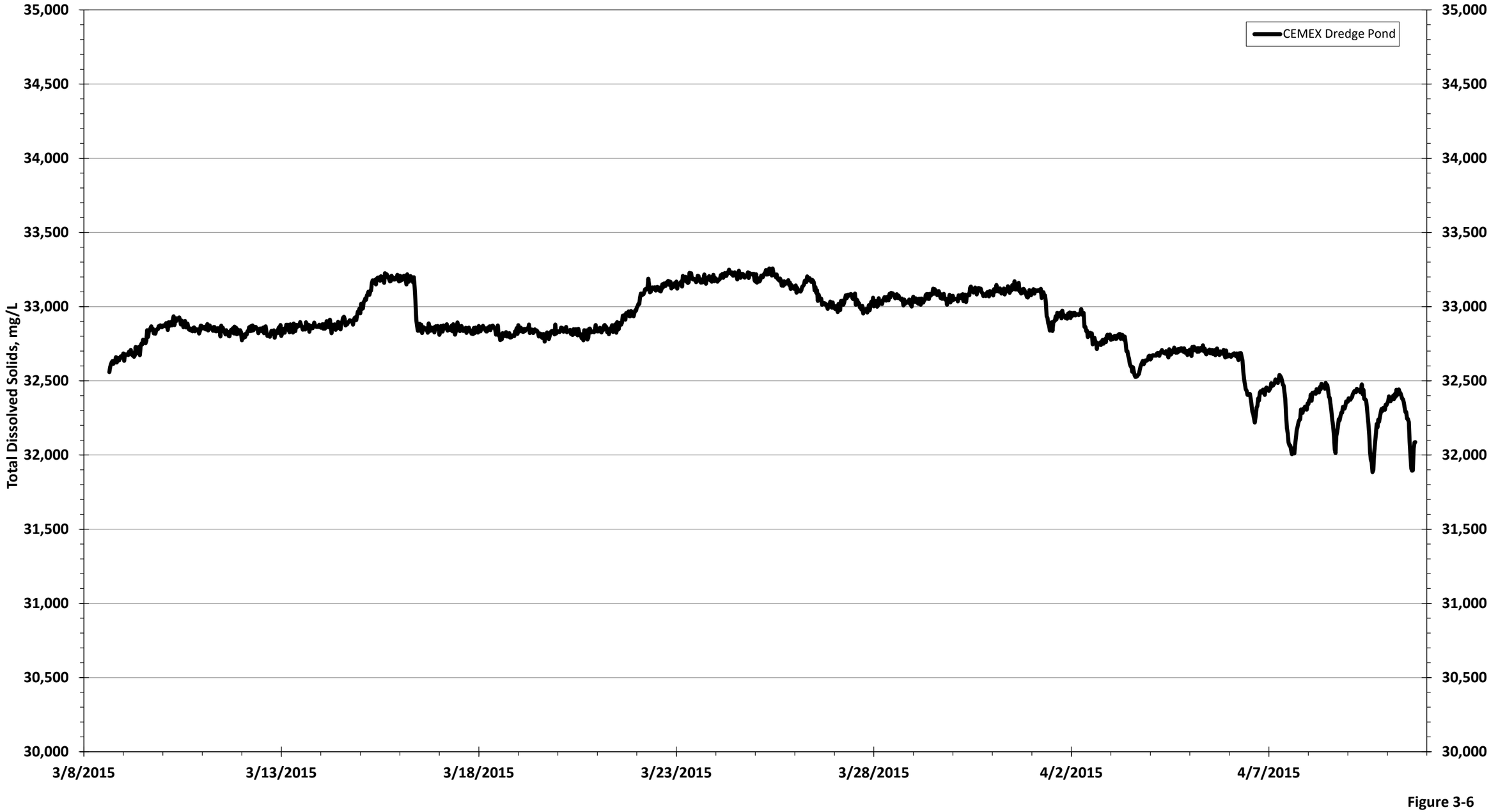


Figure 3-6

Total Dissolved Solids in MPWSP Test Slant Well

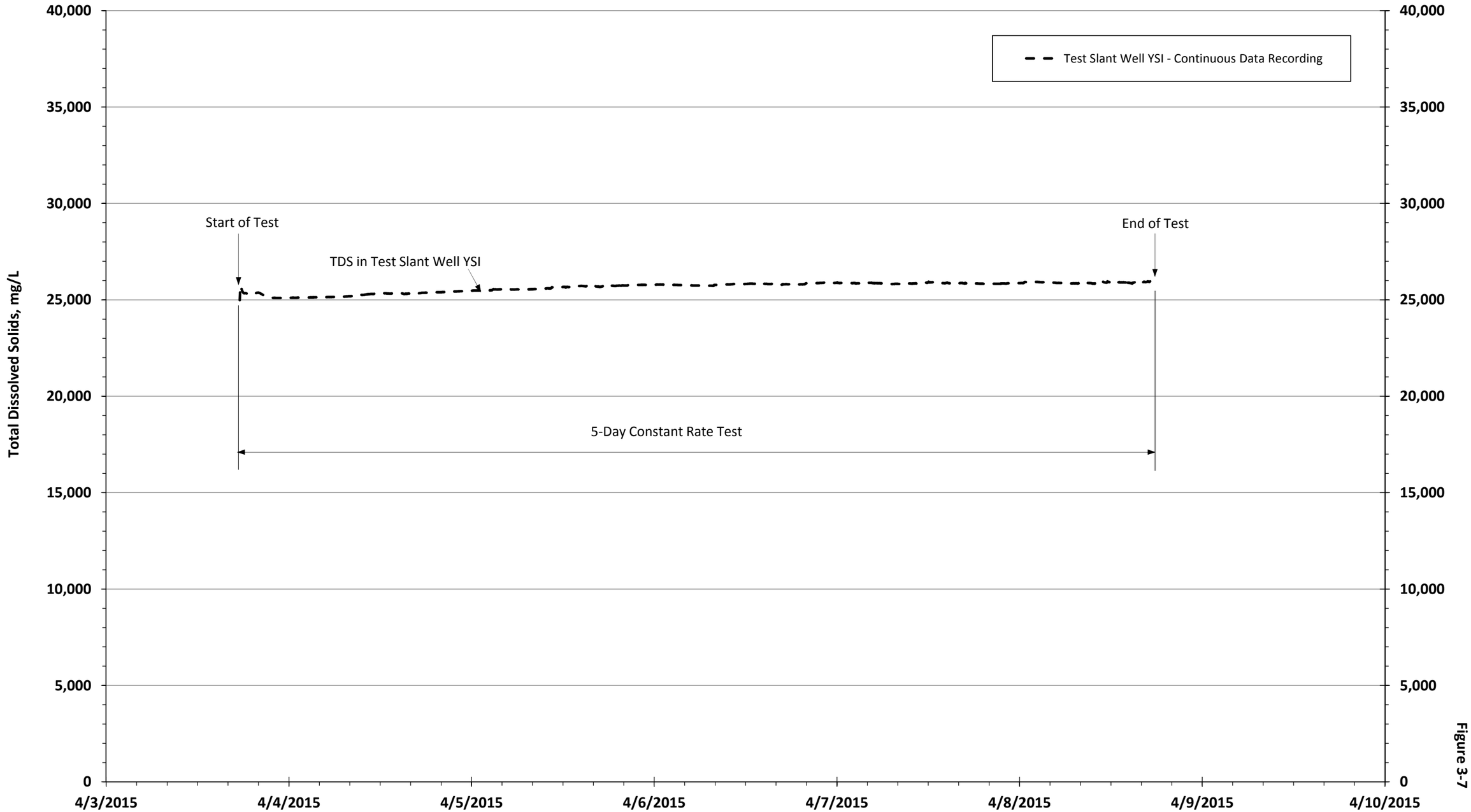


Figure 3-7

Step Drawdown Pumping Test
Test Slant Well

DRAFT

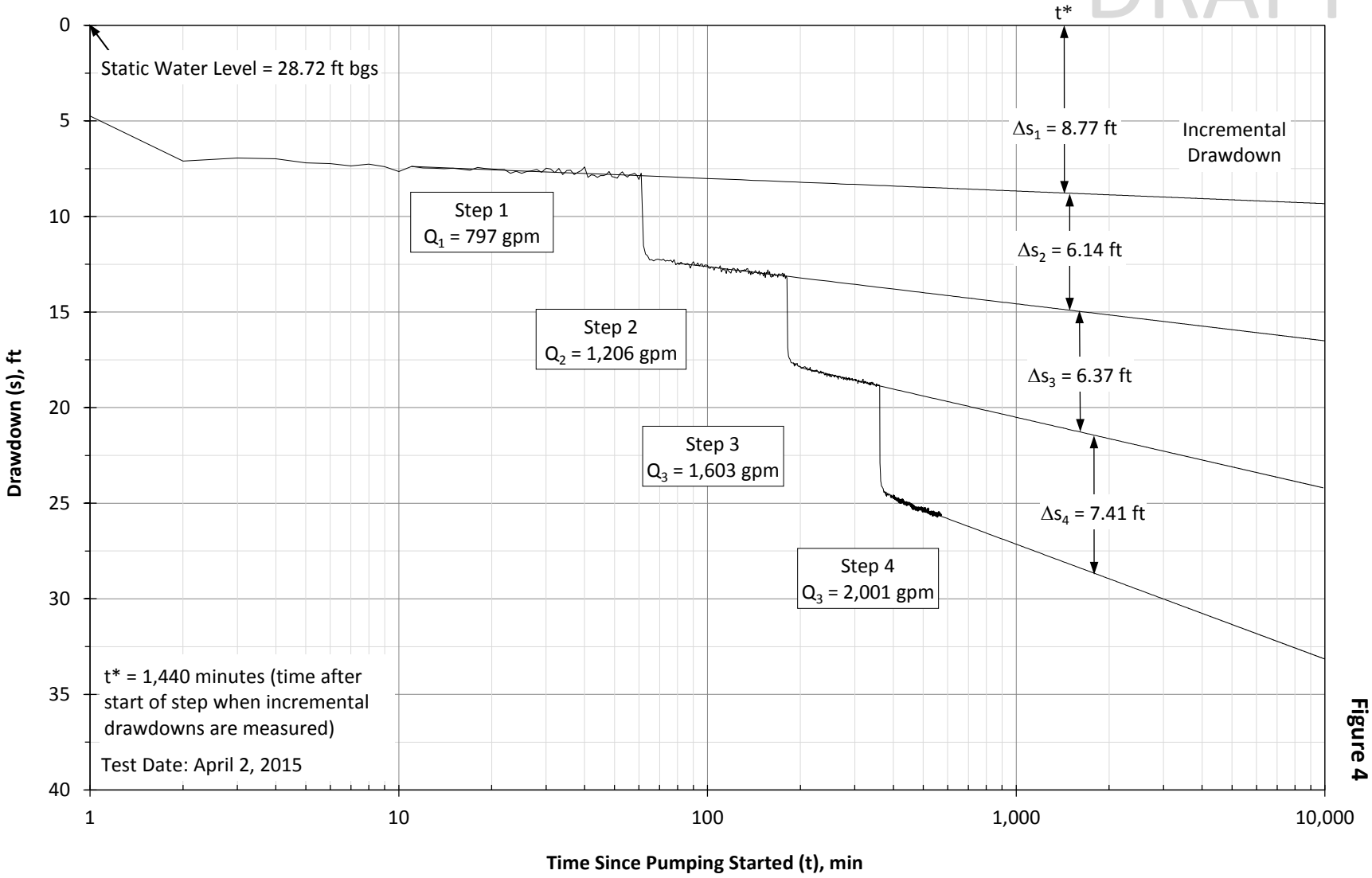


Figure 4

Specific Drawdown
Test Slant Well

DRAFT

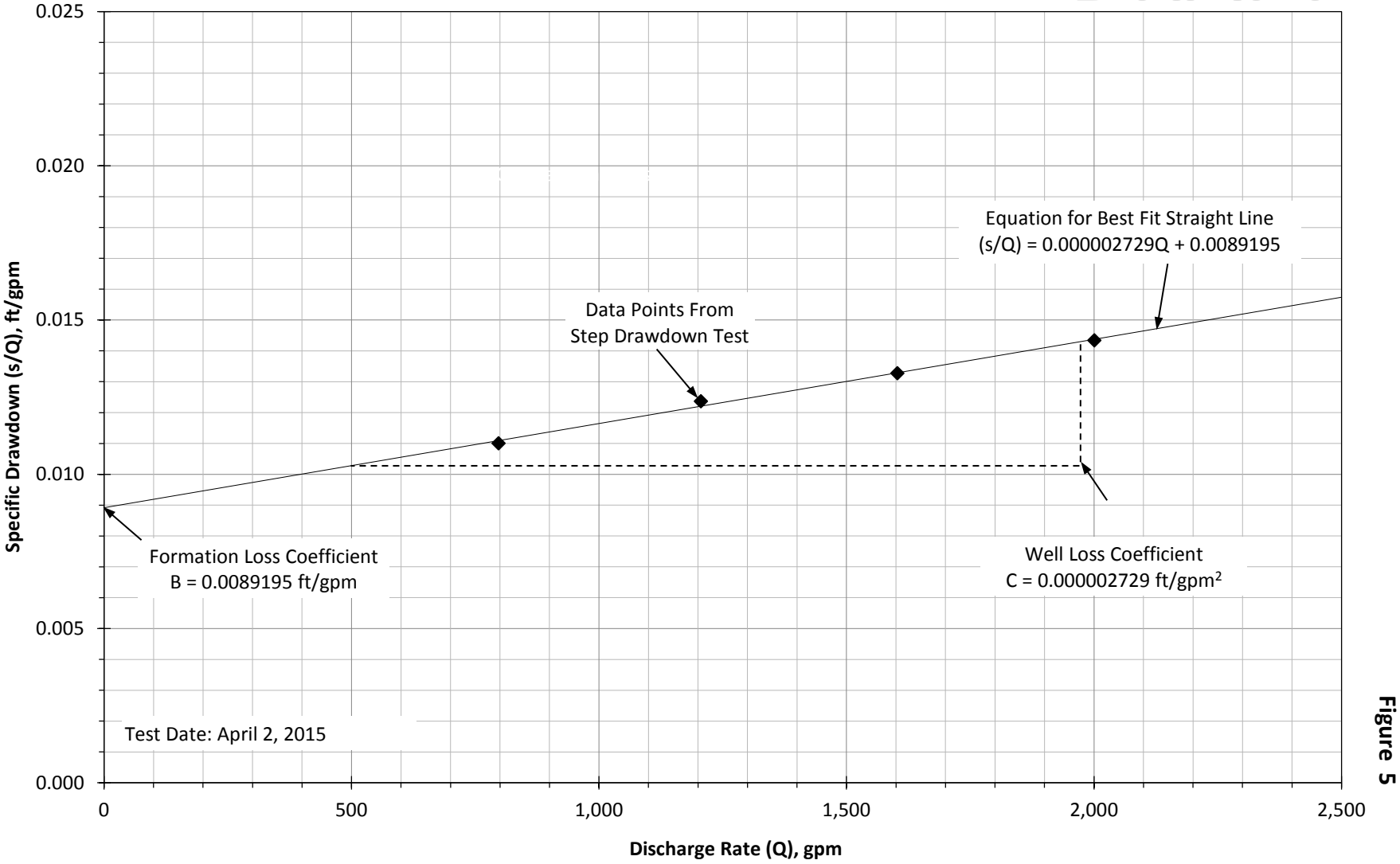


Figure 5

Specific Capacity and Well Efficiency Diagram
Test Slant Well

DRAFT

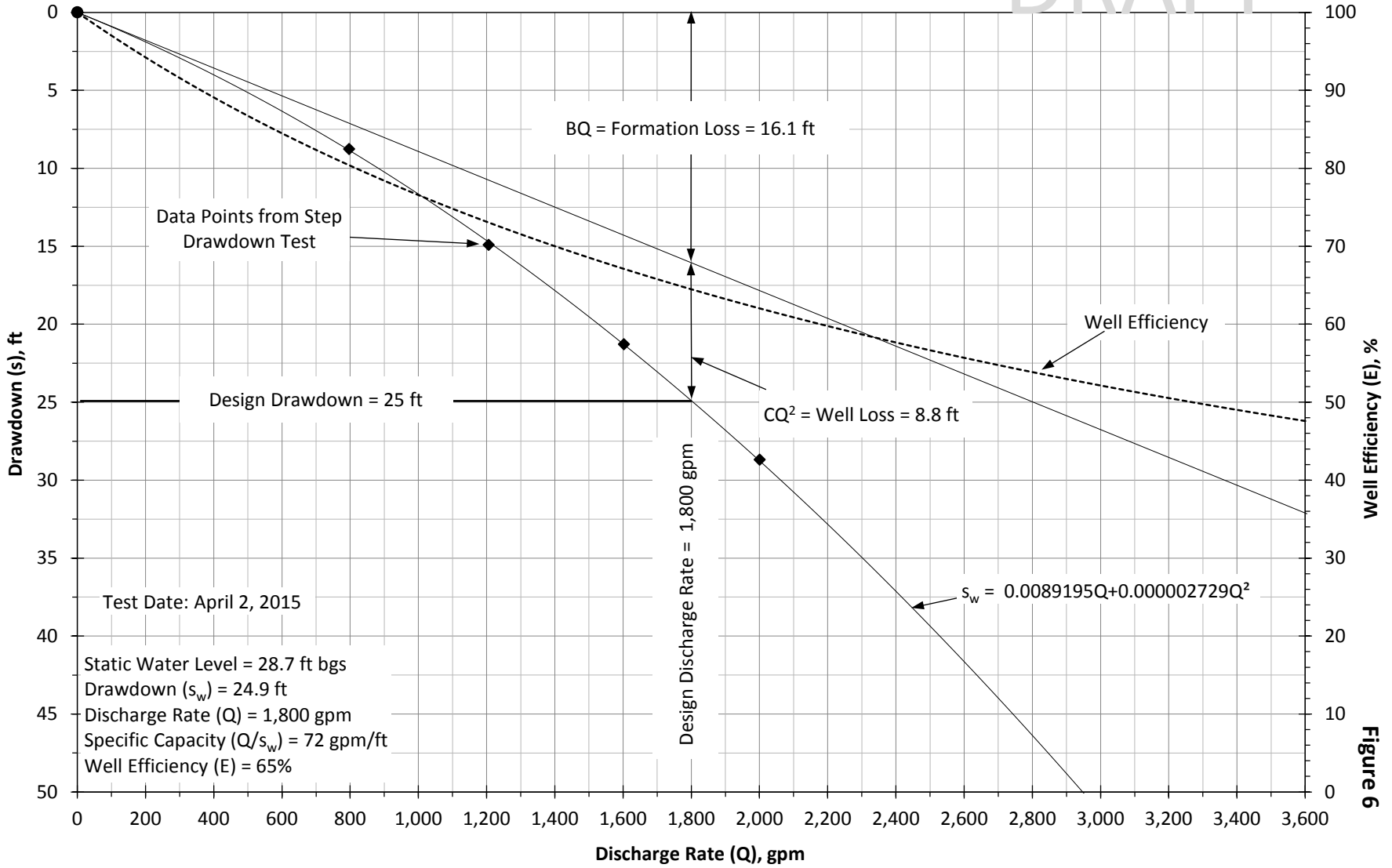
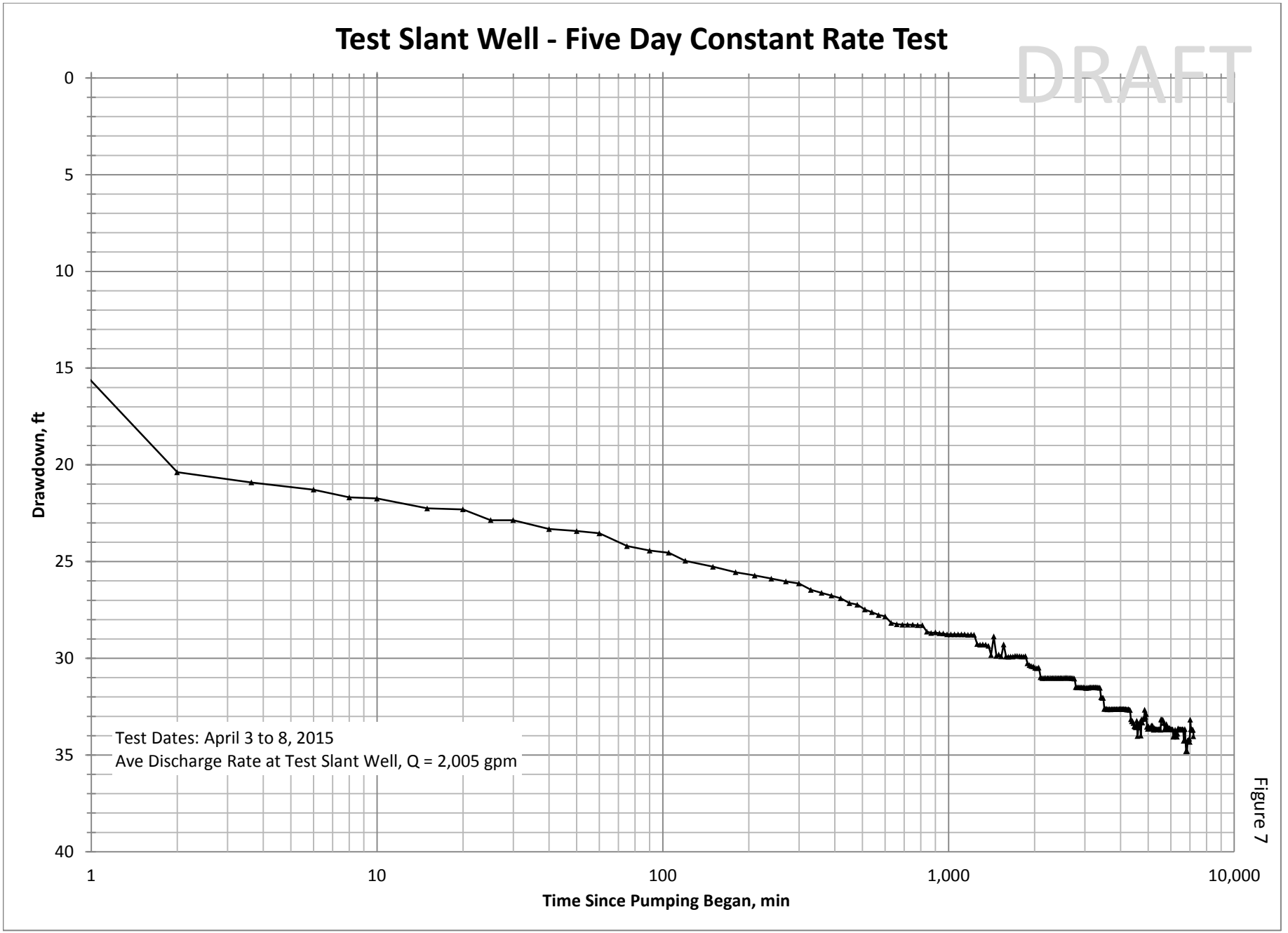


Figure 6


Test Slant Well - Five Day Constant Rate Test
DRAFT
Drawdown, ft
0
5
10
15
20
25
30
35
40
1
10
100
1,000
10,000
Time Since Pumping Began, min
Test Dates: April 3 to 8, 2015
Ave Discharge Rate at Test Slant Well, Q = 2,005 gpm
Figure 7

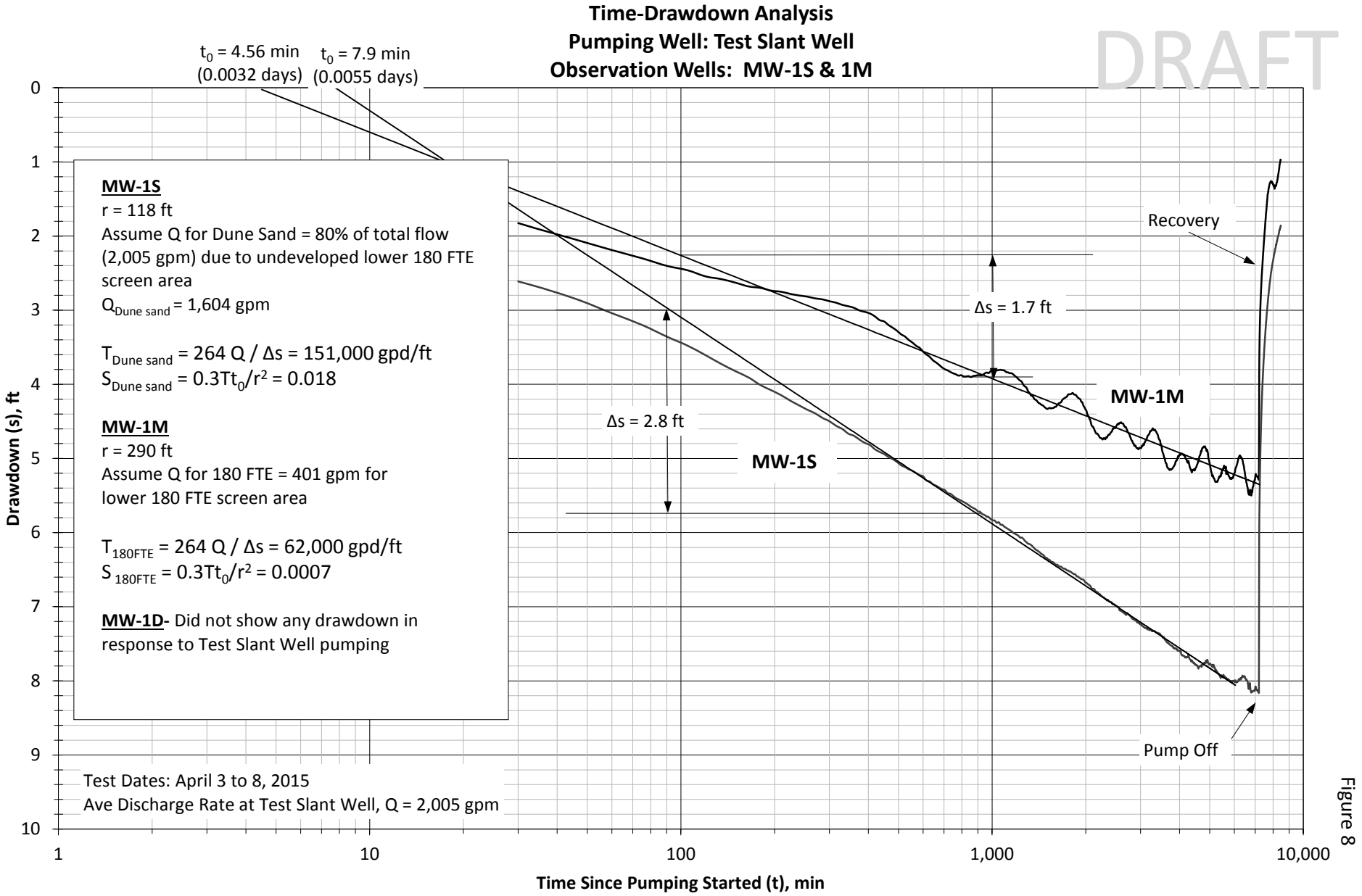

Time-Drawdown Analysis
Pumping Well: Test Slant Well
Observation Wells: MW-1S & 1M
DRAFT
t_0 = 4.56 min (0.0032 days)
t_0 = 7.9 min (0.0055 days)
MW-1S
r = 118 ft
Assume Q for Dune Sand = 80% of total flow (2,005 gpm) due to undeveloped lower 180 FTE screen area
$Q_{Dune\ sand}$ = 1,604 gpm
$T_{Dune\ sand}$ = 264 Q / Δs = 151,000 gpd/ft
$S_{Dune\ sand}$ = $0.3Tt_0/r^2$ = 0.018
MW-1M
r = 290 ft
Assume Q for 180 FTE = 401 gpm for lower 180 FTE screen area
T_{180FTE} = 264 Q / Δs = 62,000 gpd/ft
S_{180FTE} = $0.3Tt_0/r^2$ = 0.0007
MW-1D- Did not show any drawdown in response to Test Slant Well pumping
Test Dates: April 3 to 8, 2015
Ave Discharge Rate at Test Slant Well, Q = 2,005 gpm
Recovery
Δs = 1.7 ft
MW-1M
Δs = 2.8 ft
MW-1S
Pump Off
Drawdown (s), ft
0
1
2
3
4
5
6
7
8
9
10
1
10
100
1,000
10,000
Time Since Pumping Started (t), min

Figure 8

TABLES

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Table 1: Well Information Table

Well Name	Cluster	Reference Point (RP)	State Plane Coordinates Northing	Easting	Elevation** ft NAVD88	RP Height (ft above GS)	Distance of RP from Slant Well Head (ft)	Top of Screen Interval (ft below GS)	Bottom of Screen Interval (ft below GS)	Transducer Installed Depth (ft below RP)	Logging Started	Data Collected
MW-1S	MW-1	Top of ABS Transducer Mount	2,154,745.35	5,739,355.82	30.19	2.33	218	55	95	75	19-Feb-15	Level, Conductivity
MW-1M	MW-1	Top of ABS Transducer Mount	2,154,751.93	5,739,347.94	29.86	2.48	235	115	225	182	19-Feb-15	Level, Conductivity
MW-1D	MW-1	Top of ABS Transducer Mount	2,154,753.60	5,739,337.98	29.39	2.36	255	277	327	308	19-Feb-15	Level, Conductivity
MW-3S	MW-3	Top of ABS Transducer Mount	2,154,599.85	5,739,977.02	37.16	2.66	418	50	90	76	4-Mar-15	Level, Conductivity
MW-3M	MW-3	Top of ABS Transducer Mount	2,154,592.96	5,739,988.54	37.35	2.73	420	105	215	177	4-Mar-15	Level, Conductivity
MW-3D	MW-3	Top of ABS Transducer Mount	2,154,589.81	5,739,998.68	36.93	2.74	445	280	330	312	4-Mar-15	Level, Conductivity
MW-4S	MW-4	Top of ABS Transducer Mount	2,154,170.90	5,741,427.62	41.96	2.26	1,919	50	90	75	9-Mar-15	Level, Conductivity
MW-4M	MW-4	Top of ABS Transducer Mount	2,154,172.79	5,741,416.78	41.99	2.15	1,909	100	230	181	9-Mar-15	Level, Conductivity
MW-4D	MW-4	Top of ABS Transducer Mount	2,154,174.30	5,741,406.08	41.95	2.15	1,898	280	330	317	20-Feb-15	Level, Conductivity
MW-5S	MW-5	Top of ABS Transducer Mount	2,156,239.19	5,748,566.86	80.06	2.01	9,110	50	90	65	10-Mar-15	Level, Conductivity
MW-5M	MW-5	Top of ABS Transducer Mount	2,156,230.38	5,748,564.26	80.10	1.93	9,122	100	325	205	10-Mar-15	Level, Conductivity
MW-5D	MW-5	Top of ABS Transducer Mount	2,156,220.77	5,748,560.95	80.06	1.78	9,094	380	430	415	19-Feb-15	Level, Conductivity
Well No. 1****	MRWPCA	Well Cover	2,151,622.14	5,750,015.59	80.06	1.6	10,877	260	340	299	19-Feb-15	Level, Conductivity
Well No. 2****	MRWPCA	Well Cover	2,151,550.18	5,749,987.41	99.70	1.65	10,874	260	340	319	19-Feb-15	Level, Conductivity
CEMEX Dredge Pond	CEMEX	Top of ABS Transducer Mount	2,155,912.41	5,739,497.26	14.14	8.92*	1,090				8-Mar-15	Level, Conductivity
Test Slant Well	CEMEX	near ground surface	2,154,702.56	5,739,561.92	30.86	0	0	46***	231***			
CEMEX Dredge Pond	CEMEX	Top of ABS Transducer Mount	2,155,912.41	5,739,497.26	14.14	8.92*	1,090				8-Mar-15	Level, Conductivity
CEMEX North Well****	CEMEX		5,741,024.65	2,154,283.80	21.03	0.25	1,512	?	?	180	1-Apr-15	Level, Conductivity
CEMEX South Well****	CEMEX		5,740,998.57	2,154,213.90	16.13	0.25	1,510	?	?	180	1-Apr-15	Level, Conductivity

* RP height above pond water level 5.22 ft NAVD88 (8-11 am 26-Mar-15)

**Survey Performed: March 26, 2015
Horizontal Datum: NAD83 State Plane Zone 4
Vertical Datum: NAVD88

*** Top of 18 in. screen = 140 ft x Sin(19) = 46 ft TVD, Bottom of 14 in. screen = 710 x Sin(19) = 231 ft TVD

**** Estimated - not surveyed

Cal Am / RBF
Baseline Water and Total Dissolved Solids Levels
Monterey Peninsula Water Supply Project Area

Table 2

Summary of Laboratory Water Quality Results in Monitoring Wells

Well Name:		MW-1D		MW-1M		MW-1S		MW-3D		MW-3M		MW-3S		MW-4D		MW-4M		MW-4S		MW-5D		MW-5M		MW-5S		Test Slant Well		
Screen Interval (ft bgs):		277 - 327		115 - 225		55 - 95		285 - 330		105 - 215		50 - 90		280 - 330		100 - 230		50 - 90		380 - 430		100 - 325		50 - 90		140 - 320, 400 - 710 (MD)		
Sample Date:		14-Feb-15	9-Apr-15	14-Feb-15	9-Apr-15	13-Feb-15	9-Apr-15	21-Feb-15	10-Apr-15	24-Feb-15	10-Apr-15	25-Feb-15	10-Apr-15	19-Feb-15	2-Apr-15	6-Mar-15	2-Apr-15	7-Mar-15	2-Apr-15	17-Feb-15	2-Apr-15	3-Mar-15	2-Apr-15	10-Mar-15	2-Apr-15	20-Mar-15	24-Mar-15	8-Apr-15
Constituent[1]	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as $CaCO_3$)	mg/L	123	124	112	117	105	120	114	118	105	104	97	97	111	124	97	97	80	86	112	117	195	121	50	50	N/A	N/A	117
Aluminum, Total	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	166	18	166	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	33	N/A	N/A	ND
Ammonia-N	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.08	ND	N/A
Ammonia-N, Dissolved	mg/L	ND	*	ND	*	ND	*	ND	*	ND	*	ND	*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Ammonia-NH_3 (calc) Un-Ionized	ug/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A
Arsenic, Total	µg/L	46	34	41	33	43	30	44	39	37	34	34	27	40	30	21	22	15	14	4	3	2	3	4	3	N/A	N/A	33
Barium, Dissolved	µg/L	141	143	61	63	68	63	162	157	79	66	97	91	166	176	104	104	92	107	562	466	96	67	173	200	N/A	N/A	95
Bicarbonate (as HCO3-)	mg/L	150	151	137	143	128	146	139	144	128	127	118	118	135	151	118	118	98	105	137	143	238	148	61	61	N/A	N/A	143
Boron, Dissolved	mg/L	0.89	1.16	2.36	2.78	2.27	2.73	1.06	1.03	1.01	2.68	2.2	2.3	0.65	0.75	1.16	1.03	0.79	0.88	0.09	ND	ND	ND	ND	ND	N/A	N/A	2.6
Bromide, Dissolved	mg/L	44	44	46	50	39	49	44.1	44	53.8	49	44.8	38	43.8	47	31	31	16.7	18	3.3	2	0.4	ND	4.4	5.2	N/A	N/A	37
Calcium	mg/L	2,440	2,510	746	805	661	791	2,470	2,350	826	835	628	664	2,980	2,827	1,040	1,131	594	621	360	358	96	62	129	132	N/A	N/A	349
Calcium, Dissolved	mg/L	2,410	2,480	732	781	646	771	2,370	2,360	844	879	666	664	3,070	2,810	1,060	1,100	617	627	363	356	99	63	142	138	N/A	N/A	371
Carbamates by HPLC (EPA 531)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Carbonate as $CaCO_3$	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Chloride, Dissolved	mg/L	14,905	16,346	16,037	15,580	14,504	15,276	16,069	16,456	14,686	14,964	11,680	12,136	14,142	14,177	9,751	9,587	5,497	6,266	1,168	1,152	120	90	271	272	N/A	N/A	13,830
Chlorinated Pesticides and PCB (EPA 508)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Chlorine Residual,Total (Laboratory)	mg/L (H)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A
Coliform, E. Coli (Quantitray)	MPN/100mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	N/A
Coliform, E. Coli (Quantitray)-18 Hour	MPN/100mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Coliform, Total (Quantitray)	MPN/100mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	490	N/A
Coliform, Total (Quantitray)-18Hour	MPN/100mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,755	N/A	N/A
Color, Apparent (Unfiltered)	CU	10	20	ND	ND	4	ND	6	ND	ND	ND	ND	7	8	ND	4	ND	3	ND	ND	4	ND	ND	7	8	60	10	4
Copper, Total	µg/L	40	52	61	80	62	52	56	76	62	90	42	78	46	30	42	22	ND	16	13	4	ND	ND	5	ND	N/A	N/A	44
DBCP & EDB	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Dioxin	pg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	RP	N/A	RP	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Diquat (EPA 549)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Dissolved Oxygen (Field)	mg/L (H)	N/A	0.08	N/A	3.34	N/A	2.64	N/A	0.225	N/A	3.85	4.7	3.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.28	N/A	N/A
Dissolved Oxygen (Laboratory)	mg/L (H)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.34	8.84	N/A
Endothall	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Fluoride, Dissolved	mg/L	ND	ND	ND	ND	0.3	ND	ND	ND	0.5	ND	0.4	ND	ND	0.1	ND	ND	ND	0.1	0.1	0.1	0.1	0.1	ND	ND	N/A	N/A	0.2
Glyphosate	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Hardness (as $CaCO_3$)	mg/L	10,765	11,338	6,327	6,606	5,678	6,439	12,063	11,140	6,378	6,520	5,044	5,109	11,617	11,021	5,601	5,740	3,176	3,321	1,484	1,429	367	229	561	540	N/A	N/A	4,751
Hydroxide	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Iodide	µg/L	ND	*	ND	*	ND	*	ND	*	ND	*	ND	*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Iron	µg/L	146	722	ND	ND	25	ND	169	671	ND	ND	ND	ND	77	223	ND	ND	ND	169	39	17	ND	ND	ND	26	N/A	N/A	69
Iron, Dissolved	µg/L	118	726	12	ND	15	ND	142	684	ND	ND	ND	ND	80	215	ND	ND	ND	175	ND	ND	ND	ND	ND	ND	N/A	N/A	65
Kjehldahl Nitrogen, Dissolved	mg/L	ND	*	ND	*	ND	*	ND	*	ND	*	ND	*	0.6	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Lithium	µg/L	254	200	201	155	172	157	250	184	159	115	144	106	222	193	34	25	16	18	75	53	7	3	6	8	N/A	N/A	152
Magnesium	mg/L	1,130	1,230	1,080	1,120	978	1,080	1,430	1,280	1,050	1,080	844	838	1,020	962	730	708	411	430	142	130	31	18	58	51	N/A	N/A	942
Magnesium, Dissolved	mg/L	1,180	1,230	1,100	1,110	979	1,080	1,290	1,310	1,020	1,160	797	859	979	969	752	681	421	437	135	128	31	18	62	54	N/A	N/A	989
Manganese, Dissolved	µg/L	440	1,060	18	ND	41	ND	259	1,080	ND	ND	ND	170	268	1,220	113	ND	ND	248	340	645	ND	ND	ND	ND	N/A	N/A	26
Manganese, Total	µg/L	484	1,100	19	ND	43	ND	289	1,060	14	ND	58	154	276	1,221	90	ND	ND	268	336	653	ND	ND	ND	ND	N/A	N/A	26
MBAS (Surfactants)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	ND
Nitrate as NO_3	mg/L	1	2	2	4	3	4	ND	2	5	3	29	6	1	ND	4	3	20	10	3	1	70	64	237	233	N/A	N/A	5
Nitrate+Nitrite as N	mg/L	0.4	0.6	1.1	1	0.7	0.9	0.1	0.6	1.2	0.8	6.5	1.5	0.2	0.1	1	0.9	5.3	2.3	0.8	0.4	16.2	14.6	54	52.7	N/A	N/A	1
Nitrite as NO_2-N, Dissolved	mg/L	0.2	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	0.1	ND	0.1	ND	0.1	0.3	0.3	ND	0.1	N/A	N/A	ND
Odor Threshold at 60 C	TON	1	2	1	2	1	1	3	3	3	1	5	2	3	1	1	1	4	14	3	2	2	1	2	10	N/A	N/A	2
Oil & Grease (HEM)	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A
o-Phosphate-P	mg/L	0.03	0.06	0.07	0.09	0.07	0.05	0.06	0.04	0.05	0.06	0.18	0.14	0.06	0.04	ND	0.06	0.06	0.09	0.04	0.05	0.06	0.12	0.05	0.12	N/A	N/A	0.1
pH (Field Test)	pH	6.72	7.24	7.02	7.74	7.15	7.87	6.55	6.84	6.89	7.05	7.25	7.27	6.65	6.56	6.78	6.78	6.77	6.91	7	7.18	7.23	7.44	6.46	6.63	7.53	7.07	7.03
pH (Laboratory)	pH (H)	7.1	7.1	7	7.4	7.2	7.5	6.9	7.2	7.2	7.4	7.2	7.5	7	7.1	7.1	7.2	7	7.2	7.5	7.4	7.3	7.5	6.7	7.1	7.7	7.2	7.2
Phenoxy Acid Herbicides (515.3)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Phosphorus, Dissolved Total	mg/L	0.04	0.03	0.09	0.08	0.05	0.04	0.04	ND	ND	0.06	0.12	0.13	0.11	0.14	ND	0.06	0.06	0.07	0.04	0.04	0.06	0.12	0.08	0.08	N/A	N/A	0.09
Potassium	mg/L	60	61	201	209	228	247	64.4	58	197	214	168	157	51.2	46.2	46	43.9	26	30.2	7.8	6.7	3.4	2.2	2	3.1	N/A	N/A	203
Potassium, Dissolved	mg/L	59	60.9	197	207	224	244	55.7	59.6	197	232	157	161	49.1	46.3	50	43.3	28	31.5	7.1	6.6	3.6	2.2	2.4	3	N/A	N/A	213
QC Ratio TDS/SEC		0.73	0.66	0.7	0.67	0.68	0.67	0.74	0.66	0.69	0.69	0.68	0.68	0.72	0.74	0.68	0.64	0.7	0.68	0.69	0.65	0.6	0.64	0.67	0.64	N/A	N/A	0.67
Reg. Org. Compounds (EPA 525)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	N/A	N/A	ND
Settleable Solids	mL/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A
Silica as SiO_2, Dissolved	mg/L	33	32	22	21	20	19	32	30	21	18	19	19	36	31	30	27	27	24	45	41	35	32	39	38	N/A	N/A	20
Sodium	mg/L	5,760	5,913	8,011	7,381	7,306	7,211	6,960	5,620	7,232	6,590	5,340	5,632	4,286	4,092	4,079	3,685	2,579	2,399	161	131	71	51	120	116	N/A	N/A	7,606
Sodium, Dissolved	mg/L	6,150	6,340	8,320	7,920	7,500	7,480	6,110	6,180	6,930	7,670	5,550	6,260	4,730	4,090	4,320	3,490	2,750	2,500	136	128	76	51	131	120	N/A	N/A	8,040
Specific Conductance (E.C)	µmhos/cm	40,120	43,440	43,960	42,510	39,090	40,840	44,020	43,570	41,090	41,040	34,180	34,300	38,000	37,390	26,250	27,200	17,050	18,800	3,775	3,729	1,106	714	1,752	1,735	36,890	36,280	37,860
Specific Conductance (E.C) (Field)	µmhos/cm	40,882	43,249	43,788	42,426	39,747	41,557	41,740	43,223	42,340	40,642	33,456	33,798	5,750	37,532	26,779	27,703	16,917	18,376	3,961	3,968	962	796	1,828	1,746	35,270	36,306	38,097
Strontium, Dissolved	µg/L	15,666	16,477	8,689	9,434	7,995	9,084	16,370	16,228	9,500	9,458	7,619	7,287	17,499	17,148	9,637	9,864	5,208	5,455	2,777	2,834	630	435	1,231	1,288	N/A	N/A	7,440

Cal Am / RBF
Baseline Water and Total Dissolved Solids Levels
Monterey Peninsula Water Supply Project Area

Table 2

Summary of Laboratory Water Quality Results in Monitoring Wells

Well Name:		MW-1D		MW-1M		MW-1S		MW-3D		MW-3M		MW-3S		MW-4D		MW-4M		MW-4S		MW-5D		MW-5M		MW-5S		Test Slant Well		
Screen Interval (ft bgs):		277 - 327		115 - 225		55 - 95		285 - 330		105 - 215		50 - 90		280 - 330		100 - 230		50 - 90		380 - 430		100 - 325		50 - 90		140 - 320, 400 - 710 (MD)		
Sample Date:		14-Feb-15	9-Apr-15	14-Feb-15	9-Apr-15	13-Feb-15	9-Apr-15	21-Feb-15	10-Apr-15	24-Feb-15	10-Apr-15	25-Feb-15	10-Apr-15	19-Feb-15	2-Apr-15	6-Mar-15	2-Apr-15	7-Mar-15	2-Apr-15	17-Feb-15	2-Apr-15	3-Mar-15	2-Apr-15	10-Mar-15	2-Apr-15	20-Mar-15	24-Mar-15	8-Apr-15
Constituent[1]	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Sulfate	mg/L	1,950	N/A	2,070	N/A	1,840	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,700	N/A	N/A	N/A	N/A	N/A	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfate, Dissolved	mg/L	N/A	2,148	N/A	2,048	N/A	2,008	2,058	2,158	1,960	1,967	1,533	1,605	N/A	1,796	1,184	1,205	716	807	N/A	31	110	67	197	192	N/A	N/A	1,840
Temperature	° C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16.3	N/A	N/A
Temperature (Field)	° C	19.2	20.02	17.2	17.89	18.8	17.64	19.6	20.22	16.3	18.74	17.5	19.17	19.9	19.8	18.4	18.3	17.7	18.1	21.3	21.4	16.97	18.2	16.7	18.1	20.9	19.1	17.2
Total Diss. Solids	mg/L	29,100	28,700	30,900	28,300	26,600	27,500	32,600	28,600	28,500	28,300	23,400	23,300	27,500	27,600	17,900	17,500	11,900	12,800	2,616	2,437	663	454	1,166	1,117	25,300	24,400	25,400
Total Susp. Solids	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36	ND	N/A
Turbidity	NTU	1.8	0.15	0.1	0.1	0.1	0.15	1	0.3	0.1	0.16	0.15	0.24	0.65	0.15	0.25	0.05	0.3	0.2	0.25	0.25	ND	ND	0.4	0.75	17	1.6	0.4
Turbidity (Field)	NTU	0.65	0.69	0.41	0.35	0.28	0.43	0.38	0.87	0.42	0.21	0.96	0.55	0.76	0.53	0.71	0.84	0.52	0.17	0.71	0.87	0.47	0.45	1.31	1.26	40.3	0.66	0.74
Volatile Org. Compounds (524)	µg/L	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	RP	N/A	RP	N/A	ND	N/A	RP	N/A	RP	N/A	ND	N/A	RP	N/A	N/A	N/A	ND
Zinc, Total	µg/L	ND	ND	ND	ND	413	ND	ND	ND	297	ND	312	ND	ND	ND	211	107	ND	108	51	ND	40	ND	43	ND	N/A	N/A	ND

Notes:

°C	= Degrees Celsius
CU	= Color Units
mg/L	= Milligrams per Liter
NTU	= Nephelometric Turbidity Units
pg/L	= Picograms per Liter
TON	= Threshold Odor Number
µg/L	= Micorgrams per Liter
µmhos/cm	= Micromhos per Centimeter
H	= Analyzed outside of hold time
MPN/100mL	= The most probable number (MPN) of coliform or fecal coliform bacteria per 100 milliliter
ND	= NOT DETECTED at or above the Reporting Limit or Practical Quantitation Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
N/A	= No Lab Results available
RP	= Results to be provided

[1] Laboratory water quality reports will be provided in the Test Slant Well and mornitoring well completion report.
* Laboratory water quality results pending.

APPENDIX A

Coastal Development Permit # A-3-MRA-14-0050

8-Dec-14

GEOSCIENCE

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *GOVERNOR*

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885

COASTAL DEVELOPMENT PERMIT

On November 12, 2014, by a vote of 11-0, the California Coastal Commission granted to California American Water Company (Cal-Am) Coastal Development Permit #A-3-MRA-14-0050 subject to the attached standard and special conditions, for development consisting of:

> Construction, operation, and decommissioning of a test slant well at the CEMEX sand mining facility in the City of Marina and beneath Monterey Bay in the County of Monterey.

Issued on behalf of the Coastal Commission on December 8, 2014.

CHARLES LESTER
Executive Director

By: ALISON J. DETTMER
Deputy Director
Energy, Ocean Resources, and Federal Consistency Division

Acknowledgment:

The undersigned Permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.

The undersigned Permittee acknowledges that Government Code Section 818.4, which states in pertinent part, that: "A public entity is not liable for injury caused by the issuance... of any permit..." applies to the issuance of this permit.

IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL A COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGMENT HAS BEEN RETURNED TO THE COMMISSION OFFICE (14 Cal. Admin. Code Section 13158(a).)

12/8/14
Date

Signature of Permittee or Representative

STANDARD CONDITIONS

This permit is subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS

This permit is subject to the following special conditions:

1. **Proof of Legal Interest and Other Approvals.** The Permittee shall provide to the Executive Director a copy of each of the following approvals or documentation from the relevant agency that such approval is not required:
   a. PRIOR TO PERMIT ISSUANCE, proof of legal interest in the project site.
   b. PRIOR TO CONNECTING TO THE OUTFALL, the negotiated agreement or memorandum of understanding between the applicant and the Monterey Regional Water Pollution Control Agency ("MRWPCA") regarding connection and use of the ocean outfall for discharge of water produced from the test well.
   c. PRIOR TO ISSUANCE OF CDP 9-14-1735, a lease from the State Lands Commission.

   The Permittee shall inform the Executive Director of any changes to the project required by, or resulting from, these permits or approvals. Such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this permit, unless the Executive Director determines that no amendment is legally required.

2. **Liability for Costs and Attorneys Fees.** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees – including (a) those charged by the Office of the Attorney General; and (b) any court costs and attorneys fees that the Coastal Commission may be required by a court to pay – that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission, its officers, employees, agents, successors, and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

3. **Project Construction.** The Permittee shall conduct project construction as described and conditioned herein, including the following measures:
   a. Project-related construction shall occur only in areas as described in the permit application.
   b. Project-related construction, including site preparation, equipment staging, and installation or removal of equipment or wells, occurring between February 28 and October 1 of any year is subject to the timing and species protection requirements of Special Condition 14.
   c. Construction equipment and materials, including project-related debris, shall be placed or stored where it cannot enter a storm drain or coastal waters. The Permittee shall ensure that all construction personnel keep all food-related trash items in sealed containers and remove them daily to discourage the concentration of potential predators in snowy plover habitat. All trash and construction debris shall be removed from work areas and properly disposed of at the end of each work day at an approved upland location. All vegetation removed from the construction site shall be taken to a certified landfill to prevent the spread of invasive species.
   d. To reduce construction noise, noise attenuation devices (e.g., noise blankets, sound baffles, etc.) shall be installed around all stationary construction equipment, including drill rigs.
   e. All project vehicles shall maintain speeds of 10 miles per hour or less when at the project site. Prior to moving any vehicle, project personnel shall visually inspect for special-status species under and around the vehicle, and shall notify the on-site biologist should any be detected.
   f. To avoid predation of special-status species, wire excluders or similar anti-perching devices shall be installed and maintained on the top of all aboveground structures (e.g., electrical panel) to deter perching by avian predators.

   No changes to these requirements shall occur without a Commission amendment to this permit unless the Executive Director determines that no amendment is legally required.

4. **Protection of Water Quality.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit an erosion control plan for Executive Director review and approval. The Plan shall include a schedule for the completion of erosion- and sediment-control structures, which ensures that all such erosion-control structures are in place by mid-November of the year that construction begins and maintained thereafter. The plan

shall identify standard Best Management Practices to be implemented to address both temporary and permanent measures to control erosion and reduce sedimentation. Site monitoring by the applicant's erosion-control specialist shall be undertaken and a follow-up report shall be prepared that documents the progress and/or completion of required erosion-control measures both during and after construction and decommissioning activities. No synthetic plastic mesh products shall be used in any erosion control materials. All plans shall show that sedimentation and erosion control measures are installed prior to any other ground disturbing work.

5. **Hazardous Material Spill Prevention and Response.**
   (a) PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a project-specific Hazardous Materials Spill Prevention and Response Plan that includes:
   - an estimate of a reasonable worst case release of fuel or other hazardous materials onto the project site or into adjacent sensitive habitat areas or coastal waters resulting from project operations;
   - all identified locations within the project footprint of known or suspected buried hazardous materials, including current or former underground storage tanks, septic systems, refuse disposal areas, and the like;
   - specific protocols for monitoring and minimizing the use of fuel and hazardous materials during project operations, including Best Management Practices that will be implemented to ensure minimal impacts to the environment;
   - a detailed response and clean-up plan in the event of a spill or accidental discharge or release of fuel or hazardous materials;
   - a list of all spill prevention and response equipment that will be maintained on-site;
   - the designation of the onsite person who will have responsibility for implementing the plan;
   - a telephone contact list of all regulatory and public trustee agencies, including Coastal Commission staff, having authority over the development and/or the project site and its resources to be notified in the event of a spill or material release; and,
   - a list of all fuels and hazardous materials that will be used or might be used during the proposed project, together with Material Safety Data Sheets for each of these materials.

   The Permittee shall implement the Plan as approved by the Executive Director. The Permittee shall also ensure that all onsite project personnel participate in a training program that describes the above-referenced Plan, identifies the Plan's requirements for implementing Best Management Practices to prevent spills or releases, specifies the location of all clean-up materials and equipment available on site, and specifies the measures that are to be taken should a spill or release occur.

(b) In the event that a spill or accidental discharge of fuel or hazardous materials occurs during project construction or operations, all non-essential project construction and/or operation shall cease and the Permittee shall implement spill response measures of the approved Plan, including notification of Commission staff. Project construction and/or operation shall not start again until authorized by Commission staff.

(c) If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality, ESHA, or other coastal resources, the Permittee shall submit an application to amend this permit, unless the Executive Director determines no amendment is required. The application shall identify proposed measures to prevent future spills or releases and shall include a proposed restoration plan for any coastal resources adversely affected by the spill or release.

The Permittee shall implement the Plan as approved by the Executive Director.

6. **Monitoring and Removal of Temporary Structures, Well Head Burial & Well Closure/Destruction.** The Permittee shall monitor beach erosion at least once per week over the duration of the project to ensure the slant well and monitoring wells remain covered. If the wellheads, linings, casings, or other project components become exposed due to erosion, shifting sand or other factors, the Permittee shall immediately take action to reduce any danger to the public or to marine life and shall submit within one week of detecting the exposed components a complete application for a new or amended permit to remedy the exposure.

   Upon project completion, and no later than February 28, 2018, the Permittee shall cut off, cap, and bury the slant well head at least 40 feet below the ground surface, and shall completely remove all other temporary facilities approved by this coastal development permit. To ensure timely removal, the Permittee shall post the bond or other surety device as required by **Special Condition 17** to ensure future removal measures would be appropriately supported and timed to prevent any future resurfacing of the well casing or other project components.

7. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the Permittee acknowledges and agrees:
   a. that the site may be subject to hazards from coastal erosion, storm conditions, wave uprush, and tsunami runup;
   b. to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development;
   c. to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and
   d. to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

8. **No Future Shoreline Protective Device.** By acceptance of this permit, the Permittee agrees, on behalf of itself and all other successors and assigns, that no shoreline protective device(s) shall ever be constructed to protect the development approved pursuant to this permit, including the wells, supporting infrastructure, and any future improvements, in the event that the development is threatened with damage or destruction from waves, erosion, storm conditions or other natural hazards in the future. By acceptance of this permit, the Permittee hereby waives, on behalf of itself and all successors and assigns, any rights to construct such devices that may exist under Public Resources Code Section 30235.

   By acceptance of this permit, the Permittee further agrees, on behalf of itself and all successors and assigns, that the Permittee shall remove the development authorized by this permit, including the wells, supporting infrastructure, and any future improvements, if any government agency with the requisite jurisdiction and authority has ordered, and the Executive Director has concurred, that the development is not to be used due to any of the hazards identified in **Special Condition 7**. In the event that portions of the development fall to the beach before they are removed, the Permittee shall remove all recoverable debris associated with the development from the beach and ocean and lawfully dispose of the material in an approved disposal site. Such removal shall require a coastal development permit.

9. **Geology/Hazards.** The project shall be designed to meet or exceed all applicable requirements of the California Building Code. Project design and construction shall meet or exceed all applicable feasible conclusions and recommendations in the *Geotechnical Investigation for the California American Water Temporary Slant Test Well Project, Marina, Monterey County*, California, dated April 3, 2014 (GeoSoils 2014). Project components shall be sited to avoid areas identified in the coastal erosion memorandum prepared by ESA-PWA (March 2014) as subject to coastal erosion during the duration of the project.

10. **Visual Resources.** PRIOR TO PERMIT ISSUANCE, the Permittee shall submit for Executive Director review and approval a Lighting Plan prepared by a qualified engineer that includes the following:
    a. Identifies all lighting and associated infrastructure proposed for use during the test well project, such as towers, poles, electrical lines, etc. The Lighting Plan shall identify the locations, heights, dimensions, and intensity of the lighting and associated lighting infrastructure.
    b. Evaluates the effects of project lighting and associated infrastructure on wildlife in the project area and describes proposed measures to avoid or minimize any adverse effects. These measures may include shielding project lighting from off-site locations, directing lighting downward, using the minimum amount of lighting necessary to ensure project safety, and other similar measures.
    c. Affirms that all lighting structures and fixtures installed for use during the project and visible from public areas, including shoreline areas of Monterey Bay, will be painted or finished in neutral tones that minimize their visibility from those public areas.

    The Permittee shall implement the Lighting Plan as approved by the Executive Director.

11. **Protection of Nearby Wells.** PRIOR TO STARTING PROJECT-RELATED PUMP TESTS, the Permittee shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells and shall provide to the Executive Director the baseline water and Total Dissolved Solids ("TDS") levels in those wells prior to commencement of pumping from the test well. The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells. During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pump test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit.

12. **Protection of Biological Resources – Biological Monitor(s).** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall retain one or more qualified biologists approved by the Executive Director to ensure compliance with all relevant mitigation measures and Special Conditions. The approved biologist(s) shall conduct the required preconstruction surveys, implement ongoing monitoring and inspections, keep required records, and notify Commission staff and staff of other agencies as necessary regarding project conformity to these measures and Special Conditions.

    The approved biologist(s) shall be present during daylight hours for all project construction and decommissioning activities and on a periodic basis when the biologist determines operational activities may affect areas previously undisturbed by project activities. The biologist(s) shall monitor construction equipment access and shall have authority to halt work activities, if the potential for impacts to special-status species or habitat is identified, until the issue can be resolved. The qualified biologist(s) shall immediately report any observations of significant adverse effects on special-status species to the Executive Director.

13. **Protection of Biological Resources – Training of On-site Personnel.** Prior to starting construction and decommissioning activities, the approved biologist(s) shall conduct an environmental awareness training for all construction personnel that are on-site during activities. The training shall include, at a minimum, the following:
    - Descriptions of the special-status species with potential to occur in the project area;
    - Habitat requirements and life histories of those species as they relate to the project;
    - Avoidance, minimization, and mitigation measures that will be implemented to avoid impacts to the species and their habitats;
    - Identification of the regulatory agencies and regulations that manage their protection; and,
    - Consequences that may result from unauthorized impacts or take of special-status species and their habitats.

    The training shall include distribution of an environmental training brochure, and collection of signatures from all attendees acknowledging their participation in the training. Subsequent trainings shall be provided by the qualified biologist as needed for additional construction or operations workers through the life of the project.

14. **Protection of Biological Resources – Pre-Construction and Pre-Disturbance Surveys.** The approved biologist(s) shall conduct pre-construction surveys for special-status species as described below:
    a. No more than 14 days before the start of onsite activities or any activities planned for areas previously undisturbed by project activities, the biologist(s) shall conduct a field evaluation of the nature and extent of Western snowy plover activity in the project area and shall identify measures needed to ensure construction activities minimize potential effects to the species. Those measures shall, at a minimum, meet the standards and requirements of the mitigation measures included in Exhibit 5 as well as those included in subsection (d) of this special condition. Those measures shall also be submitted for Executive Director review and approval at least five days before the start of construction activities. The Permittee shall implement the measures as approved by the Executive Director.
    b. Prior to construction or activities planned for areas previously undisturbed by project activities, the approved biologist(s) shall coordinate with construction crews to identify and mark the boundaries of project disturbance, locations of special-status species and suitable habitat, avoidance areas, and access routes. GPS data collected during preconstruction surveys completed in 2012, 2013, and 2014 shall be used to flag the known locations of Monterey spineflower and buckwheat for avoidance during construction. Avoidance buffers shall be established and flagged or fenced as necessary to avoid surface disturbance or vegetation removal. The monitoring biologist shall fit the placement of flags and fencing to minimize impacts to any sensitive resources. At a minimum, the biologist shall direct the placement of highly visible exclusion fencing (snow fence or similar) at the following locations:
        - around sensitive snowy plover habitat areas that do not require regular access;
        - areas along the northern edge of the CEMEX accessway in the vicinity of the settling ponds; and
        - between the work area and any identified occurrence of Monterey spineflower or buckwheat within 10 feet of the existing accessway or work area.

All delineated areas of temporary fencing shall be shown on grading plans and shall remain in place and functional throughout the duration of construction and decommissioning activities.

c. The approved biologist(s) shall conduct surveys for Monterey spineflower and buckwheat (host plant for Smith's blue butterfly) within all project disturbance areas and within 20 feet of project boundaries during the blooming period for the spineflower (April-June) to identify and record the most current known locations of these species in the project vicinity. Surveys shall be conducted by a qualified botanist, and shall include collection of Global Positioning System (GPS) data points for use during flagging of sensitive plant species locations and avoidance buffers prior to construction.

d. Starting no later than February 1 of each year of project construction, operation, and decommissioning, the approved biologist(s) shall conduct breeding and nesting surveys of sensitive avian species within 500 feet of the project footprint. The approved biologist(s) shall continue those surveys at least once per week during periods of project construction, well re-packing, and decommissioning that occur between February 1 and October 1 each year.

In the event that any sensitive species are present in the project area but do not exhibit reproductive behavior and are not within the estimated breeding/reproductive cycle of the subject species, the qualified biologist shall either: (1) initiate a salvage and relocation program prior to any excavation/maintenance activities to move sensitive species by hand to safe locations elsewhere along the project reach or (2) as appropriate, implement a resource avoidance program with sufficient buffer areas to ensure adverse impacts to such resources are avoided. The Permittee shall also immediately notify the Executive Director of the presence of such species and which of the above actions are being taken. If the presence of any such sensitive species requires review by the United States Fish and Wildlife Service and/or the California Department of Fish and Game, then no development activities shall be allowed or continue until any such review and authorizations to proceed are received and also authorizes construction to proceed.

If an active nest of a federally or state-listed threatened or endangered species, species of special concern, or any species of raptor or heron is found, the Permittee shall notify the appropriate State and Federal wildlife agencies within 24 hours, and shall develop an appropriate action specific to each incident. The Permittee shall notify the California Coastal Commission in writing by facsimile or e-mail within 24 hours and consult with the Commission regarding determinations of State and Federal agencies.

If the biologist(s) identify an active nest of any federally- or state-listed threatened or endangered species, species of special concern, or any species of raptor or heron within 300 feet of construction activities (500 feet for raptors), the biologist(s) shall monitor bird behavior and construction noise levels. The biologist(s) shall be present at all relevant construction meetings and during all significant construction activities (those with potential noise impacts) to ensure that nesting birds are not disturbed by

construction-related noise. The biologist(s) shall monitor birds and noise every day at the beginning of the project and during all periods of significant construction activities. Construction activities may occur only if construction noise levels are at or below a peak of 65 dB at the nest(s) site. If construction noise exceeds a peak level of 65 dB at the nest(s) site, sound mitigation measures such as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing the use of back-up alarms shall be employed. If these sound mitigation measures do not reduce noise levels, construction within 300 ft. (500 ft. for raptors) of the nesting areas shall cease and shall not re-start until either new sound mitigation can be employed or nesting is complete.

If active plover nests are located within 300 feet of the project or access routes, avoidance buffers shall be established to minimize potential disturbance of nesting activity, and the biologist shall coordinate with and accompany the Permittee's operational staff as necessary during the nesting season to guide access and activities to avoid impacts to nesting plovers. The biologist shall contact the USFWS and CDFW immediately if a nest is found in areas near the wellhead that could be affected by project operations. Operations shall be immediately suspended until the Permittee submits to the Executive Director written authorization to proceed from the USFWS.

If, after starting project activities, the Permittee must stop construction due to the presence of sensitive species or due to the lack of necessary approvals or permits (e.g., a lease from the State Lands Commission), the Permittee shall remove and properly store all project-related equipment and vehicles away from the project site in a manner that does not adversely affect sensitive species.

15. **Project Area Restoration.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall prepare a Restoration Plan for review and approval by the Executive Director that is consistent with the City of Marina restoration requirements as codified in Municipal Code Section 17.41.100. The Plan shall include, at a minimum:
    a. a description of the habitat characteristics and extent of the area to be restored, which shall include, at a minimum, all areas of temporary disturbance in the project footprint other than those areas actively in use by CEMEX for mining purposes;
    b. performance standards and success criteria to be used;
    c. a minimum 3:1 ratio of native plants to be replaced within the affected area;
    d. an invasive species control program to be implemented for the duration of the project;
    e. the timing of proposed restoration activities;
    f. proposed methods to monitor restoration performance and success for at least five years following initiation of the Plan; and
    g. identification of all relevant conditions, requirements, and approvals by regulatory agencies needed to implement the Plan.

    The Permittee shall implement the Plan: (1) during and immediately following construction and prior to operation of the test well, and (2) during and immediately following decommissioning activities.

Success criteria will include plant cover and species composition/diversity, which shall meet or exceed adjacent undisturbed dune habitat on the CEMEX parcel as determined by the biological monitor. Success criteria shall, at a minimum, be consistent with the requirements of the existing Lapis Revegetation Plan prepared for the RMC Lonestar Lapis Sand Plant (25 percent average vegetative cover and species diversity of all species listed in Group A of the Plan present and providing at least 1 percent cover).

16. **Invasive Species Control.** The Permittee shall remove and properly dispose of at a certified landfill all invasive or exotic plants disturbed or removed during project activities. The Permittee shall use existing on-site soils for fill material to the extent feasible. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species, or the material must consist of purchased clean material.

17. **Posting of Bond.** To ensure timely removal, PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall provide to the Commission a surety bond or similar security device acceptable to the Executive Director for $1,000,000 (one million dollars), and naming the Coastal Commission as the assured, to guarantee the Permittee's compliance with Special Conditions 6 and 15. The surety bond or other security device shall be maintained in full force and effect at all times until Special Conditions 6 and 15 have been met.

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APPENDIX G-2

Monterey Peninsula Water Supply Project – Test Slant Well Long Term Pumping Test and Coastal Development Permit #A-3-MRA-14-0050

July 23, 2015

July 23, 2015

Charles Lester
Executive Director
c/o Tom Luster
California Coastal Commission
45 Fremont St., Suite 2000
San Francisco, CA 94105-2219

Delivered by E-mail

Subject: Monterey Peninsula Water Supply Project – Test Slant Well Long Term Pumping Test and Coastal Development Permit #A-3-MRA-14-0050

Dear Tom,

This letter has been prepared by the Hydrogeologic Working Group (HWG) to propose an amendment to Special Condition 11 of the California Coastal Commission (CCC) Coastal Development Permits A-3-MRA-14-14-0050 dated December 8, 2014 and 9-14-1735, dated January 28, 2015. The proposed amendment includes some revised language to Special Condition 11 to help clarify requirements for Test Slant Well pumping, and provides responses to the CCC letter of July 3, 2015 (CCC Letter). In addition, this letter provides responses to the Hopkins Groundwater Consultants letter of June 25, 2015 (Hopkins Letter), which was submitted to the CCC and raised issues related to the HWG's analysis of issues concerning the Test Slant Well.

Proposed Modifications to Special Condition 11

In order for Special Condition 11 to work as intended, the Condition requires definitions of certain terms, some clarification of key sentences, and inclusion of an additional reporting requirement.

Special Condition 11 as approved by the CCC is provided below, and we have underlined those key sentences that require further clarification:

> PRIOR TO STARTING PROJECT-RELATED PUMP TESTS, the Permittee shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells and shall provide to the Executive Director the baseline water and Total Dissolved Solids ("TDS") levels in those wells prior to commencement of pumping from the test well. **The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells**. During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. **If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pump test and inform the Executive Director**. The Hydrogeology

Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. **If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit**.

The discussion below provides proposed definitions for groundwater elevation trends, drawdown, and TDS increase (to clarify permit language), revisions to the bolded sentences above, inclusion of an additional reporting requirement in the condition, and rationale for the proposed modifications.

Definition of Regional Groundwater Elevation Trends and TDS Level Trends

For purposes of the language in Special Condition 11, regional groundwater elevation and TDS level trends are seasonal fluctuations in groundwater elevation and TDS levels throughout Salinas Valley Groundwater Basin (and specifically in the CEMEX area at MW-4) that result from causes other than Test Slant Well pumping.

Definition of "Drop in Water Level" or "Drawdown"

For purposes of the language in Special Condition 11, "drop in water level" should be considered the same as "drawdown," which is defined as that change in groundwater elevation at the compliance well (MW-4S and MW-4M), which can be shown to be solely from Test Slant Well pumping. Specifically, drawdown is the difference between measured ground water elevations (during pumping) and regional/background (non-pumping) groundwater elevation trends.

Definition of TDS Level Increase

For purposes of the language in Special Condition 11, TDS level increase is defined as that increase in total dissolved solids (TDS) at the compliance well (MW-4S and MW-4M), which can be shown to be solely from Test Slant Well pumping. Specifically, TDS level increase is any increase in TDS shown by the difference between measured TDS (during pumping) and regional/background (non-pumping) TDS level trends.

Proposed Revisions to First Bolded Sentence

The first bolded sentence with proposed modifications would read as follows: "The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells, along with regional groundwater elevation trends and TDS level trends."

In addition, a new reporting requirement would be added after the fourth sentence in the condition that would read as follows: "The Hydrogeology Working Group shall review weekly monitoring data and

prepare a monthly report that shall be submitted to the Executive Director documenting the regional/background groundwater elevation trends and TDS level trends."

Proposed Revisions to Second Bolded Sentence

The second bolded sentence with proposed modifications would read as follows, "If drawdown exceeds 1.5 feet at MW-4 (based on averaging of MW-4S and MW-4M) from regional groundwater elevation trends, or if TDS levels increase more than two thousand parts per million (based on averaging of MW-4S and MW-4M) from regional TDS level trends, the Permittee shall immediately stop the pump test and inform the Executive Director."

Proposed Revisions to Third Bolded Sentence

The third bolded sentence with proposed modifications would read as follows, "If, however, the Executive Director determines that the Test Slant Well has caused a drop in water level (i.e., drawdown) of 1.5 feet or more or a TDS increase of two thousand parts per million or more, the Permittee shall not re-start the pump test until receiving an amendment to this permit."

Restated Special Condition 11

With the proposed modifications, Special Condition 11 as revised would read as follows:

> PRIOR TO STARTING PROJECT-RELATED PUMP TESTS, the Permittee shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells and shall provide to the Executive Director the baseline water and Total Dissolved Solids ("TDS") levels in those wells prior to commencement of pumping from the test well. The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells, along with regional groundwater elevation trends and TDS level trends. During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. The Hydrogeology Working Group shall review weekly monitoring data and prepare a monthly report that shall be submitted to the Executive Director documenting the regional/background groundwater elevation trends and TDS level trends. If drawdown exceeds 1.5 feet at MW-4 (based on averaging of MW-4S and MW-4M) from regional groundwater elevation trends, or if TDS levels increase more than two thousand parts per million (based on averaging of MW-4S and MW-4M) from regional TDS level trends, the Permittee shall immediately stop the pump test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing

to resume. If, however, the Executive Director determines that the Test Slant Well has caused a drop in water level (i.e., drawdown) of 1.5 feet or more or an increase in TDS of two thousand parts per million or more, the Permittee shall not re-start the pump test until receiving an amendment to this permit.

Rational for Proposed Special Condition 11 Text Modifications

The selection of 1.5 feet was intended to refer to a drawdown caused solely by the Test Slant Well, not a regional decline in groundwater levels due to other factors. Seasonal declines in groundwater levels occur in essentially all groundwater basins that are highly developed, due to increased municipal, agricultural, industrial, and domestic pumping that occurs during the dry season from March/April to August/September. The Salinas Valley is no exception to this pattern of seasonal declines in regional groundwater levels (MCWRA, April 2015; **Attachment A**). These seasonal declines are not a result of the cone of depression from one or a few wells, but rather a cumulative decline in groundwater levels and groundwater storage from tens to hundreds of pumping wells in a given basin. Total groundwater pumping from the Pressure Subarea of Salinas Valley Groundwater Basin is estimated at approximately 130,000 acre-feet per year (AFY) as a long-term average, with the most recent annual estimate of 118,000 AFY in 2013 (Brown and Caldwell, 2015). Within the Pressure Subarea south of Salinas, it is estimated that 40 percent of the groundwater pumping is from the 180-Foot Aquifer. Therefore, the effects are widespread throughout the entire Salinas Valley basin, and even areas with limited or no pumping within the basin will experience seasonal/regional water level declines due to cumulative basin pumping effects. This is especially the case in a semi-confined to confined groundwater system (where pumping effects are more widespread due to low storativity values), such as occurs within the northern Salinas Valley. Further supporting documentation for seasonal declines in Salinas Valley Groundwater Basin is provided in a subsequent section of this letter that provides responses to the CCC Letter.

Trends and fluctuations in both groundwater elevations and salinity can be observed in monitoring wells. Specifically, non-Test Slant Well pumping groundwater elevations in the 180-FTE Aquifer generally show a landward hydraulic gradient which results in progressive sea-water intrusion and increased salinity landward. Groundwater elevations in the shallow Dune Sand Aquifer show an oceanward hydraulic gradient, as would be expected given the general lack of groundwater pumping from this aquifer. With respect to the Test Slant Well monitoring well network, it should be noted that MW-5S is likely screened in a perched or shallower zone than the Dune Sand Aquifer screened in other "S" monitoring wells. This is apparent from the difference in groundwater elevation recorded at MW-5S (considerably higher) compared to other "S" monitoring well groundwater elevations (MW-3S, MW-4S, MW-6S).

The current language in Special Condition 11 can and has been interpreted to mean zero drawdown is allowed at MW-4 regardless of seasonal declines in regional groundwater levels; thereby making the stated performance standard of 1.5 feet meaningless (i.e., when regional groundwater levels decline by 1.5 feet or more during the summer months, regardless of Test Slant Well pumping, the Test Slant Well may not operate). The intent of Special Condition 11 was to establish a performance standard for MW-4 that would be protective of inland production wells by ensuring that the Test Slant Well would not be

allowed to cause greater than anticipated drawdown or salinity. The selected performance standards were 1.5 feet for drawdown and 2,000 mg/L for TDS. But in order for these performance standards to work in practice and to confirm whether the Test Slant Well is complying with them, they must be applied against regional trends. For reasons described above, the language in Special Condition 11 needs to be modified to reflect the CCC's intent that the Test Slant Well could not be the cause of more than 1.5 feet of drawdown or a TDS increase of more than 2,000 mg/L at MW-4 without further CCC review and technical analysis. The CCC's intent was not to stop Test Slant Well pumping where declines in regional groundwater levels from other sources result in a 1.5 foot or greater drop in water levels at MW-4. Methods for calculation of drawdowns that are superimposed on a regional trend are described in the following section of this letter that provides responses to the CCC Letter.

The proposed averaging of drawdowns and salinity increase (due to Test Slant Well pumping) in the MW-4S (Dune Sand Aquifer) and MW-4M (180-FTE Aquifer) for comparison to the performance standards of 1.5 feet and a 2,000 mg/L TDS increase are appropriate for the following reasons: a) the Dune Sand Aquifer and 180-FTE Aquifer beneath the CEMEX site are not separated by a thick continuous clay layer (aquitard), b) the Dune Sand Aquifer (represented by MW-4S) and 180-FTE Aquifer (represented by MW-4M) at the CEMEX site are in hydraulic communication due to the lack of a separating aquitard, c) pumping just from the Dune Sand Aquifer at the CEMEX site will cause a water level response at nearby monitoring wells screened in the 180-FTE Aquifer, and pumping just from the 180-FTE Aquifer at the CEMEX site will cause a water level response at nearby monitoring wells in the Dune Sand Aquifer, and d) the Test Slant Well is screened in (and pumps water from) both the Dune Sand Aquifer and the 180-FTE Aquifer. Given the facts that the Dune Sand Aquifer and 180-FTE Aquifer are not isolated beneath the CEMEX site and the Test Slant Well is screened in both aquifers, an averaging of drawdowns in MW-4S and MW-4M due to Test Slant Well pumping is the most appropriate value to use for comparison to the 1.5 foot performance standard. The exclusion of MW-4D from the average (because the 400-Foot Aquifer beneath CEMEX shows no effects from Test Slant Well pumping) is conservative in that its inclusion would result in a lower calculated average to compare to the 1.5 foot threshold. Additional discussion regarding MW-4D is provided in the following section on responses to the CCC Letter.

Responses to CCC Letter and Supporting Documentation

The CCC Letter provided the Executive Director's determination that the water level decrease at MW-4 was caused in part by pumping of the test slant well. Therefore, the CCC concluded that, "Pursuant to Special Condition #11, Cal-Am must therefore submit an application for a permit amendment to allow restart of the test and is not to conduct further pump testing until receiving an amended permit." However, the CCC acknowledged the influence of seasonal declines in regional groundwater level trends due to cumulative basin pumping on the water levels measured at MW-4. Given the benefit of several months of groundwater monitoring data and ongoing data collection, the CCC stated that, "…we believe the current permit and its conditions can be modified to better reflect aquifer conditions identified through these data…" Thus, the CCC requested additional information and supporting documentation for previous conclusions by the HWG in our letters dated June 10 and June 22, 2015. The requested analysis and supporting documentation is described below and provided as attachments to this letter.

Characterization of Local/Regional Effects

The occurrence of seasonal groundwater level declines in Salinas Valley Groundwater Basin is documented in reports prepared by Monterey County Water Resources Agency (MCWRA) staff for submittal to the Board of Directors (MCWRA, 2015). The most recent available report is dated April 27, 2015, and states the following, "Groundwater level measurements indicate that, by February, water levels had begun their seasonal decline in the Pressure 400-Foot Aquifer…In the Pressure 180-Foot Aquifer and the East Side and Forebay Subareas, groundwater levels began declining in March. Between February and March, average water levels dropped by three feet in the Pressure 180-Foot Aquifer…" The MCWRA report provides a hydrograph for the 180-Foot Aquifer for several different years documenting a consistent seasonal decline in groundwater levels from March to August.

Additional documentation of seasonal declines in regional groundwater level trends from March/April to July/August in the Salinas Valley Groundwater Basin due to cumulative basin pumping from municipal, agricultural, industrial, and domestic wells is provided in **Table 1** and as groundwater hydrographs in **Attachment A**. The summary of the groundwater hydrograph data presented in **Table 1** includes calculation of the rate of decline that normalizes the data relative to the duration of the seasonal decline (or duration of the available data set) in each hydrograph. The groundwater hydrographs from ten wells in the Salinas Valley Groundwater Basin screened in the 180-Foot Aquifer provided in **Attachment A** show that peak groundwater elevations occur between January and April and the lowest groundwater elevations typically occurred in August.

The magnitude of the seasonal decline in groundwater level trends measured at these in-basin wells ranged from 2.9 to 23.5 feet over a three to five month duration. Review of the location map for the wells indicates that the magnitude (and rate) of the seasonal water level decline among these wells appears to be greatest near the City of Salinas and generally decreases towards the ocean, as would be expected given the distribution of wells pumping from the 180-Foot Aquifer. **Table 1** and the groundwater hydrographs in **Attachment A** clearly document the seasonal decline that occurs in the 180-Foot Aquifer throughout the Salinas Valley Groundwater Basin, even though the concentration of wells pumping from the 180-Foot Aquifer is several miles inland from the coast.

Table 1. Summary of Seasonal Water Level Decline Salinas Valley Groundwater Basin 180-Foot Aquifer Wells.

Well ID	Distance from Test Slant Well (miles)	Direction from Test Slant Well	Seasonal Decline (feet)	Duration of Decline	Rate of Decline (feet/day)
MW-4M[1]	0.4	E	3.75	Mar 9 – Jul 1, 2015	0.033
MW-5M[1]	1.8	E	5.85	Mar 10 – Jul 1, 2015	0.052
MW-6M[1]	4.1	SE	8.5	Apr 22 – Jul 1, 2015	0.120
33R1	4.6	N-NE	6	Apr-Aug 2012	0.049
22636	4.3	N-NE	12	Mar-Aug 2013	0.079
22632	4.4	E	17.5	Mar-Aug 2013	0.115
22651	5.6	E	22	Mar-Aug 2013	0.144
22650	7.2	E	23.5	Mar-Aug 2013	0.154
31F1	7.3	E	22.5	Apr-Aug 2013	0.184
16M1	10.5	E-SE	20.5	Apr-Aug 2013	0.168

[1]The "M" wells are screened in the 180-FTE Aquifer.

The frequent water level measurements being collected from wells in the Test Slant Well monitoring network document a weekly cycle with reduction in basin pumping on Sundays. This observation correlates well with our understanding of farm labor practices (they typically have Sunday off) and industrial water uses (likely minimal operations on Sunday compared to other days of the week). The weekly cycle is prominent at MW-5 (**Figure 1**) and also observed at MW-4 (**Figure 2**). The stronger weekly cycle signal in MW-5 data reflects its slightly closer proximity to the concentration of basin pumping wells. The weekly cycle signal is even stronger in MW-6, which is located further inland than MW-5 (Geoscience, 2015).

Effects on Different Aquifers

The CCC Letter suggests that because available monitoring data from the Test Slant Well monitoring network cover three different aquifers, the Special Condition 11 amendment application should consider possible use of specific thresholds for each of the three aquifers to measure potential effects of Test Slant Well pumping. The Test Slant Well monitoring network includes nested wells at each location labeled as shallow ("S"), middle ("M"), and deep ("D") wells that correspond to the Dune Sand Aquifer, 180-FTE Aquifer, and 400-Foot Aquifer, respectively. The HWG proposes to apply the thresholds to the Dune Sand and 180-FTE Aquifers, and eliminate the 400-Foot Aquifer from future consideration for reasons described below.

Local and regional stratigraphy combined with the observed variations in the magnitude of daily tidal fluctuations in monitoring well data indicate the presence of unconfined conditions in the shallow wells (Dune Sand Aquifer), unconfined to semi-confined conditions in the middle wells (180-FTE Aquifer), and confined conditions in the deep wells (400-Foot Aquifer). Geologic data collected during drilling of borings at MW-1, MW-3, and MW-4 at the CEMEX property (e.g., the presence of a continuous clay layer above the 400-Foot Aquifer) and groundwater level monitoring from various wells during Test Slant Well pumping and non-pumping conditions demonstrate that Test Slant Well pumping has no impact on the

400-Foot Aquifer. A continuous clay layer aquitard between the 180-FTE Aquifer and 400-Foot Aquifer was observed in boreholes drilled on the CEMEX property within an interval from approximately -200 to -250 Feet MSL (Geoscience, 2014). In the 400-Foot Aquifer monitoring wells, the data collected from April to July 2015 has demonstrated that daily fluctuations are due to tidal influence and the seasonal water level declines are due to inland pumping (Geoscience, 2015; MCWRA, 2015). The starting and stopping of Test Slant Well pumping has not impacted groundwater levels at MW-4D, MW-3D, or MW-1D (**Figures 2, 3, and 4**). In particular, MW-1D is located approximately 50 feet from the Test Slant Well, and is the closest monitoring well to the Test Slant Well. As demonstrated by the data collected at MW-1D, Test Slant Well pumping has not influenced groundwater levels in the 400-Foot Aquifer even at a distance of 50 feet from the Test Slant Well. Given the lack of influence of Test Slant Well pumping on groundwater levels at MW-1D, as well as at MW-3D and MW-4D, the HWG has concluded there is no influence of Test Slant Well pumping on the 400-Foot Aquifer (**Figures 2, 3, and 4**). Thus, the HWG proposes that the groundwater level fluctuations at MW-4D be excluded from the evaluation of drawdown impacts of the Test Slant Well at the MW-4 compliance point. The exclusion of MW-4D from use in calculating the observed drawdown at MW-4 (and use of only MW-4S and MW-4M) is conservative in that the exclusion of MW-4D would result in higher values of drawdown being calculated at MW-4 (i.e., 0 drawdown at MW-4D would lower the overall average for MW-4).

Based on our review of several months of monitoring data with periods of both pumping and non-pumping of the Test Slant Well, the Test Slant Well's effects on water levels are limited to the Dune Sand Aquifer and 180-FTE Aquifer. This was expected given the screen zones in the Test Slant Well and local/regional geologic conditions as described above. Therefore, the HWG proposes that compliance with Special Condition 11 be based on drawdown and TDS variations in MW-4S (Dune Sand Aquifer) and MW-4M (180-Foot Aquifer). Further discussion of proposed thresholds is provided in the following section.

Water and TDS Levels

The CCC Letter recommends that the application propose thresholds that better reflect identified trends in the data. The HWG proposes that the drawdown threshold remain at 1.5 feet, but be defined as entirely due to drawdown from pumping of the Test Slant Well. The proposed methods for calculation of drawdown, which include accounting for the seasonal decline in water levels, are described in the following paragraphs and in **Attachment B**.

The HWG will continually evaluate regional groundwater level conditions, which typically will include a seasonal decline in groundwater levels from March/April to August/September and a seasonal recovery (increase) in water levels from August/September to January/February. In addition to Test Slant Well monitoring network wells MW-1, MW-3, MW-4, and MW-5, more monitoring wells have been added to expand the spatial distribution of monitoring wells in the network to provide improved coverage between the coast and inland pumping areas (e.g., MW-6, MW-8, and MW-9) (Geoscience, 2015). Drawdown due to pumping of the Test Slant Well will be measured as a decline in water levels from the regional water level trend, and can occur when regional groundwater levels are either rising or falling. As an example, drawdown was calculated for MW-1S/M and MW-3S/M where distinguishable water

level impacts are observed from Test Slant Well pumping (**Attachment B**). The calculated drawdowns that occurred during Test Slant Well pumping at MW-1S/M, MW-3S/M, and estimated at MW-4S/M are summarized in **Table 2**.

Table 2. Summary of Drawdown Calculations.

Well	Drawdown (feet)	Distance from Test Slant Well (feet)
MW-1S	8.1	50
MW-3S	1.8	550
MW-4S	<0.1[1]	2,000
MW-1M	6.1	50
MW-3M	2.0	550
MW-4M	0.25[1]	2,000

[1]Calculated drawdowns at MW-4S/M are so small as to be difficult to distinguish from daily tidal and seasonal declines. The stated values represent maximum potential drawdowns, and actual drawdowns are considered negligible.

Precise calculations of drawdown in MW-4S and 4M are somewhat difficult, given that the drawdowns are very small to negligible and superimposed on a declining regional water level trend (**Attachment B**). As a check, distance-drawdown plots were prepared (**Attachment C**). The distance drawdown plots, based on known drawdowns at MW-1 and MW-3, provide additional evidence that drawdowns for MW-4S and MW-4M at a distance of 2,000 feet from the Test Slant Well are expected to be negligible.

It is also important to note that if the decline in water level at the monitoring wells during the Test Slant Well pumping period were mostly due to drawdown from Test Slant Well pumping and not from seasonal water level decline, then the water level should recover back up to the pre-pumping static level (i.e., water level change during recovery should be equal/opposite of water level change during pumping). This is clearly not the case in MW-4S or 4M, as summarized in **Table 3**, which demonstrates that water levels continue to decline since Test Slant Well pumping ceased on June 5, 2015.

Table 3. Summary of Groundwater Level Elevations in MW-4S and MW-4M.

Well	April 22: Start of Pumping Groundwater Elevation (ft. NAVD88)	June 5: End of Pumping Groundwater Elevation (ft. NAVD88)	July 1: Post Pumping Groundwater Elevation (ft. NAVD88)
MW-4S	+4.15	+3.25	+3.1
MW-4M	+0.4	-1.50	-2.1

In terms of the proposed threshold for drawdown at MW-4, the HWG proposes to use an average of drawdowns at MW-4S and MW-4M compared to the 1.5 foot performance standard. For Test Slant Well pumping conducted between April 22 and June 5, the average drawdown for MW-4S and MW-4M is 0.15 feet.

In terms of TDS, the HWG proposes to maintain the current performance standard of an increase in TDS of 2,000 mg/L. Similar to the method proposed for drawdown compliance, the change in TDS would be

calculated as an average of observations from MW-4S and MW-4M. The monitoring wells have instrumentation to monitor specific conductivity, which can be converted to TDS using a formula provided in the weekly monitoring reports. To date, monitoring data for specific conductivity at MW-4S and MW-4M have not shown changes in response to the Test Slant Well being turned on or off. An overall slight decline has been observed in MW-4S and an overall slight increase has been observed at MW-4M, and these changes appear related to regional conditions (or possibly instrument drift) and not pumping of the Test Slant Well. The increase in TDS due to Test Slant Well pumping would be calculated as the deviation from existing trends.

Compliance Wells

The CCC letter requested clarification of compliance with the Special Condition 11's requirement for monitoring of a minimum of four wells on the CEMEX site within 2,000 feet of the Test Slant Well. Compliance with this requirement is met with monitoring of nine wells at three locations (MW-1S, MW-1M, MW-1D, MW-3S, MW-3M, MW-3D, MW-4S, MW-4M, and MW-4D), the Test Slant Well itself, and the CEMEX North Well. All eleven of these wells are located on the CEMEX site within 2,000 feet of the TDS, and have transducers installed for continuous groundwater monitoring.

Responses to Hopkins Letter

The HWG has reviewed the letter prepared by Hopkins Groundwater Consultants dated June 25, 2015. A detailed response to comments is provided in **Attachment D**. Based upon our review of the letter, our opinions regarding the impacts of Test Slant Well pumping have not changed. As documented throughout our letter, additional monitoring data collected since Hopkins review fully support previous HWG conclusions.

Closing Thoughts

Recent events regarding the Test Slant Well pumping have led to preparation of this letter by the HWG and the need to file for an amendment to the permit. A substantial amount of technical detail has been provided in this letter to support previous HWG conclusions and to provide necessary support/documentation for the application for a permit amendment. However, it is important to note that the bottom line is that it is difficult to distinguish the precise amount of drawdown at MW-4 due to Test Slant Well pumping because the amount of drawdown at MW-4 is negligible. Whether the amount of drawdown is 0, 0.1, or 0.25 feet is not as important as noting that is much less than the 1.5 foot performance standard for drawdown at MW-4. In other words, unless the Test Slant Well drawdown effects are clearly distinguishable in the MW-4 data, the Test Slant Well pumping should be presumed to be in compliance with Special Condition 11. Furthermore, when Test Slant Well pumping is resumed, the amount of drawdown produced can reasonably be expected to be very similar as what was observed during Test Slant Well pumping from April 22 to June 5. Nonetheless, the HWG will closely monitor weekly groundwater monitoring data and report to the CCC on regional trends on a monthly basis moving forward (as described in this letter). We look forward to working closely with the CCC in future monitoring of the Test Slant Well phase of this important regional water supply project.

Sincerely,

The Hydrogeologic Working Group (Dennis Williams, Tim Durbin, Martin Feeney, Peter Leffler)

Dennis Williams

Tim Durbin

Martin Feeney

Peter Leffler

References

Geoscience, 2014, *Monterey Peninsula Water Supply Project, Hydrogeologic Investigation, Technical Memorandum (TM1), Summary of Results - Exploratory Boreholes*, prepared for California American Water and RBF Consulting, July 8.

Geoscience, 2015, *Monterey Peninsula Water Supply Project, Test Slant Well Long Term Pumping Monitoring Report No. 10, 24-June-15 – 1-July-15*, prepared for California American Water, July 7.

Monterey County Water Resources Agency (MCWRA), 2015, Agenda Title: *Receive report on Salinas Valley Water conditions for the second quarter of Water Year 2014-2015*, prepared for Board of Directors Meeting on April 27.

FIGURES

Figure 1. Groundwater Elevation in MPWSP MW-5M and MW-5D

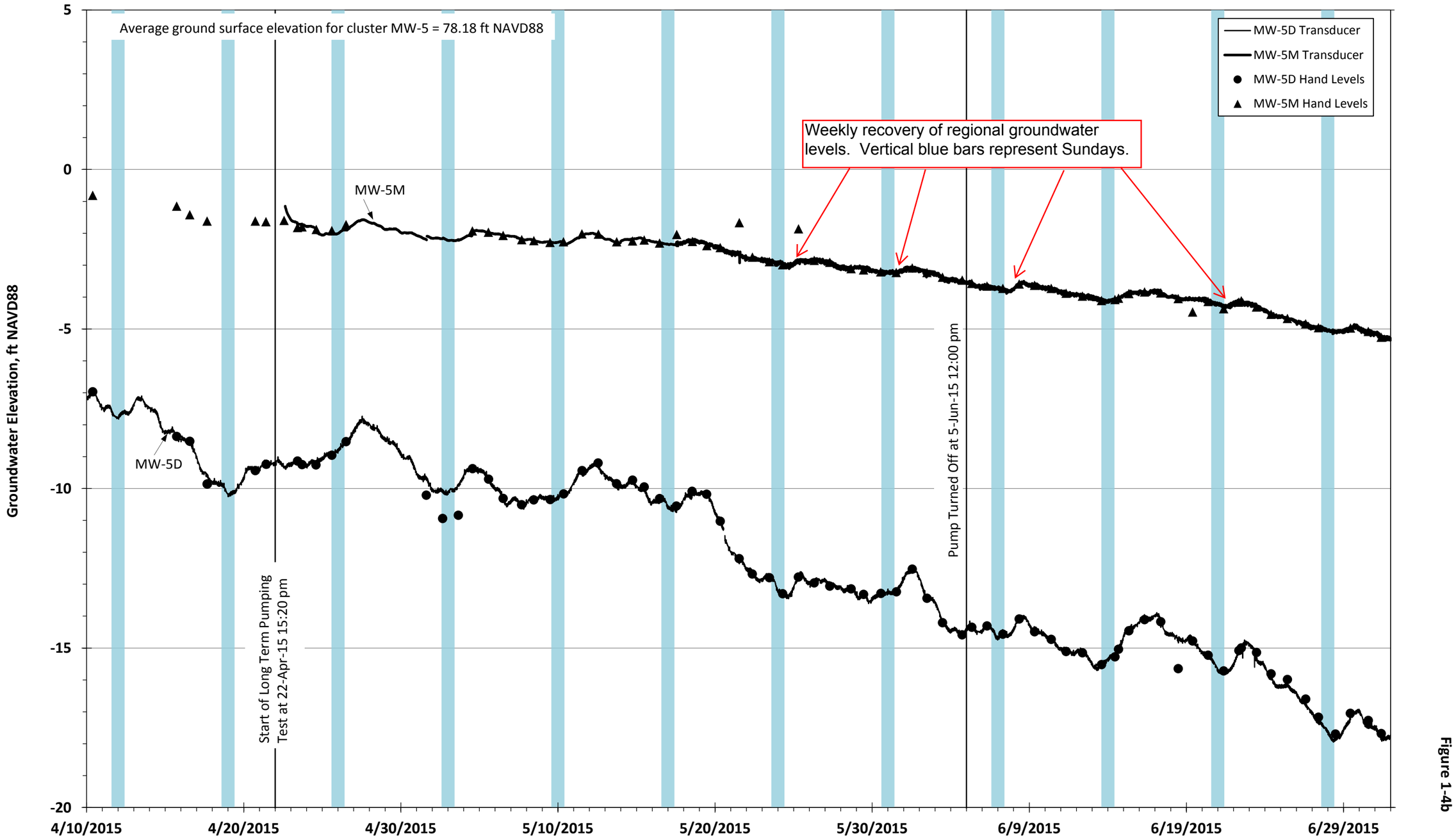


Figure 1-4b

Figure 2. Groundwater Elevation in MPWSP MW-4

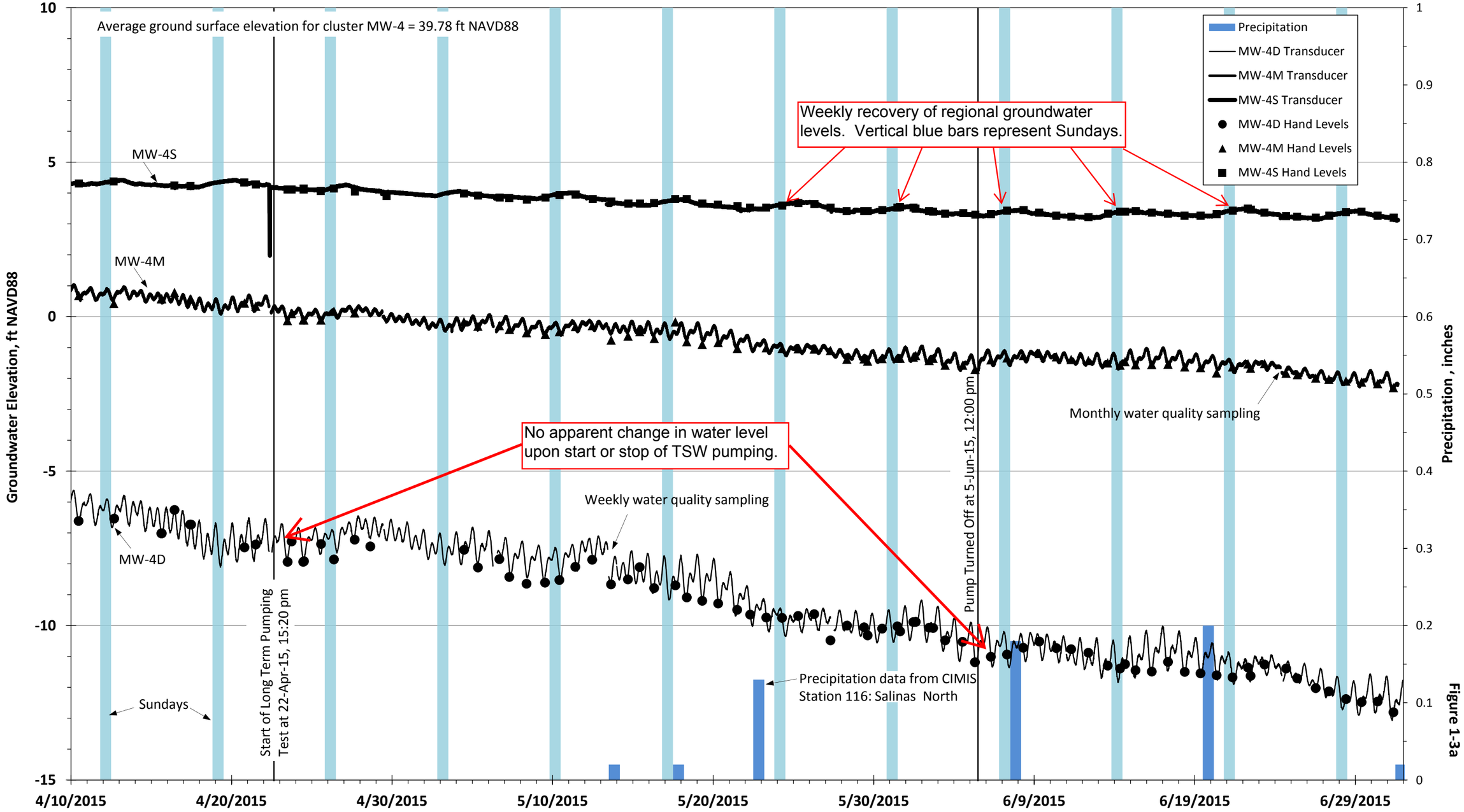


Figure 1-3a

Figure 3. Groundwater Elevation in MPWSP MW-3

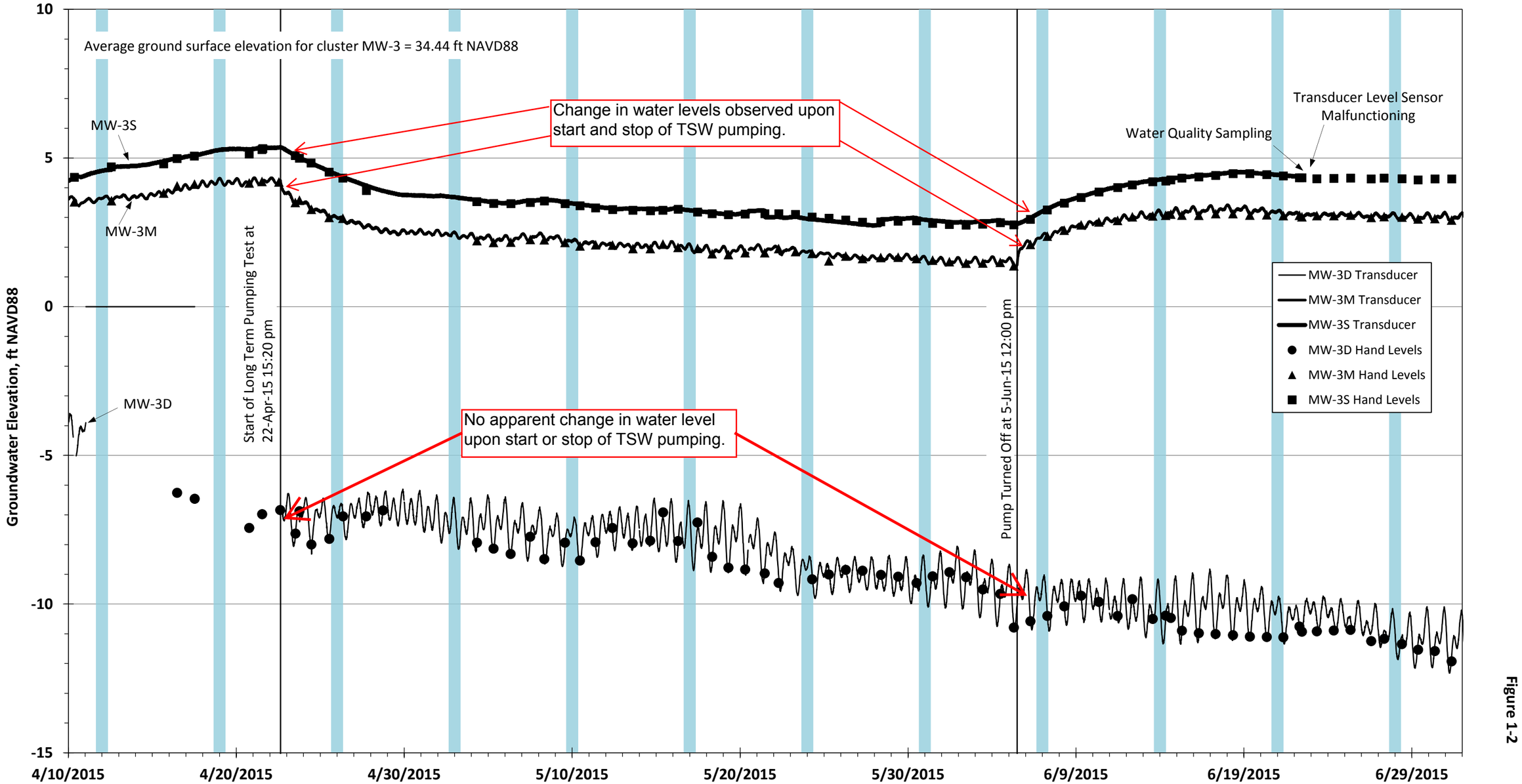


Figure 1-2

Figure 4. Groundwater Elevation in MPWSP MW-1

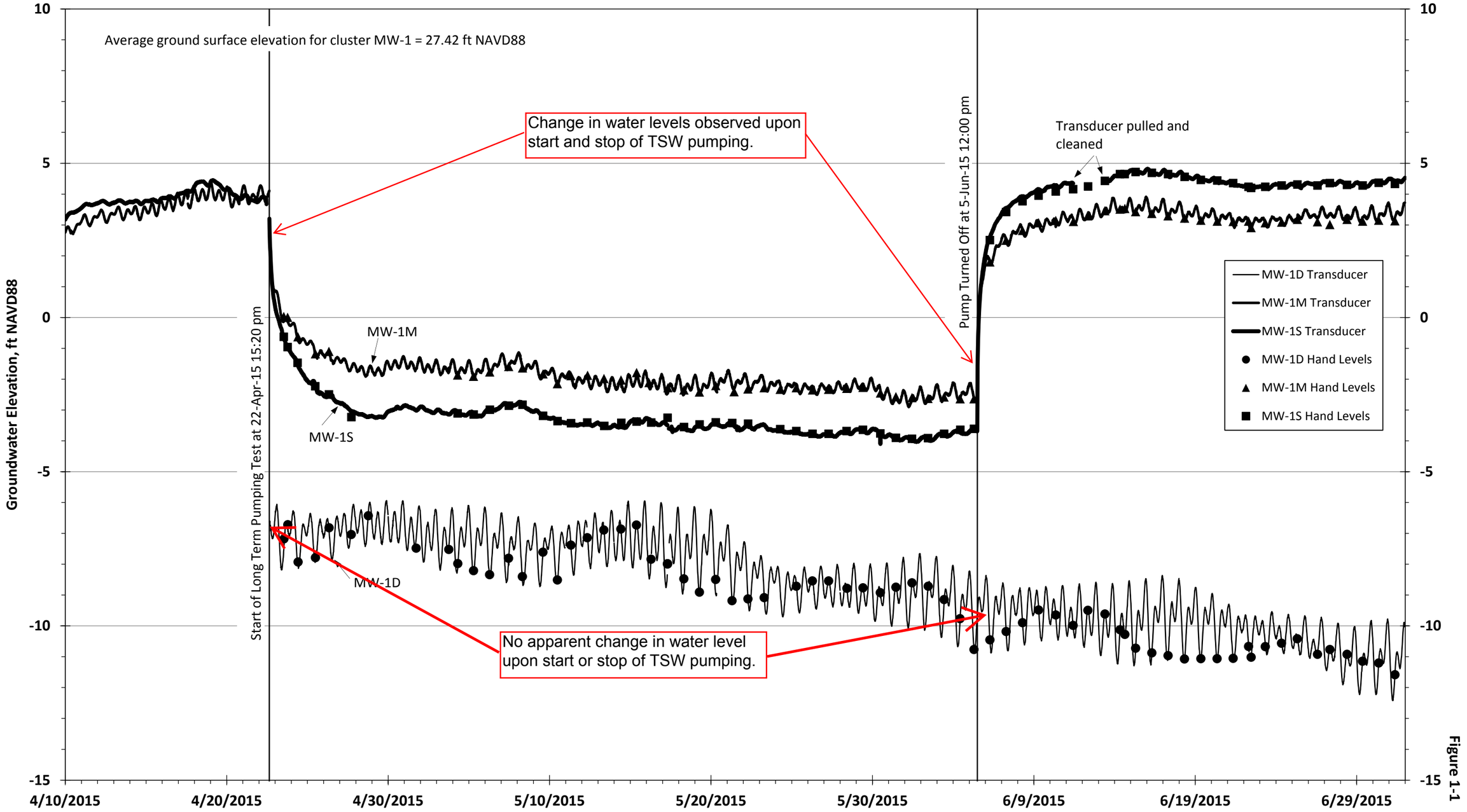


Figure 1-1

Attachment A – Documentation of Seasonal Groundwater Level Declines

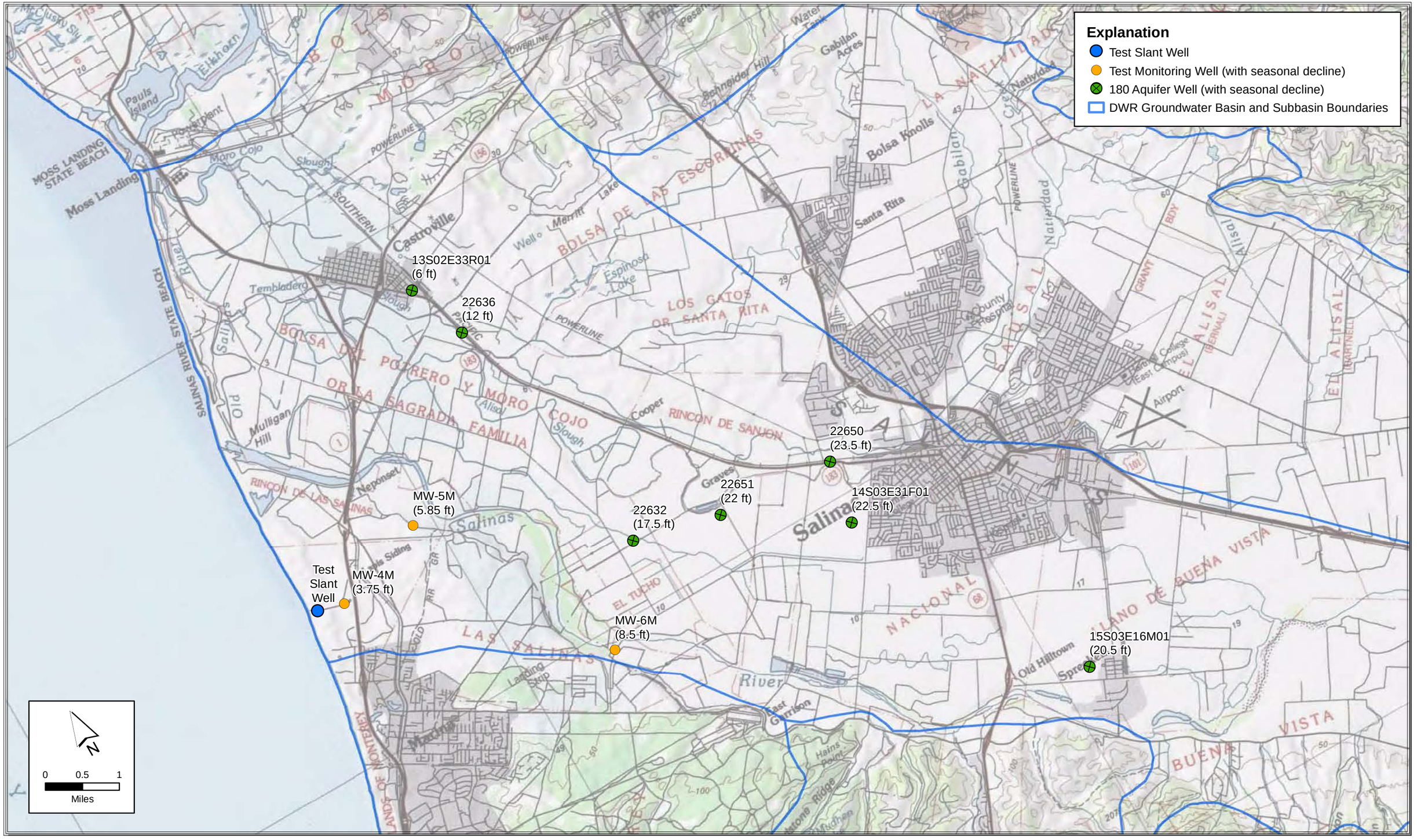


Exhibit
180 Aquifer Well Hydrographs
Monterey Peninsula Water Supply Project

Groundwater Elevation in MPWSP MW-4

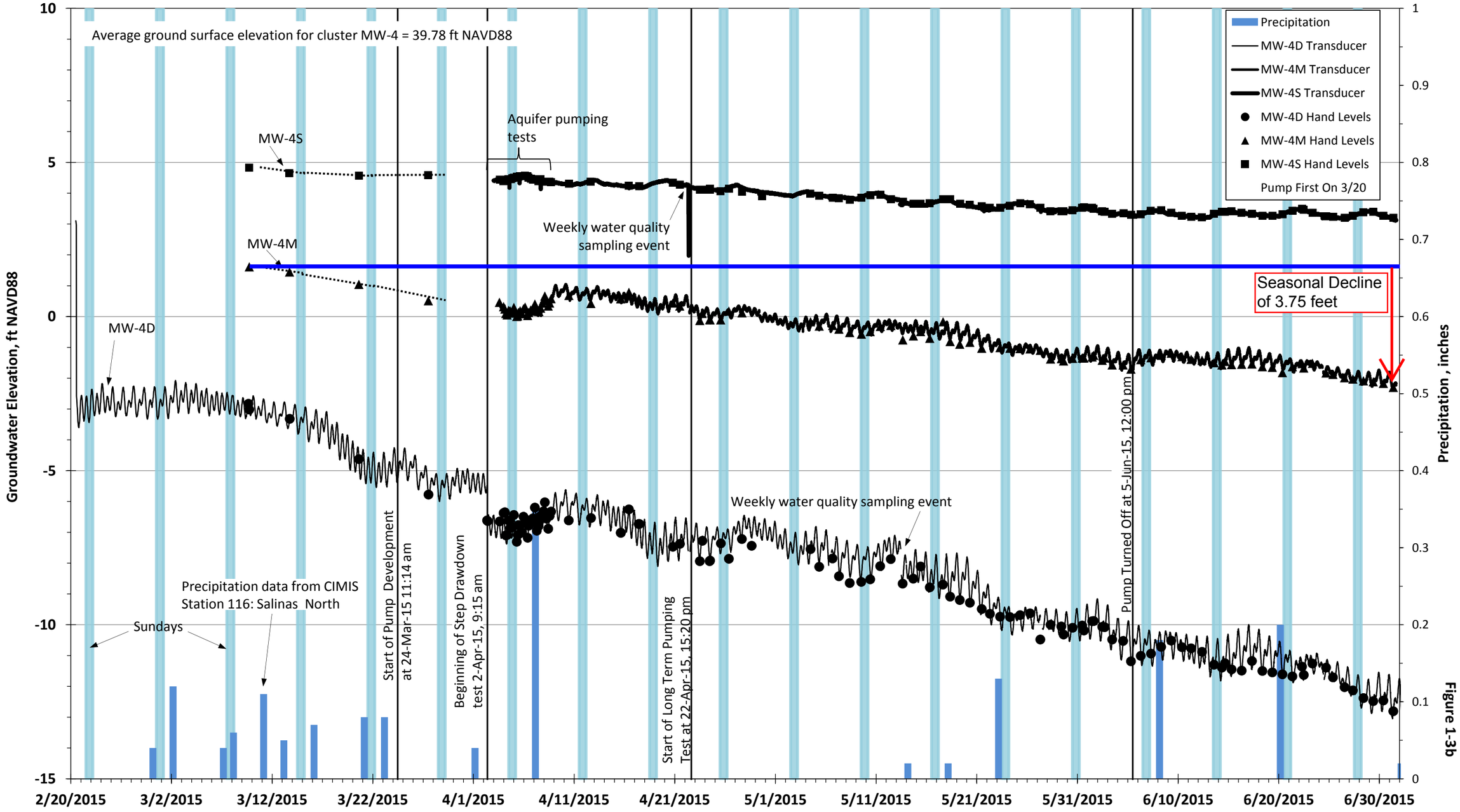


Figure 1-3b

Groundwater Elevation in MPWSP MW-5M and MW-5D

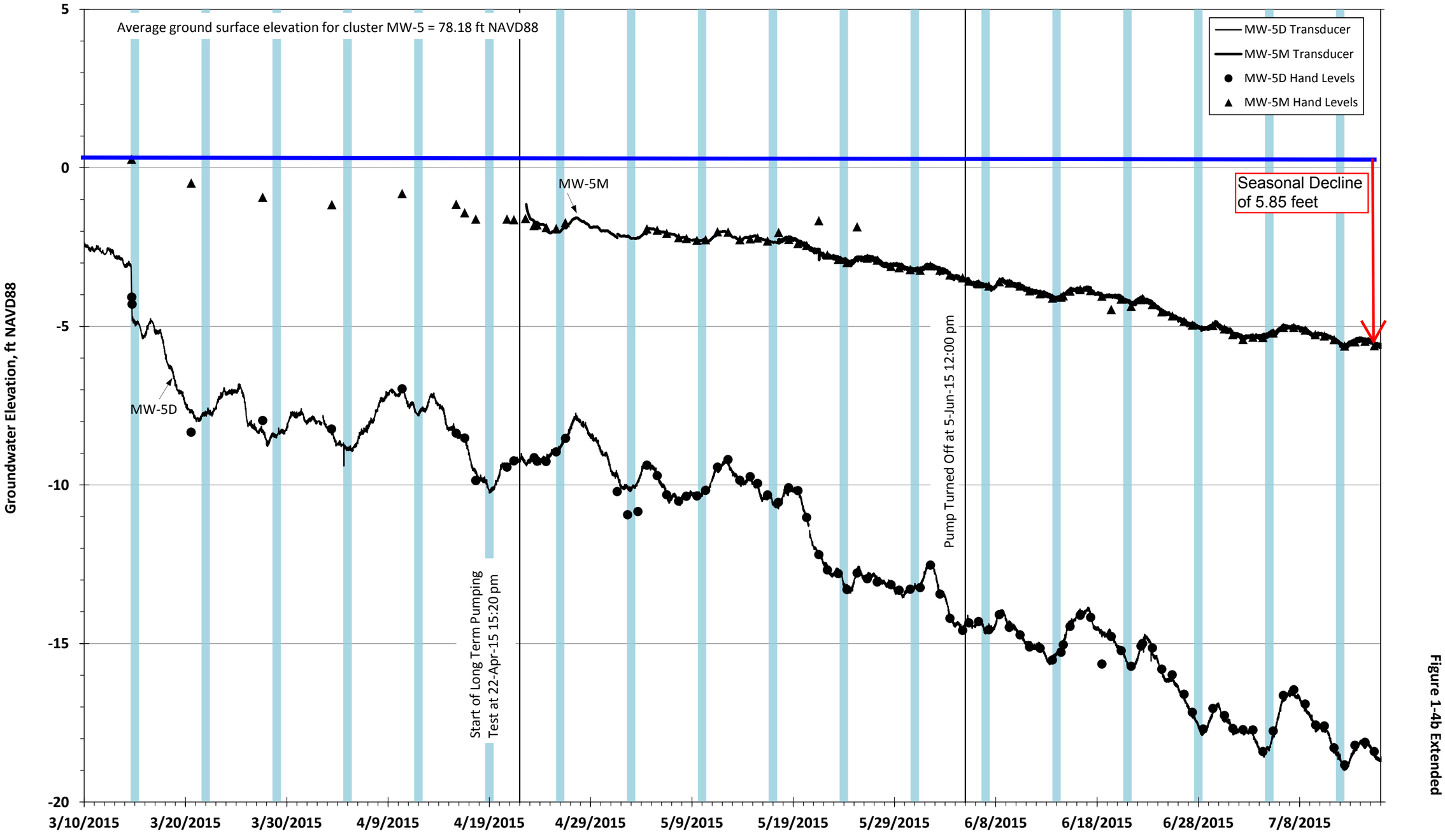


Figure 1-4b Extended

Groundwater Elevation in MPWSP MW-6

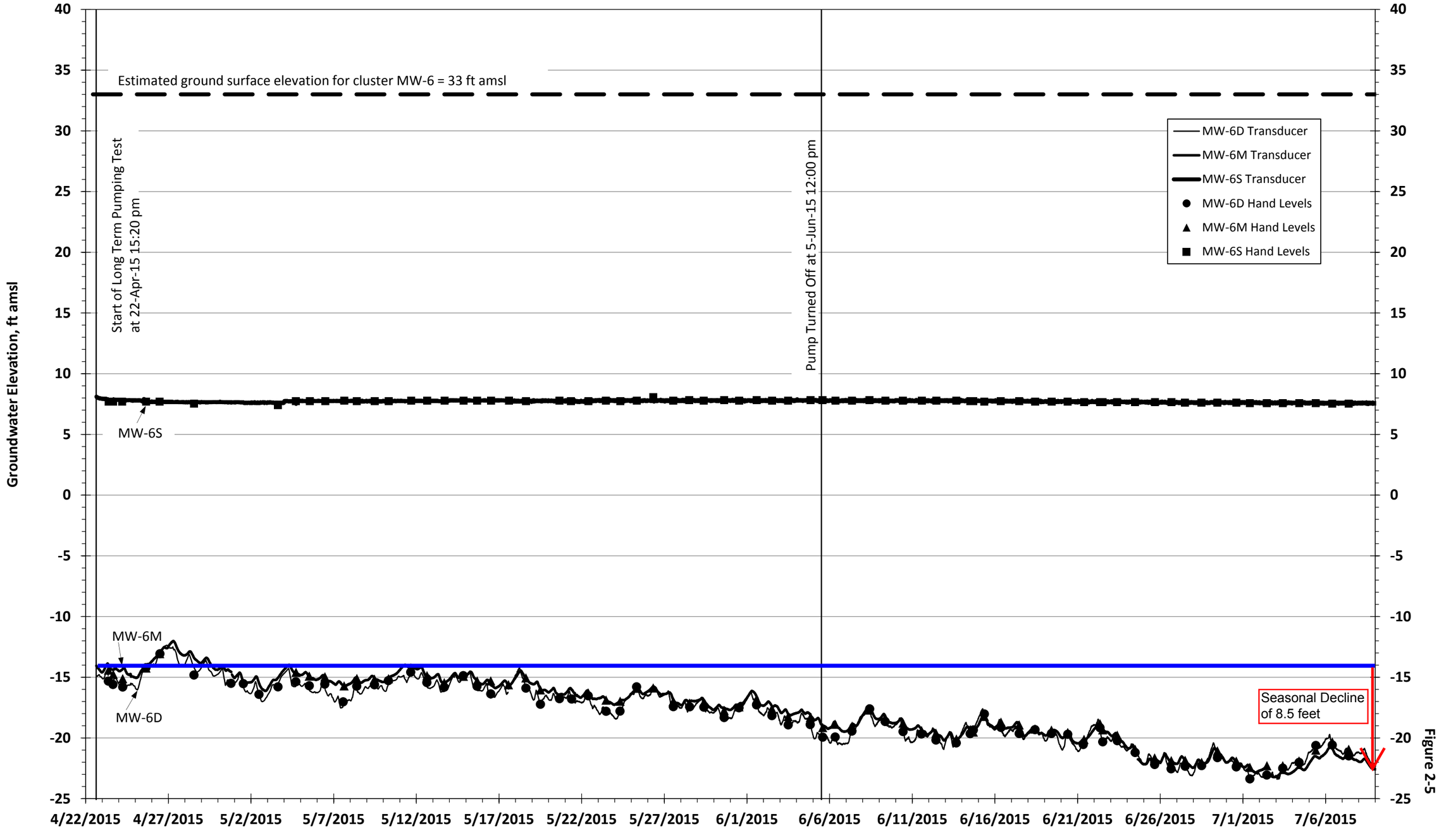
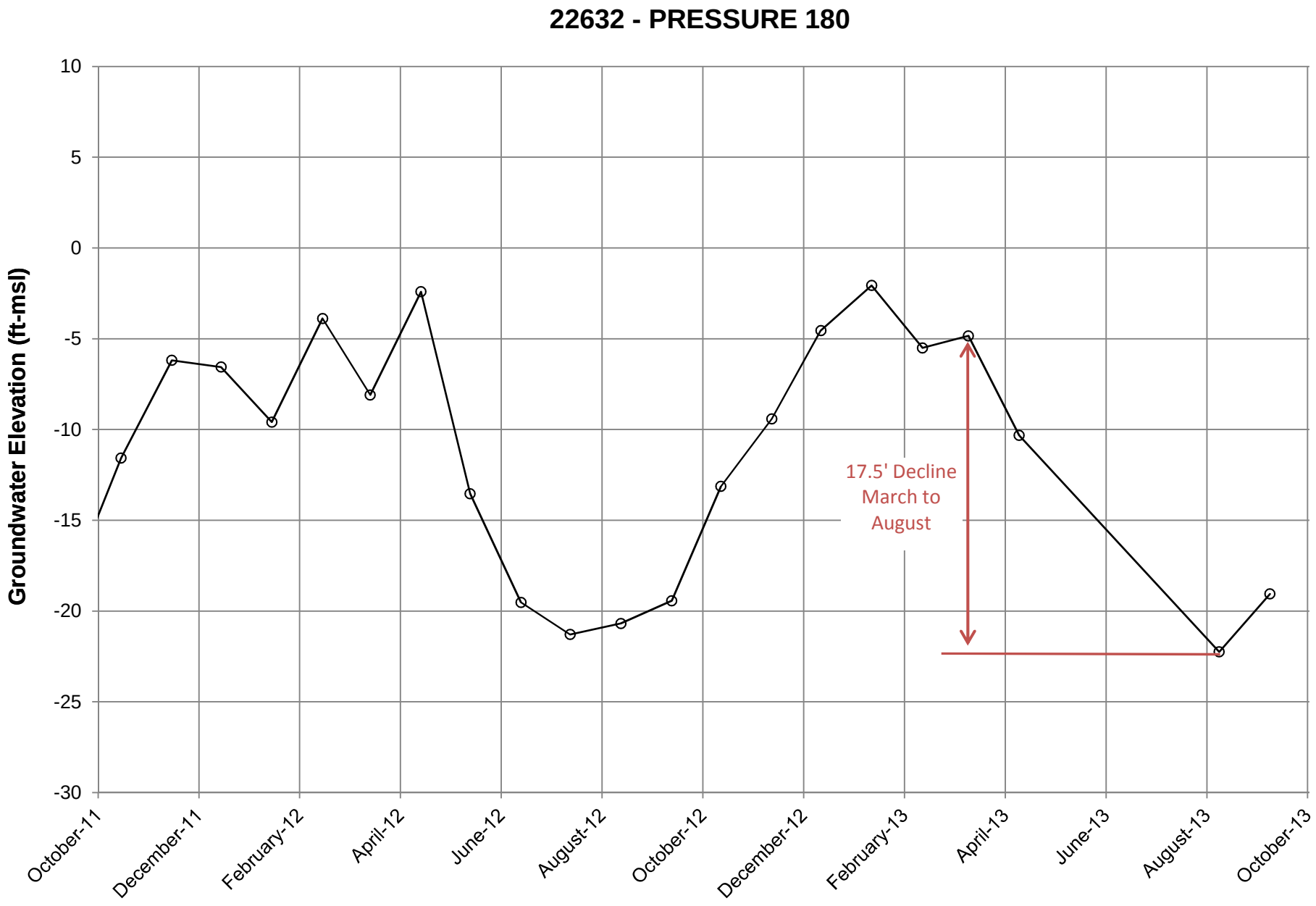


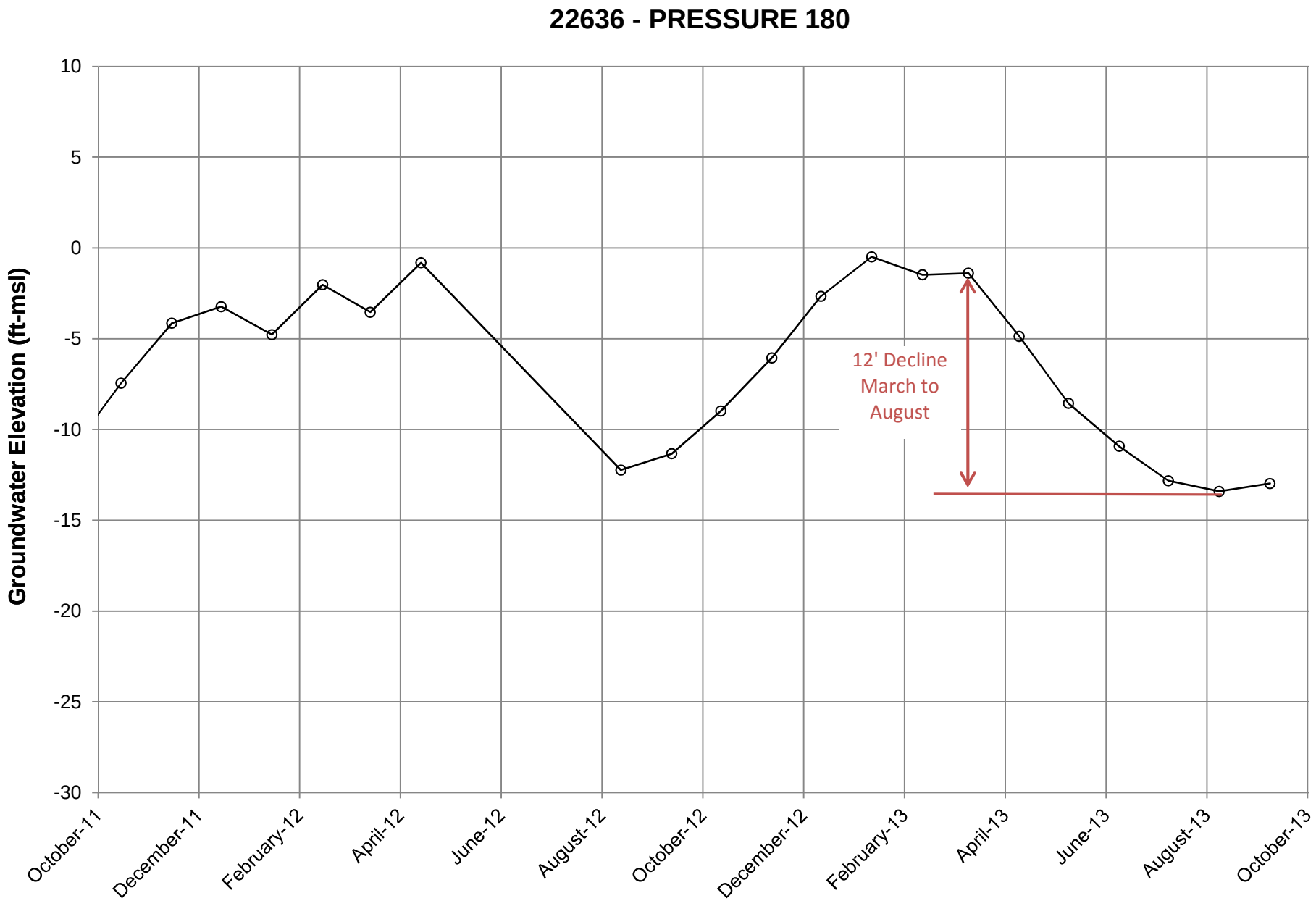
Figure 2-5



Test Well Analysis

Basin Groundwater Levels

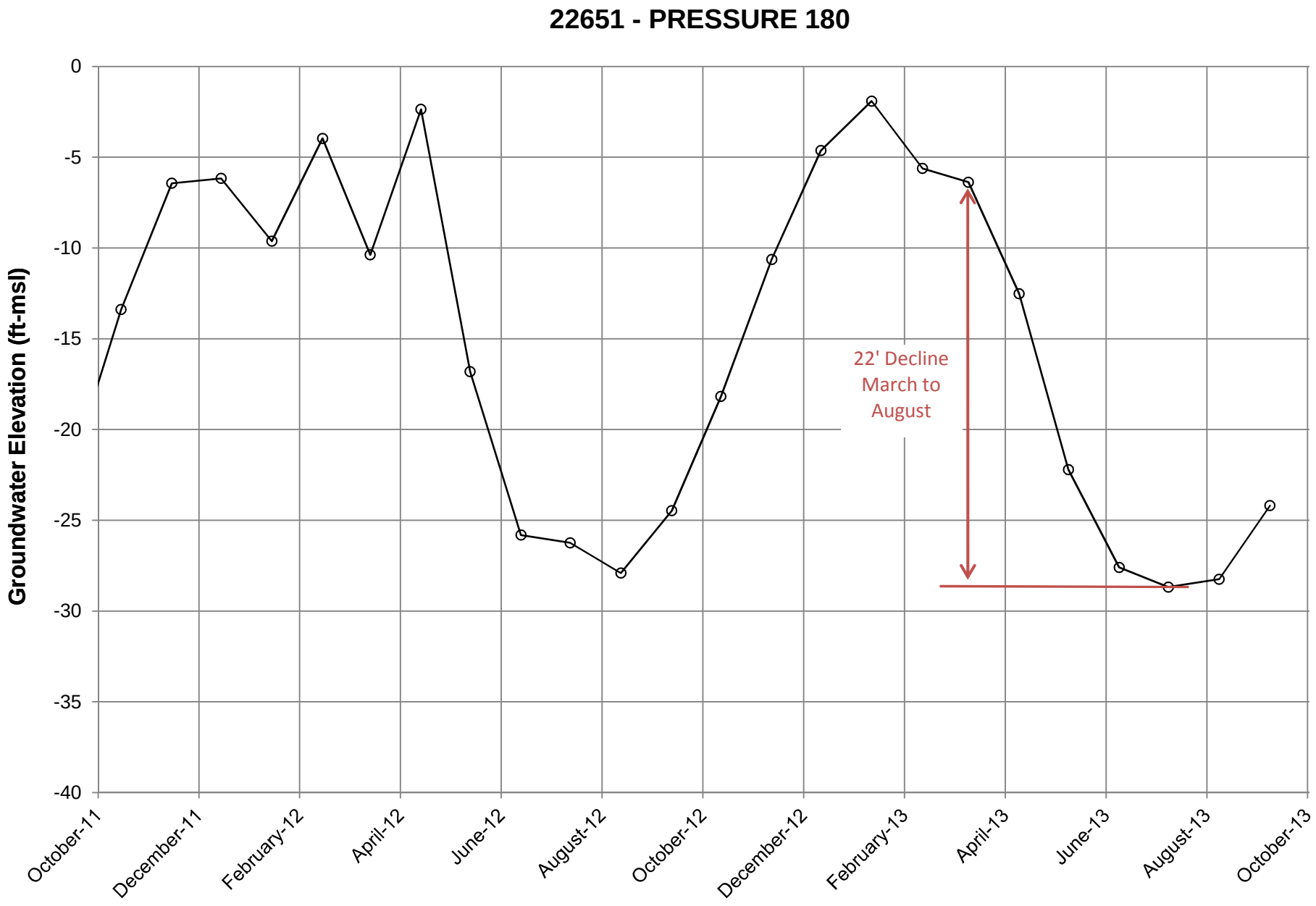
MPWSP



Test Well Analysis

Basin Groundwater Levels

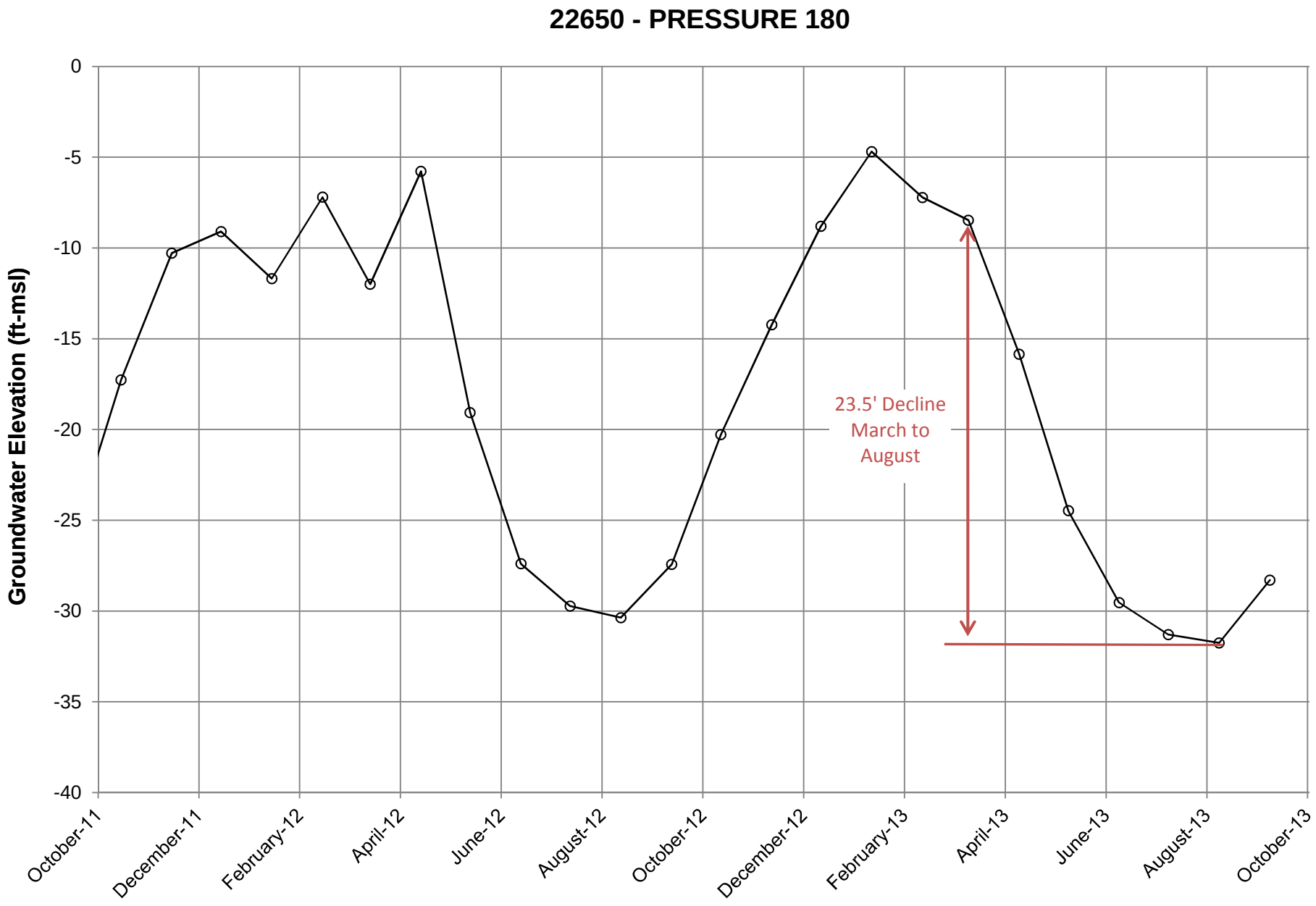
MPWSP



Test Well Analysis

Basin Groundwater Levels

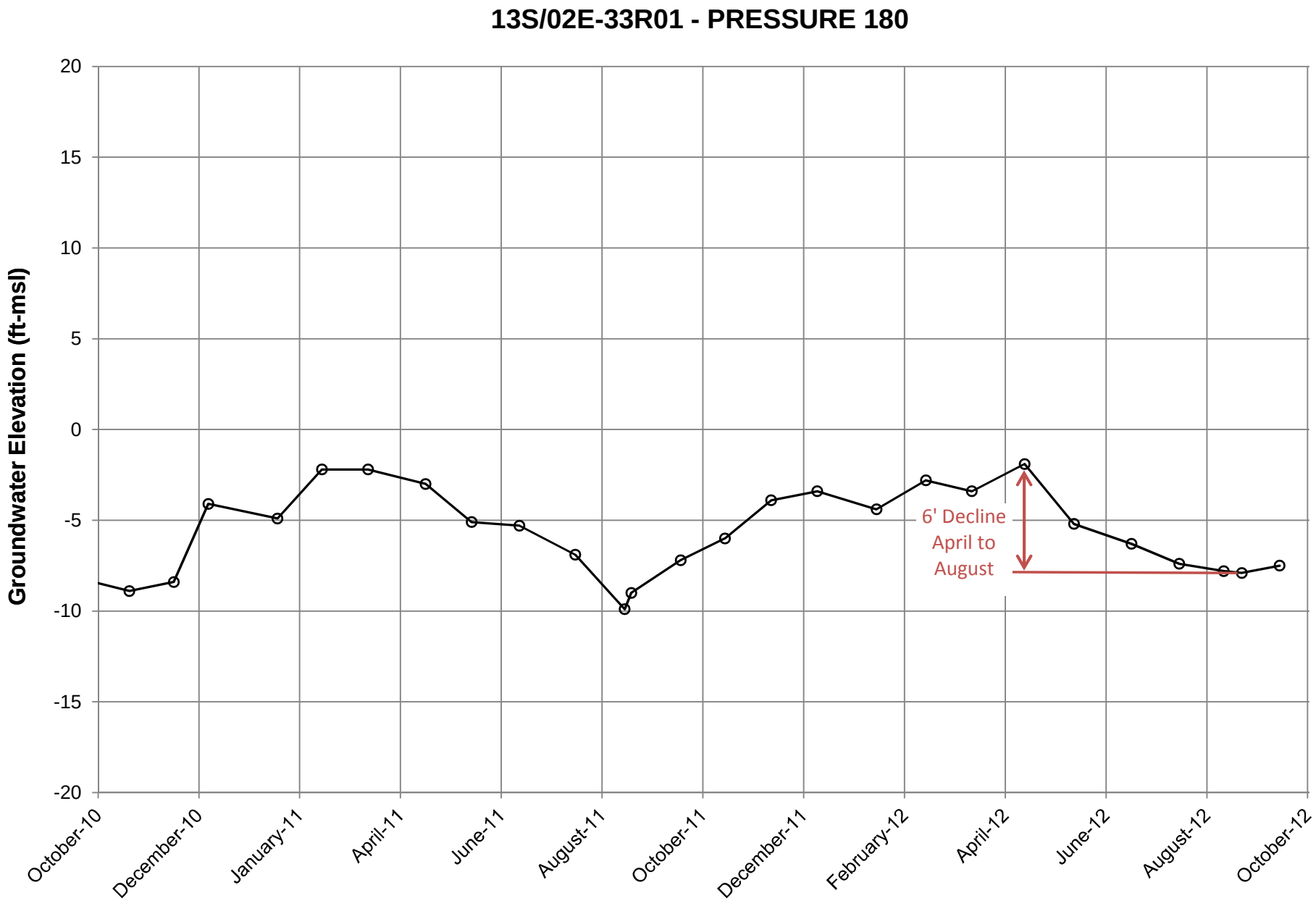
MPWSP



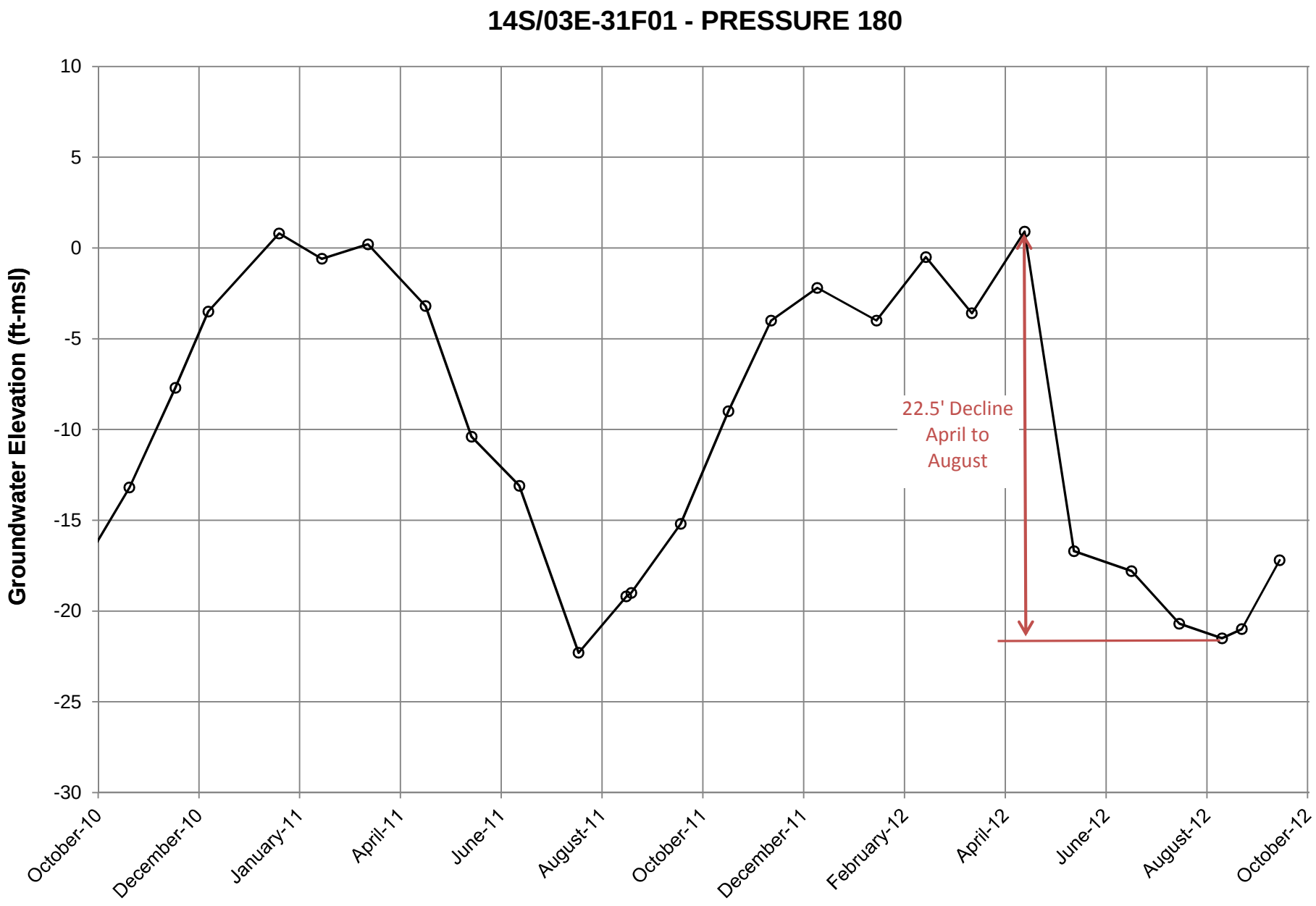
Test Well Analysis

Basin Groundwater Levels

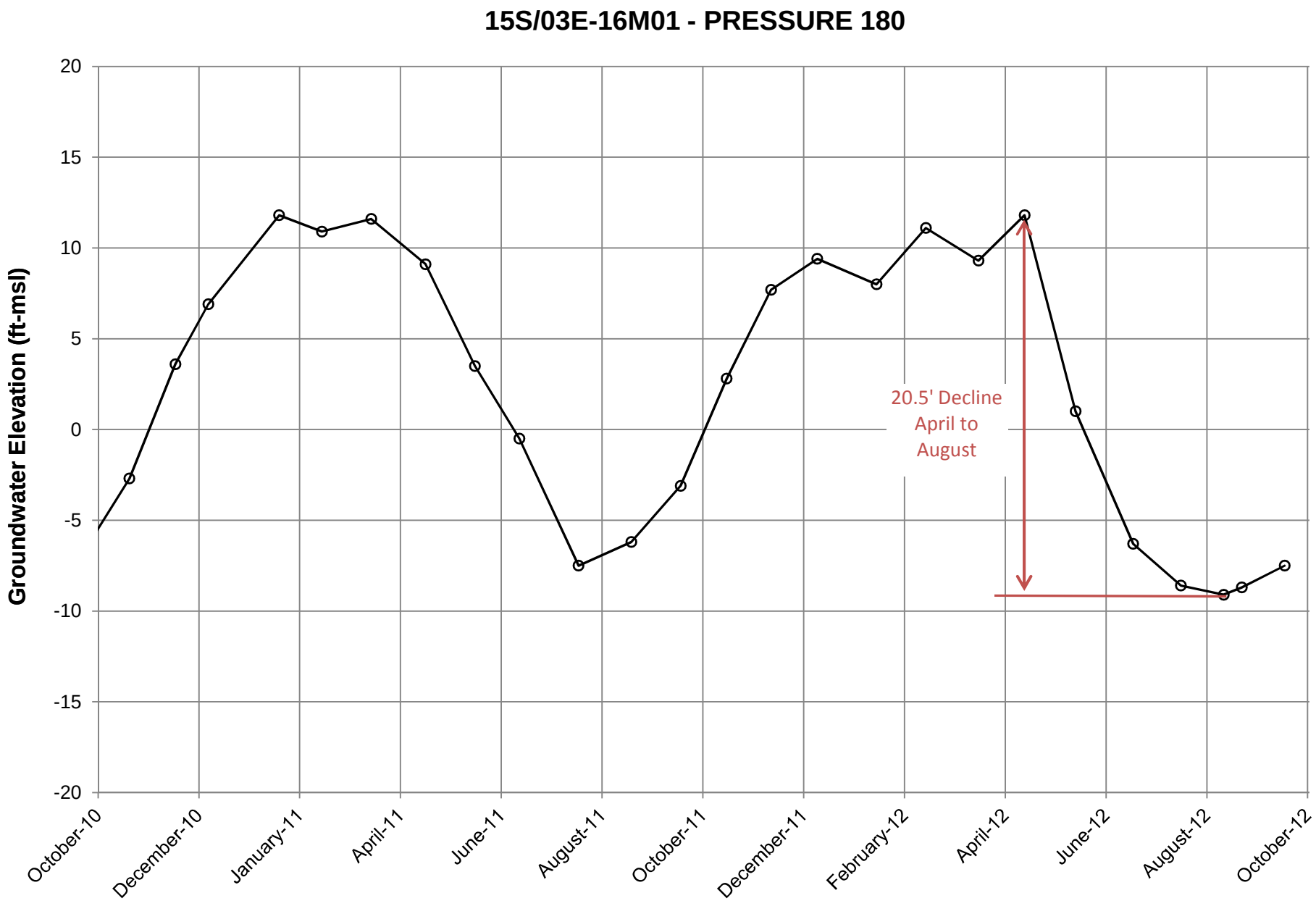
MPWSP



Test Well Analysis
Basin Groundwater Levels
MPWSP



Test Well Analysis
Basin Groundwater Levels
MPWSP



Test Well Analysis
Basin Groundwater Levels
MPWSP

Attachment B – Drawdown Calculations and Water Quality Assessment

Drawdown Calculation Methodology

Due to the occurrence of groundwater level declines on a seasonal basis (March/April to August/September), the measurement of long-term drawdown at monitoring wells from a well that begins pumping in April must use a baseline trend that reflects the regional decline in water levels. With respect to the CEMEX Test Slant Well (TSW) pumping test project, the declining baseline for the monitoring wells can be approximated by drawing a straight line from the pre-pumping static level on April 22, 2015 through the recovery data in late June 2015. In the case of the MW-4 wells, a line through the pre-pumping water levels is extended through the water level data collected during TSW pumping (April 22 to June 5) and after TSW pumping ceased (June 5 to July 1). The difference between this declining baseline and measured water levels at the end of the pumping period (June 5) represents the amount of drawdown that can likely be attributed to the test slant well pumping. This Attachment includes plots showing calculation of drawdowns for MW-1S, MW-1M, MW-3S, MW-3M, MW-4S, and MW-4M.

Furthermore, it should be noted that drawdown will be most noticeable within the first day or two of the Test Slant well pump turning on or off. This is due to the instantaneous change in aquifer stress at the moment a pump is turned on or off compared to the longer time frame for regional declines to influence groundwater levels. For a given monitoring well that is impacted by the TSW, similar responses or offsets in water levels should occur when the well is turned off or on. These responses are obvious in water level data for MW-1S, MW-1M, MW-3S, and MW-3M, as can be observed on the plots included in this Attachment (also see Figures 3 and 4 in the main body of this letter).

The water level data collected to date for MW-4M can also be evaluated using the methods cited above. This well is located in the 180-foot FTE Aquifer and illustrates a maximum potential deviation of 0.25 feet from the line extended from the pre-pumping static water levels through the pumping and post-pumping data. In addition, close inspection of water level data in the day or two after onset of pumping and after pumping ceased also shows a maximum potential change in water levels of 0.25 feet. Thus, two different calculations show a maximum potential drawdown at MW-4M that can be attributed to the Test Slant Well pumping of 0.25 feet. A similar analysis for MW-4S shows less than 0.1 feet of drawdown can be attributed to Test Slant Well pumping.

Evaluation of water level data collected to date for MW-5S and MW-5M clearly indicate no drawdown from TSW pumping at this location. This Attachment includes plots demonstrating the lack of drawdown for MW-5S andMW-5M.

Methodology for Evaluating Changes in TDS

Water quality in the TSW monitoring well network is monitored using transducers with continuous recording of specific conductivity and periodic water quality sampling for laboratory analysis of specific conductivity and total dissolved solids (TDS). When laboratory data are not available, a conversion factor has been established based on data collected for this study to multiply specific conductivity in uS/cm by a formula (provided in the weekly monitoring reports) to obtain TDS in mg/L. The plots of specific conductivity provided in this Attachment indicate that while specific conductivity/TDS in MW-1M are clearly influenced by TSW pumping (as would be expected), there does not appear to be any influence on specific conductivity/TDS at MW-4S, MW-4M, or MW-4D from turning the TSW on or off.

The potential for increase in specific conductivity/TDS should be measured from the MW-4S and MW-4M baseline trend being established with ongoing monitoring. The threshold of 2,000 mg/L TDS increase at MW-4S and MW-4M should be measured from the established baseline trend while the TSW is pumping. Given the potential for transducer instrument drift, the continuous instrument readings of specific conductivity/TDS should be verified with ongoing periodic water quality sample collection and laboratory analysis to confirm any trends and especially any deviations from those trends.

Groundwater Elevation in MPWSP MW-1

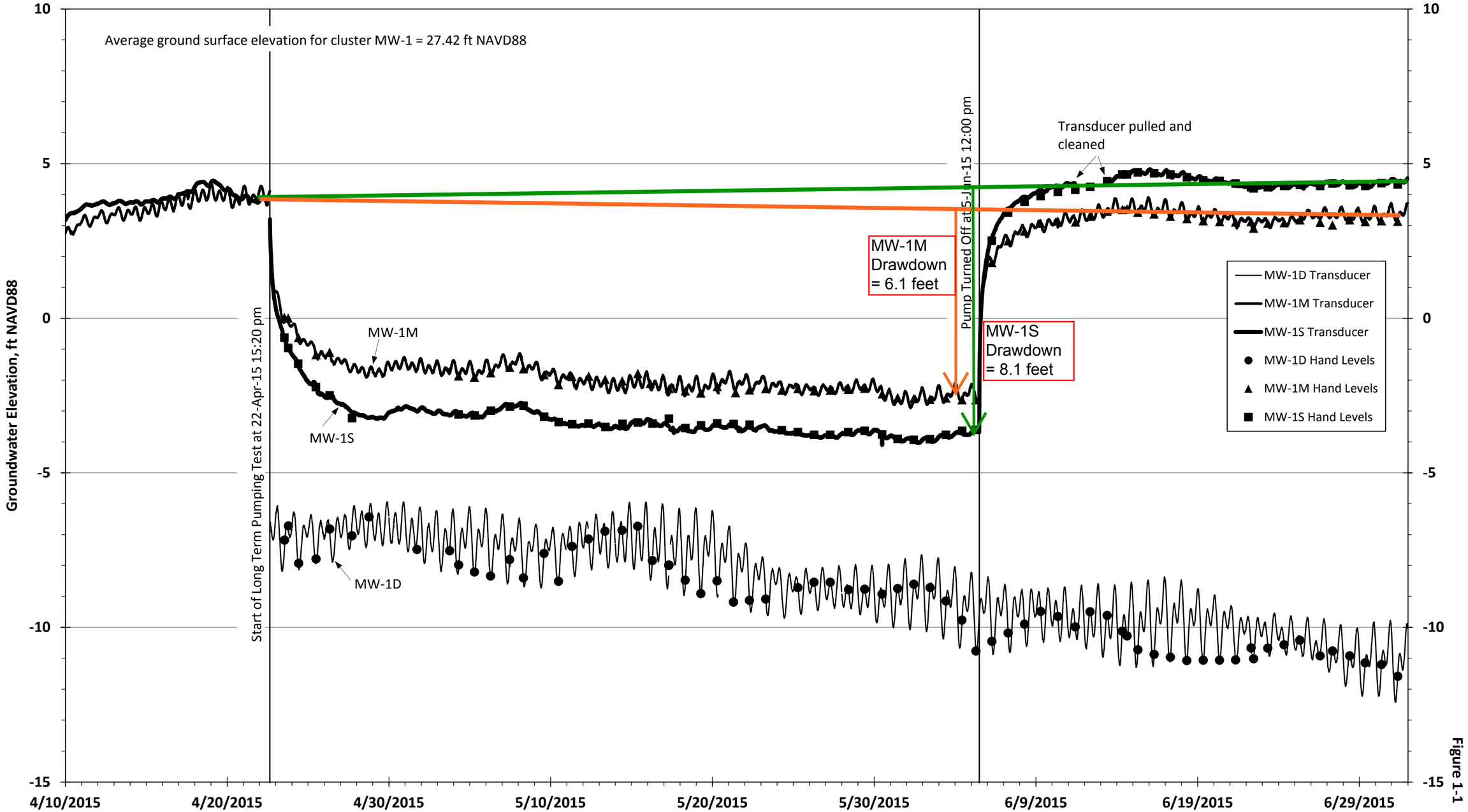


Figure 1-1

Groundwater Elevation in MPWSP MW-3

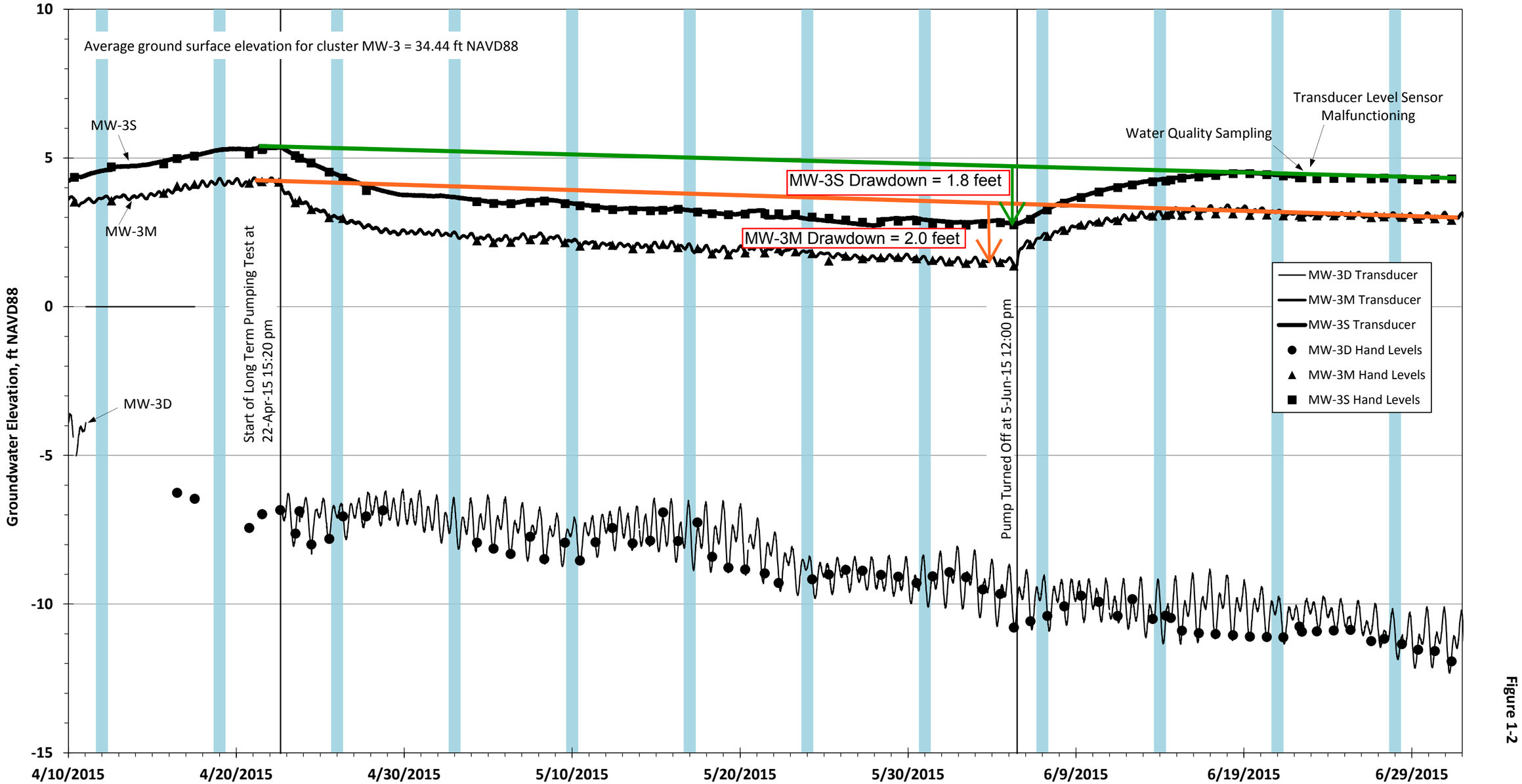


Figure 1-2

Groundwater Elevation in MPWSP MW-4

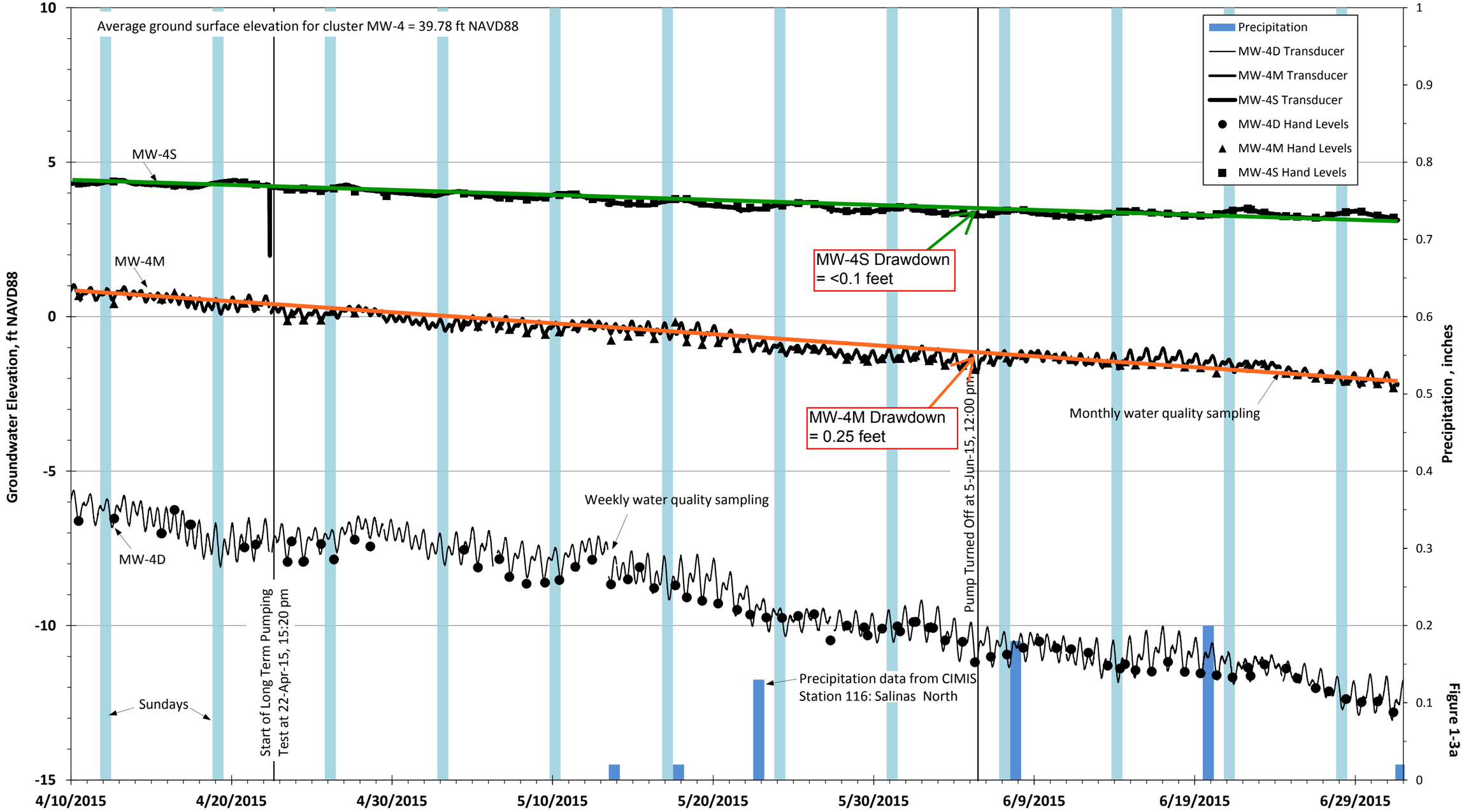


Figure 1-3a

Groundwater Elevation in MPWSP MW-5S

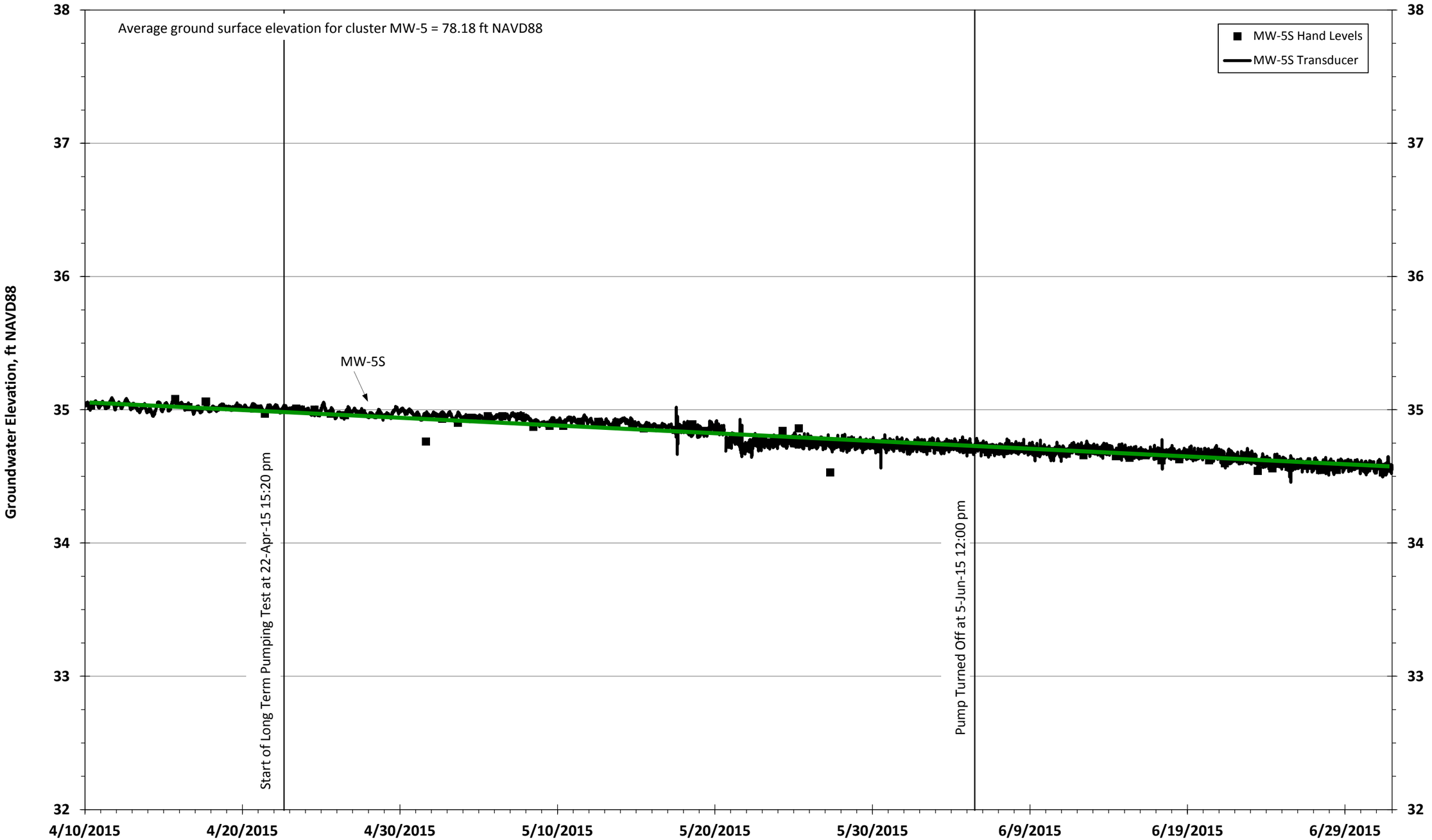


Figure 1-4a

Groundwater Elevation in MPWSP MW-5M and MW-5D

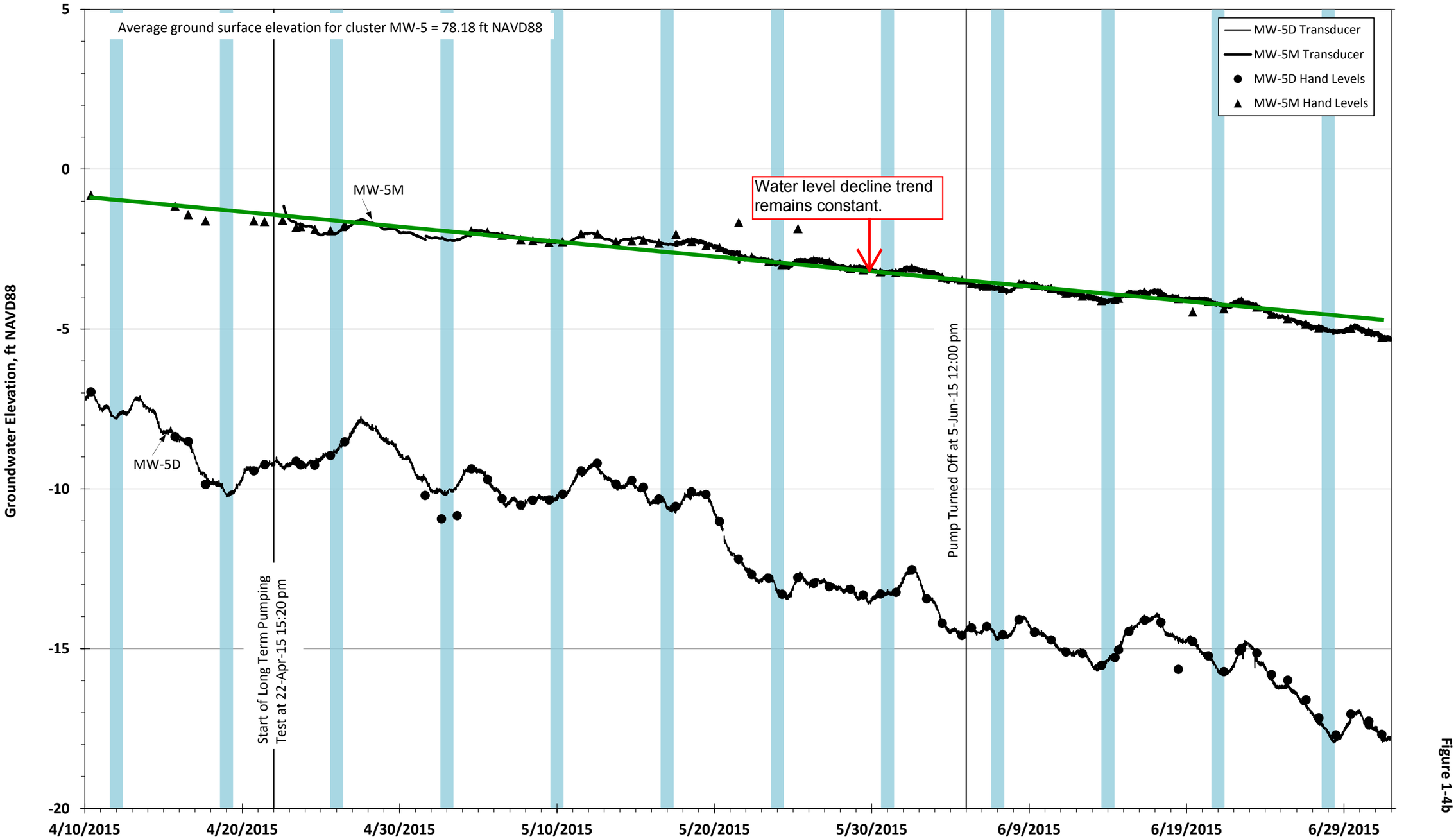


Figure 1-4b

Specific Conductivity in MPWSP MW-1

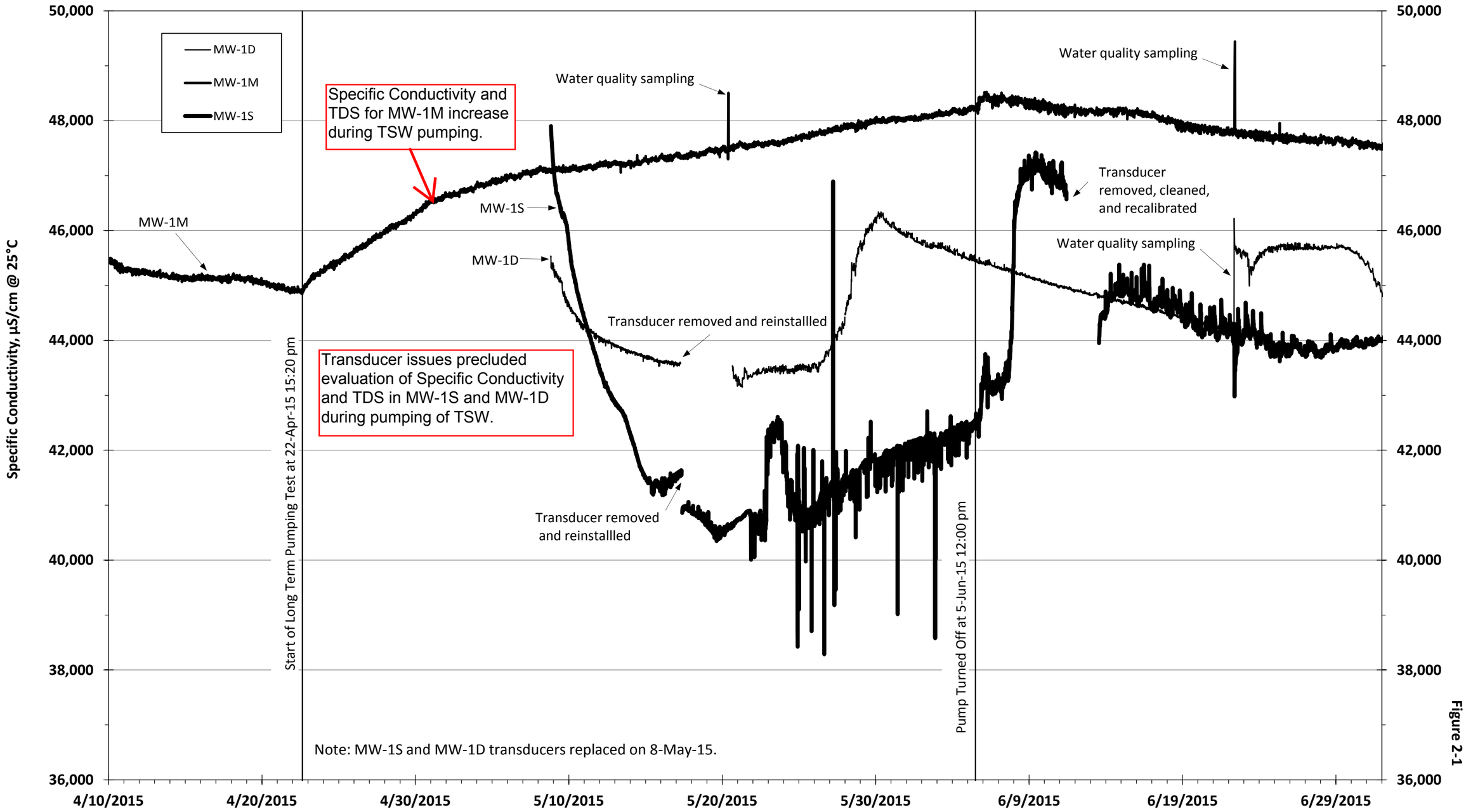


Figure 2-1

Specific Conductivity in MPWSP MW-3

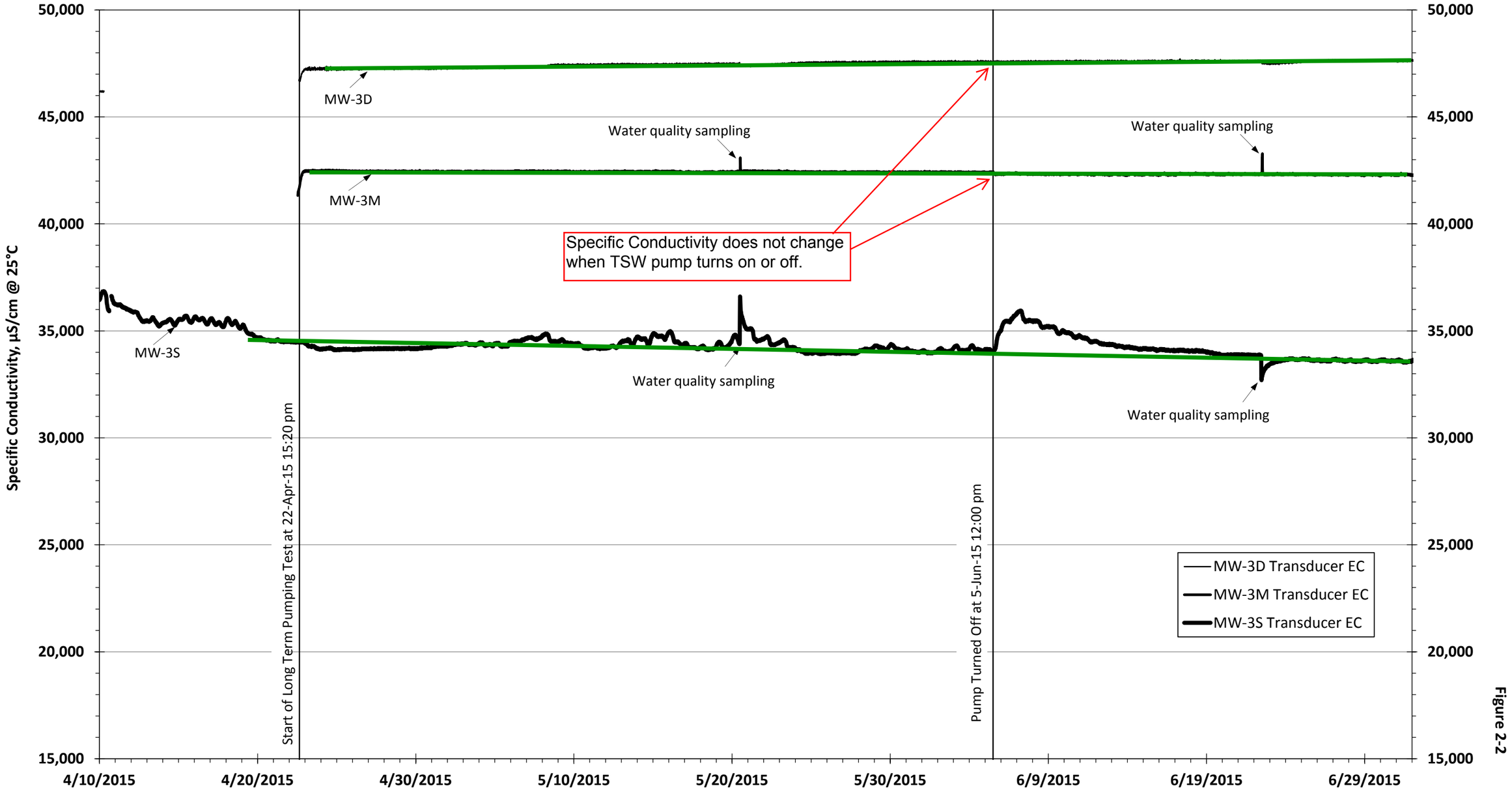


Figure 2-2

Specific Conductivity in MPWSP MW-4

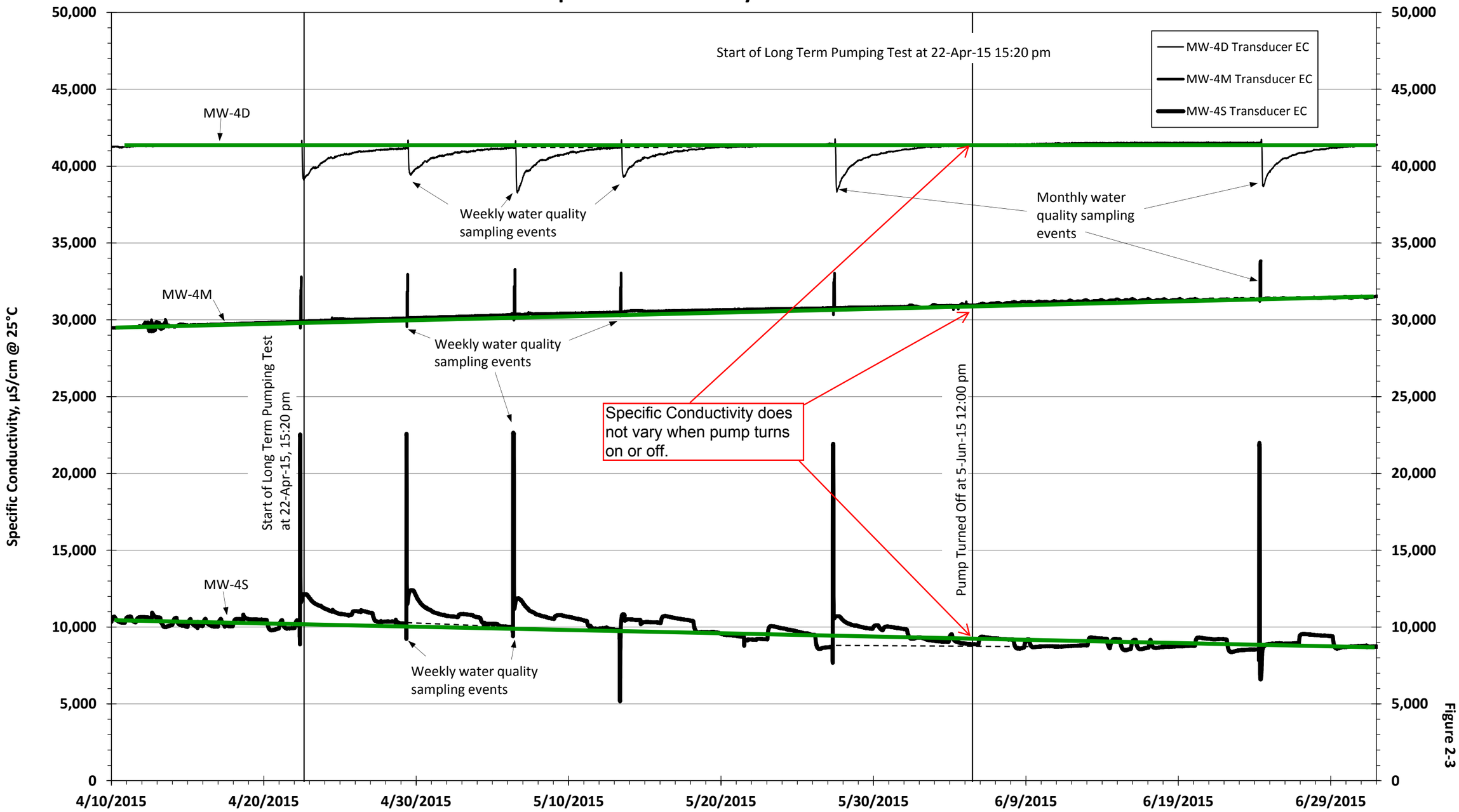


Figure 2-3

Specific Conductivity in MPWSP MW-5

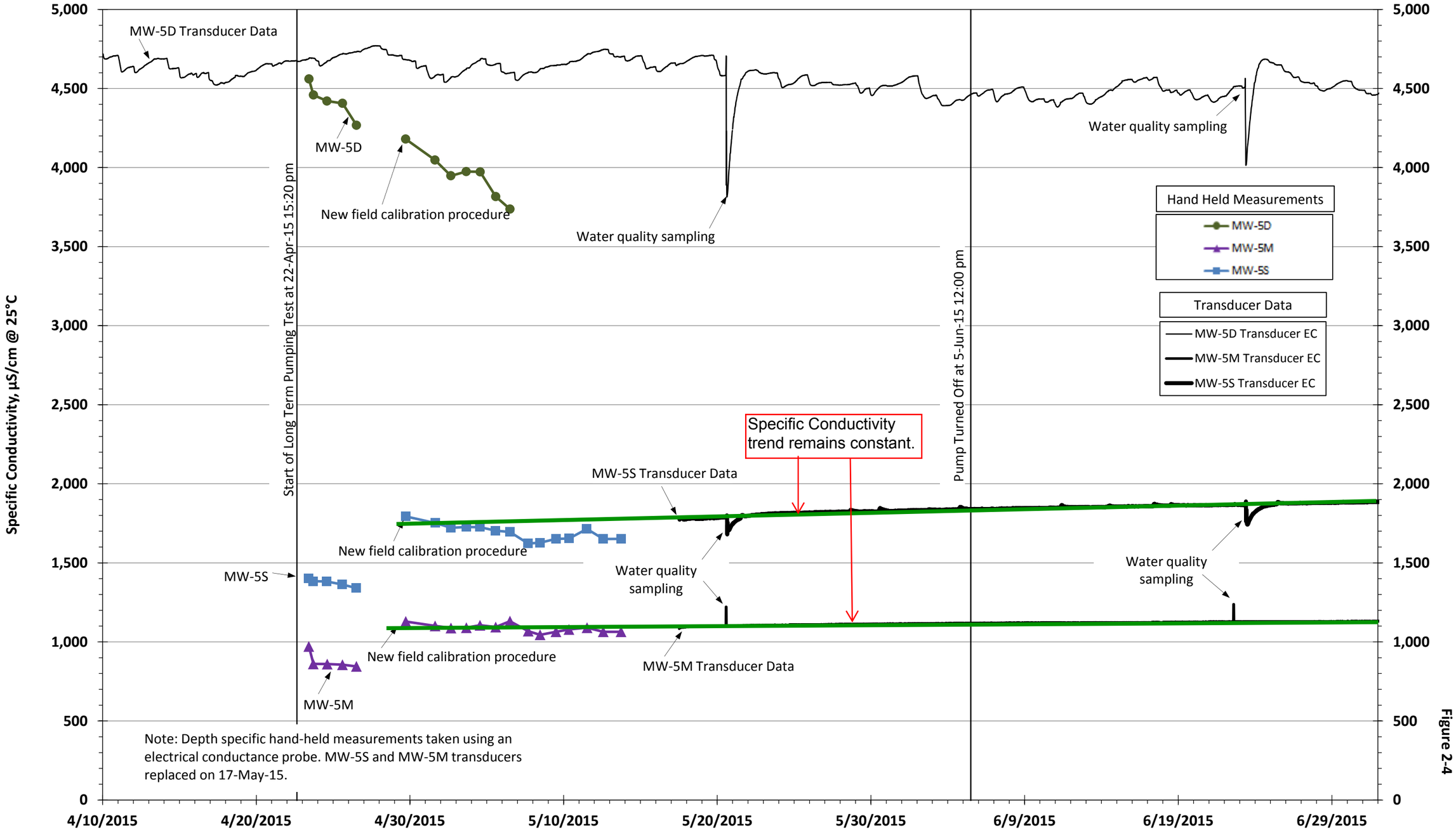
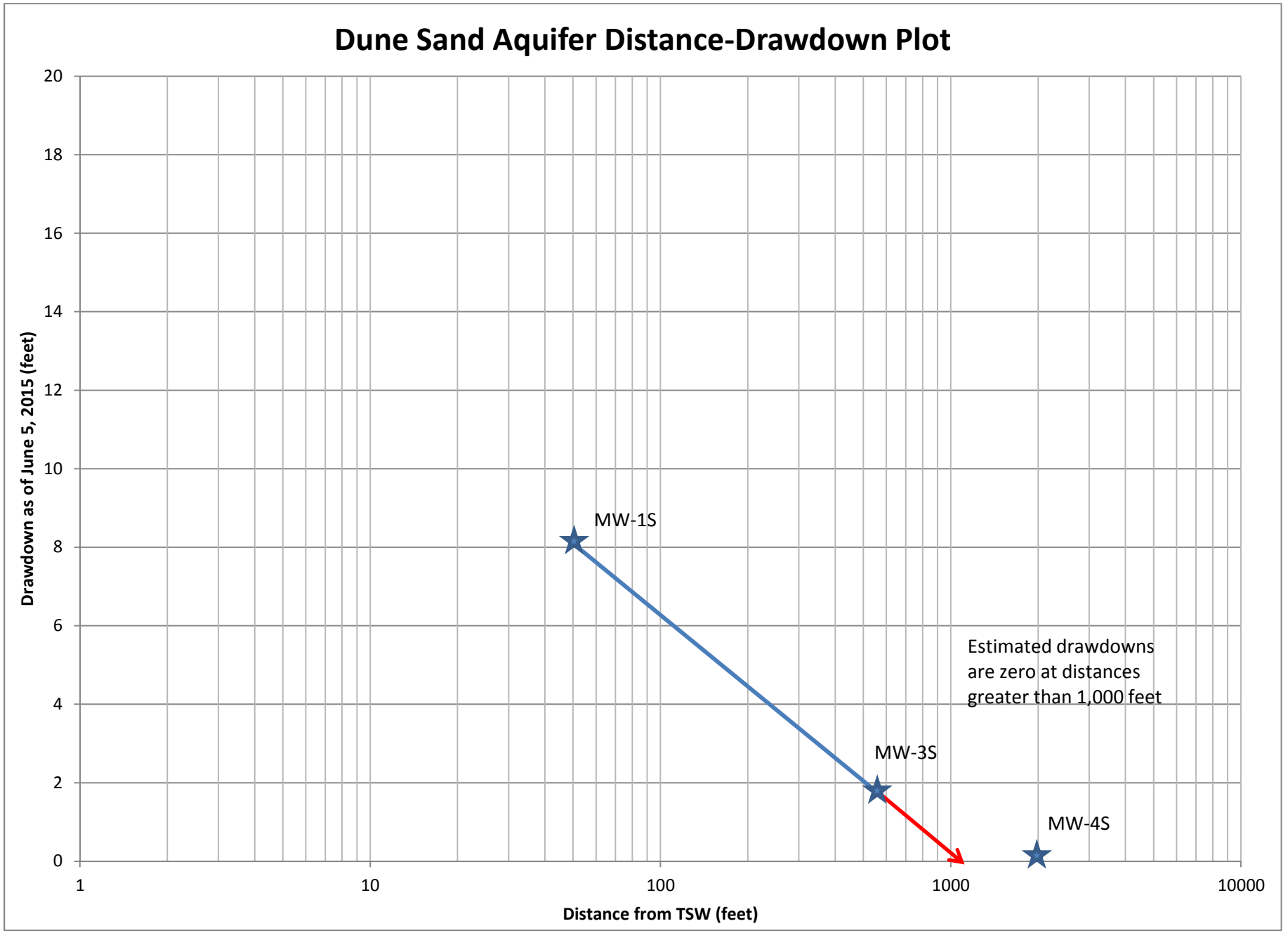
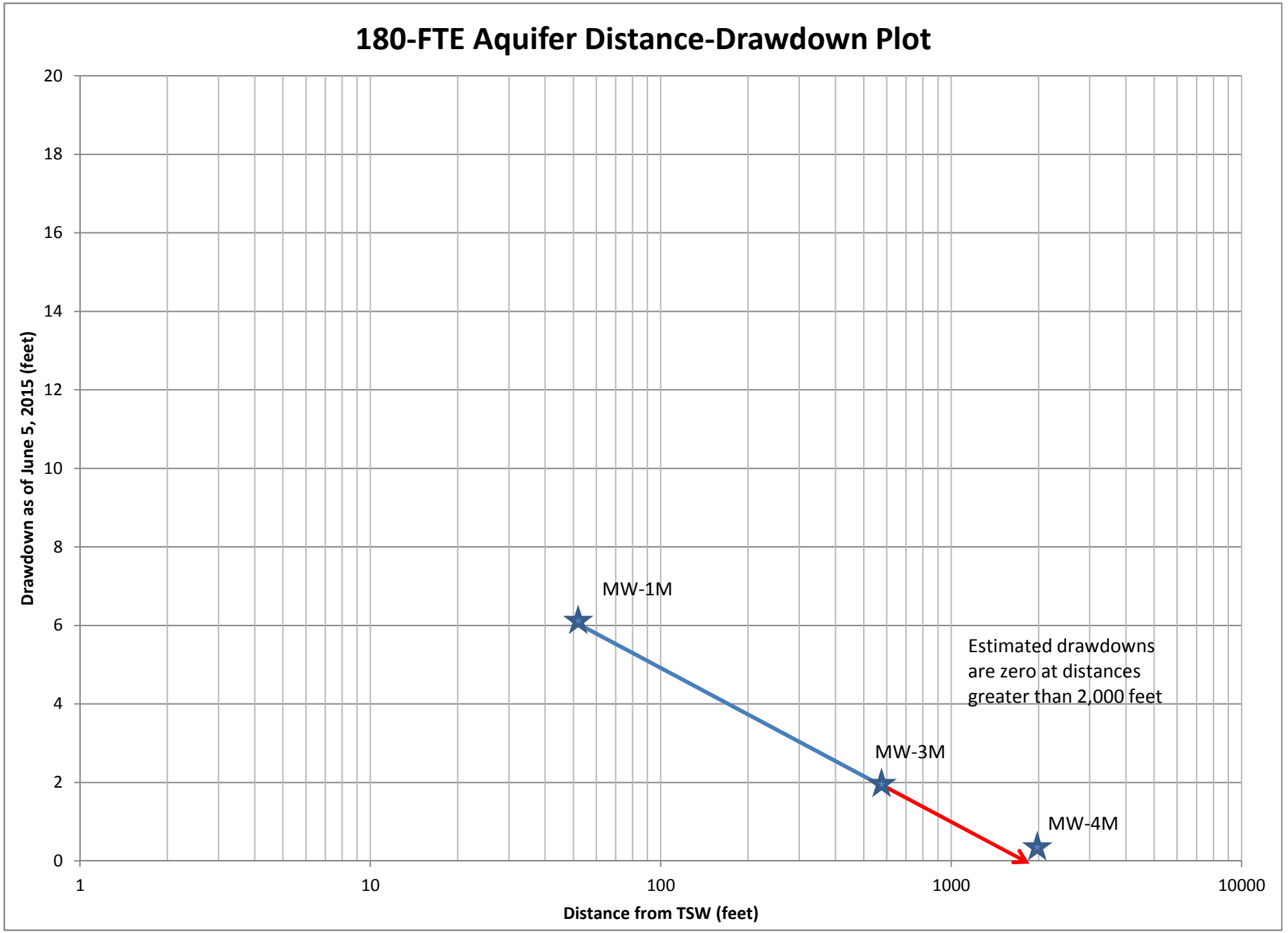


Figure 2-4

Attachment C – Distance Drawdown Plots


Dune Sand Aquifer Distance-Drawdown Plot
Drawdown as of June 5, 2015 (feet)
20
18
16
14
12
10
8
6
4
2
0
1
10
100
1000
10000
Distance from TSW (feet)
MW-1S
MW-3S
MW-4S
Estimated drawdowns
are zero at distances
greater than 1,000 feet


180-FTE Aquifer Distance-Drawdown Plot
Drawdown as of June 5, 2015 (feet)
20
18
16
14
12
10
8
6
4
2
0
1
10
100
1000
10000
Distance from TSW (feet)
MW-1M
MW-3M
MW-4M
Estimated drawdowns
are zero at distances
greater than 2,000 feet

Attachment D – Responses to Hopkins Groundwater Consultants Letter

Responses to Hopkins Groundwater Consultants (Hopkins) Letter dated June 25, 2015 are provided below. The format provides Hopkins comment (in bold/italics) followed by the HWG response. The numbering of the comments was done by the HWG to facilitate organization of this response to comments. It should be noted that many of the flawed statements made in the Hopkins Letter could be attributed to not having all the monitoring data that are now available to show that previous HWG conclusions were correct.

1) ***Page 1, first paragraph. "Based on the information provided to date in the HWG memos, it does not appear it can be reasonably disputed that the 1.5 compliance level has been exceed at MW-4 in the 180-foot (or middle) aquifer and the drop in water levels (from pre-pumping conditions) was caused at least in part, if not mostly, by the test well."***

Additional data provided in this letter demonstrates that the drop in water levels from pre-pumping conditions at MW-4 was caused virtually entirely by the seasonal decline in water levels, and not by pumping of the Test Slant Well. The details of the additional data presented with this letter and how they demonstrate the main cause is seasonal decline are described in this letter and are reiterated in specific responses to Hopkins comments below.

2) ***Page 1, second paragraph. "…without long-term monitoring of local groundwater conditions (baseline conditions) it is virtually impossible to determine whether changes in aquifer water levels are caused by any factor other than the test slant well pumping."***

As demonstrated in the current letter, determination of drawdown from Test Slant Well pumping (see Attachments B and C) is relatively straight forward and easy to calculate unless the drawdown is minimal (i.e., less than about 0.3 feet). Because only a drawdown nearing Special Condition 11's 1.5 foot performance standard requires a causation determination, the potential difficulty in calculating the Test Slant Well's contribution to lesser drawdowns will not impact the HWG's required causation determinations.

3) ***Page 1, second paragraph. "Despite the HWG's apparent "consensus" belief that there may be other causes for declines in pre-pumping water levels at MW-4, the HWG has not provided evidence of any other likely causes for the decline." And "…it conflicts with statements in the Coastal Commission's Staff Report and findings that there are no active groundwater pumping wells in the Project area."***

The HWG has provided an abundance of evidence in this letter for seasonal water level declines being the main, if not entire, cause of water level declines at MW-4 (see main body of letter and Attachment A). The hydrographs provided in Appendix A show how the seasonal decline in the 180-Foot Aquifer progresses from its maximum near the City of Salinas (over 20 feet of decline) to lesser amounts near the coast (4 to 6 feet) (i.e., a progression of lesser seasonal declines further away from the concentration of pumping). The prominence of seasonal declines is apparent in the 180-Foot Aquifer all the way from the City of Salinas to the coast.

It is well understood that pumping from inland wells causes seawater intrusion in the 180-FTE Aquifer by impacting water levels in coastal areas, such as the CEMEX site. Without such impacts, seawater intrusion would not occur. Yet the flow of water from the ocean continues to the present day, even though the concentration of pumping wells is several miles inland. Clearly, the pumping of wells several miles inland causes water levels to decline at the coast.

The main reason that the pumping of wells several miles inland impacts MW-4 substantially more than the test slant well located 2,000 feet away on the beach is two-fold: a) the cumulative pumping of all the inland wells is far in excess of the 2,000 gpm being pumped from the test slant well, and b) the ocean acts as a major recharge boundary to the test slant well but not the inland wells. The significance of this second point is critical to understanding the water level fluctuations at MW-4.

The presence of the ocean recharge boundary results in the following: a) within a day or two of the onset of pumping virtually all the water being pumped from the test slant well derives from the ocean-side of the well, at which point the cone of depression begins to stabilize and drawdown at a given location such as MW-4 essentially ceases to decline further; b) given the location of inland pumping wells being several miles from the ocean recharge boundary, the overlapping cones of depression from all these inland pumping wells continue expanding until reaching basin boundaries – thereby resulting in seasonal basin water level declines throughout the entire basin up to the coastline. The discussion above is based on very basic, fundamental hydrogeologic principles found in any groundwater textbook (Freeze and Cherry, 1979; Todd, 1980; Fetter, 1994; Kruseman and de Ridder, 1994; Heath, 1983).

4) ***Footnote at bottom of Page 1. "Notably, any active agricultural wells in the 180-foot aquifer would be at least twice as far away as the slant well and pumping considerable less water. Therefore, the slant well is much more likely to be the cause of drawdown at MW-4 than any agricultural wells.***

As explained throughout this letter, the seasonal water level declines are not due to one or a few particular inland pumping wells, but rather the cumulative effect of tens to hundreds of inland municipal/agricultural/industrial/domestic pumping wells. The cumulative pumping of these inland wells is considerably greater than the pumping from the Test Slant Well. In addition, the Test Slant Well is immediately adjacent to a major recharge boundary (the Ocean) that provides the major source of water to the Test Slant Well, whereas the inland pumping wells have no such recharge boundary. Therefore, wells pumping at inland locations have much more widespread impacts than the Test Slant Well.

5) ***Bottom of Page 1 and top of Page 2. The HWG "…ignores all the monitoring data for the slant well prior to April 10, 2015…"***

Previous HWG letters focused on the pre-pumping time period from April 10 to April 22 at MW-4 since this time period was adequate to establish the pre-pumping regional water level trend. The April 10 to April 22 period was deemed adequate for this purpose based on review of the

water level trends in various wells before and after this time frame. However, additional evaluation of pre-pumping monitoring well water level data prior to April 10 is provided in this letter and in our response to Hopkins' Comment 6 below.

6) ***Pages 2 and 3. "…we would note that it is our opinion that most of the 1.6 foot drawdown in the 180-foot aquifer at MW-4 between April 17 and June 5, 2015 is likely due to the test well." This comment by Hopkins was based on the following: a) "…three weeks prior to commencement of long term pumping shows that water levels in the 180-foot aquifer at MW-4 were largely flat other than a small decline during the 5-day Constant Pumping Test and subsequent increase in water level after the 5-day test stopped, followed by a small decline to prior levels."; b) "…monitoring data for the 180-foot aquifer at MW-5 further supports the conclusion that most, if not all of the declines at MW-4 are likely attributable to the test well."; c) "…monitoring data shows that water levels have declined somewhere between 2 and 3 feet from pre-pumping conditions at MW-4 in the 180-foot aquifer."***

   It is not clear why this comment references the data of April 17 when the long-term test started on April 22.

   A comparison of the decline in groundwater levels at wells MW-4M and MW-5M prior to commencement of the long-term pumping test on April 22 is provided in the table below. As indicated in the table, both wells show significant declines in water levels prior to April 22. The rates of decline shown in the table below are in very close agreement with Table 1 in the main body of the current HWG letter, which shows overall declines in these two wells from M arch 9/10 to July 1. The fact that declines are greater in MW-5M than in MW-4M is due to the closer proximity of MWS-5M to the concentration of pumping wells in the 180-Foot Aquifer, as explained in detail in our letter.

Well	March 9 Groundwater Elevation (ft. NAVD88)	April 22 Groundwater Elevation (ft. NAVD88)	Net Decline (feet)	Rate of Decline (feet/day)
MW-4M	+1.55	+0.3	1.25	0.028
MW-5M	+0.5	-1.7	2.2	0.050

   Based on the monitoring well water level data collected through July 1, the logic and discussion provided on pages 2 and 3 of the Hopkins Letter is flawed and incorrect. The rates of decline in water levels in MW-4M before, during, and after pumping of the Test Slant Well were similar. Any argument for drawdown being observed in MW-4M between April 22 and June 5 from pumping of the Test Slant Well can't be more than about 0.25 feet, as previously stated by the HWG. For all practical purposes, the drawdown in MW-4M is so small as to be indistinguishable from the daily tidal fluctuations in the data and can be considered negligible.

7) ***Footnote at bottom of Page 3. "…averaging the level of decline in each aquifer at MW-4 to determine whether Condition 11 is triggered is improper given the different confinement levels***

in the Dune Sand (unconfined), 180-foot (semi-confined), and 400-foot aquifers (confined)." And "…this differs from the assumptions made in the modeling for the Project, which was based on the assumption that the 180-foot aquifer was unconfined in the Project area (i.e. no aquitard). As a result, the test well's impacts on the 180-ft aquifer will be significantly larger than predicted in the project's modeling and drawdown conclusions."

Averaging of drawdowns (due to Test Slant Well pumping) in the MW-4S (Dune Sand Aquifer) and MW-4M (180-FTE Aquifer) for comparison to the performance standard of 1.5 feet is appropriate for the following reasons: a) The Dune Sand Aquifer and 180-FTE Aquifer beneath the CEMEX site are not separated by a thick continuous clay layer (aquitard), b) the Dune Sand Aquifer (represented by MW-4S) and 180-FTE Aquifer (represented by MW-4M) at the CEMEX site are in hydraulic communication due to the lack of a separating aquitard, c) pumping just from the Dune Sand Aquifer at the CEMEX site will cause a water level response at nearby monitoring wells screened in the 180-FTE Aquifer, and pumping just from the 180-FTE Aquifer at the CEMEX site will cause a water level response at nearby monitoring wells in the Dune Sand Aquifer, d) the Test Slant Well is screened in (and pumps water from) both the Dune Sand Aquifer and the 180-FTE Aquifer. Given the facts that the Dune Sand Aquifer and 180-FTE Aquifer are not isolated beneath the CEMEX site and the Test Slant Well is screened in both aquifers, an averaging of drawdowns in MW-4S and MW-4M due to Test Slant Well pumping is the most appropriate value to use for comparison to the 1.5 foot performance standard.

The comment regarding the modeling is addressed in Response to Comment 17. Furthermore, it should be noted that the Salinas Valley Aquitard that overlies the 180-Foot Aquifer at inland well locations is not present beneath the CEMEX property. Thus, the shallow (Dune Sand) aquifer is in hydraulic communication with the 180-FTE Aquifer beneath the CEMEX site, whereas this is not the case further inland where the Salinas Valley Aquitard is present between the shallow aquifer and 180-Foot Aquifer. Again, Hopkins is making passing comments on the DEIR modeling effort, which is not the subject of Special Condition 11.

8) ***Footnote at bottom of Page 3. "The Geoscience technical memorandum entitled MPWSP Baseline Water and Total Dissolved Solids Levels Test Slant Well Area…does not identify what groundwater and TDS levels should be used as the pre-pumping/baseline for the monitoring wells. It is unclear how and why the HWG selected groundwater and TDS levels from April 10, 2015 as representative of pre-pumping conditions, when this date was only 2 days after the end of the 5-day Constant Rate pumping test."***

Based upon monitoring data collected through July 1, it is apparent that baseline water and total dissolved solids levels need to also account for regional groundwater trends since April 10. These regional groundwater level and salinity trends are described and quantified throughout the current HWG Letter. In addition, methods to calculate drawdown and salinity values for comparison to performance standards in Special Condition 11 are also provided in the current HWG letter. Accordingly, while groundwater and TDS levels on April 10, 2015 represent baseline levels at a single point in time, the baseline levels are constantly changing due to sources other

than the Test Slant Well. As discussed in the body of the HWG Letter, it is therefore more appropriate to measure the Test Slant Well's effects against regional groundwater and TDS trends.

9) ***Page 4. "While we do not have sufficient time or data (as the underlying data for the HWG reports has not been provided) to fully peer review both HWG reports…"***

From the start of the project and prior to onset of the long-term constant rate Test Slant Well pumping test on April 22, HWG reports and groundwater monitoring data have been posted on the Project web site, including weekly updates to the monitoring data. These reports and groundwater monitoring data provide sufficient information for peer review.

10) ***Page 4, first bullet point. "The HWG Baseline Report's suggestion that if water levels don't fully recover at MW-4 after a shutdown is evidence that the test well did not cause any recorded decrease in water levels is not scientifically supportable. Given the on-shore gradient in the 180-foot aquifer at this location any recovery water would need to come from the ocean-side of the monitoring wells and may only occur over an extended period, if at all. Moreover, given the lack of baseline information, the only reasonable method to infer whether the test well is not causing an impact is if the same trends continue after the test well is shut-off. As noted above that did not occur in the 180-foot aquifer at MW-4."***

The discussion and logic provided by Hopkins in this first bullet point defies basic hydrogeologic principles. Every well is located in an aquifer with a regional hydraulic gradient driving the overall flow of groundwater in a particular direction. As pointed out here by Hopkins, there is a landward (east-southeast) flow of water at MW-4M. Hopkins appears to be implying that the Test Slant Well cone of depression would only experience water level recovery on the side of the well in the up-gradient direction. The HWG would refer the reader to any basic groundwater textbook to show this logic is flawed (Freeze and Cherry, 1979; Todd, 1980; Fetter, 1994; Kruseman and de Ridder, 1994; Heath, 1983). Recovery of water levels caused by pumping of a given well would be expected in all directions around the pumping well, after accounting for the regional rise/decline in water levels (and possibly for anisotropic aquifer conditions for some wells).

Furthermore, Hopkins makes the statement here that the, "…only reasonable method to infer whether the test well is not causing an impact is if the same trends continue after the test well is shut-off. As noted above, that did not occur in the 180-foot aquifer at MW-4." The data presented in this letter (through July 1)and discussion provided above for Comment 6 shows that, in fact, the same trends occur in MW-4M before, during, and after pumping of the Test Slant Well.

11) ***Page 4, second bullet point. "The June 22, 2015 HWG memo (at p. 3) states water levels in the 180-aquifer at MW-4 from May 28th to June 17th were relatively flat. This statement misrepresents the actual data that shows water levels continued to decline from May 28th***

until pumping ceased on June 5, and then recovered to the approximate levels they were at on May 28th…"

The HWG was pointing out in our June 22 memo that there are short-term periods where the rate of decline in water levels may fluctuate, some periods being flatter than others, possibly in response to rainfall, which may affect basin pumping rates over the short term. However, with the data collected through July 1 that was incorporated and analyzed throughout this letter, the overall trends after pumping are clear and support previous conclusions by the HWG.

Overall, the rate of water level decline is less between May 28th and June 17th than observed prior to May 28th or after June 17th. However the dates of May 28th and June 17th are not related to the Test Slant Well turning on or off. Therefore, the changes in the slope of the water level declines at MW-4M do not correspond to the Test Slant Well turning on or off, but rather other factors related to seasonal water level declines that are influenced by rainfall events and fluctuations in cumulative inland groundwater pumping.

12) ***Page 4, third bullet point. "The June 22, 2015 HWG memo (at p. 4) states "Even after stopping pumping, MW-4 continues to decline in response to regional pumping inland." Not only is this inconsistent with the HWG's statement above that water levels were relatively flat from May 28th to June 17th, it again misrepresents the actual data showing water levels recovered after pumping ceased. Thus, the HWG's suggestion that water levels have "continued" to decline cannot be defended."***

This comment is addressed in the response to Comment 11 above. Furthermore, the post-pumping regional water level decline resumes a steeper descent from June 17th to July 1st. Again, post-pumping data through July 1 demonstrate that water levels at MW-4 did not show any significant recovery after Test Slant Well pumping ceased, but rather the overall post-pumping water level decline is very similar to the pre-pumping water level decline. As described previously by the HWG, the drawdown and recovery in water levels at MW-4M does not exceed 0.25 feet in any reasonable analysis of the data.

13) ***Page 4, fourth bullet point. The HWG June 22, 2015 memo states under a "worst case scenario" relating to factors/causes of the regional water level declines and slight changes in the downward trend of those declines (i.e. not caused by changes in inland pumping or outside influences), it seems clear from the data collected so far that if there is any drawdown at MW-4S and/or MW-4M – it is less than 0.5 feet and probably closer to 0.2 to 0.3 feet. Given an allowable drawdown of 1.5 feet, the water levels are well within the allowable limit." As explained above this statement is not consistent with the full set of monitoring data, which demonstrates most if not all of the 1.6 foot drawdown at MW-4 between April 17 and June 5, 2015 is likely due to the test well. "***

Again, it is not clear why Hopkins is referring to April 17 in this comment as opposed to the April 22 start date of the long-term Test Slant Well pumping test.

As explained throughout this Response to Hopkins' Comments, Hopkins analysis and conclusions are flawed and incorrect. Furthermore, as demonstrated throughout this letter and by using multiple methods of calculation (e.g., Attachments B and C, and Response to Comment 6), the drawdown in MW-4M from the Test Slant Well pumping is negligible, and the decline in water level observed is a result of regional groundwater elevation trends due to other sources.

14) ***Bottom of Page 4. "It is worth noting that while the baseline data are insufficient to understand groundwater conditions in this coastal portion of the Pressure Subarea, intentional application of the test method/procedure can be used to effectively differentiate background data versus the slant test well's effect if sufficient monitoring data is available."***

As described throughout the current HWG letter, sufficient background monitoring data have been collected through July 1 to clearly demonstrate the effects (or lack thereof) of Test Slant Well pumping at the various monitoring wells.

15) ***Bottom of Page 4 and top of Page 5. "Therefore, we recommend that you request the Coastal Commission suspend pumping for at least the same duration pumping was conducted before authorizing an amendment to the permit. This will allow the aquifer(s) to recover from the pumping stress conditions and allow continued observation of basin conditions without the pumping stresses of the slant test well."***

The Test Slant Well pumping duration was 44 days from April 22 to June 5. As of July 18, there was an equivalent recovery period of 44 days without the Test Slant Well pumping. Thus, the requested time period to shut down the Test Slant Well has been satisfied. As demonstrated with data presented through July 1 in the current HWG letter, sufficient data were already available for the pre-pumping, during pumping, and post-pumping periods to fully evaluate effects of Test Slant Well pumping.

16) ***Top of Page 5. "…the installation of Monitoring Well No. 7 will provide crucial data at a location between MW-4 and MW-5 and allow continued development of understanding regarding the hydrogeological framework in this coastal portion of the Pressure subarea."***

While it is easy for one to recommend more and more monitoring wells and data, the current monitoring well network is more than adequate to monitor the effects of Test Slant Well pumping and to establish regional water level trends that impact monitoring wells at the CEMEX site (as demonstrated with data presented in this HWG letter).

17) ***Top of Page 5. "We further note that the coastal groundwater conditions are unlike those assumed by the Cal-Am modeling and that additional subsurface investigation and monitoring well observation data will be essential to understanding the occurrence and movement of groundwater south of the Salinas River."***

The Hopkins Letter only reviewed and commented on the monitoring well data associated with the Test Slant Well pumping test. The reference to the modeling work relative to "…coastal

groundwater conditions…" in this comment is undocumented and unsupported, and is not relevant to Special Condition 11. Again, one can always recommend additional subsurface investigation no matter how much work is done for a given project; in the case of Cal Am proposed CEMEX site, an extensive subsurface investigation has been conducted and several new monitoring wells installed. This subsurface investigation and ongoing monitoring well data collection are more than adequate to provide a basis for evaluation of the proposed project.

18) ***Middle of Page 5. "…we note that the HWG has now appropriately observed the semi-confined nature of the 180-foot aquifer in this area of the coastline…" and footnote at bottom of Page 5, "The Coastal Commission Staff Report and modeling for the test well assumed that the 180-foot aquifer in this area was unconfined. As noted above, the test well's impacts on the 180-foot aquifer will be significantly larger than predicted in the project's modeling and drawdown conclusions evaluated in the Coastal Commission Staff Report."***

The overall geologic nature of the upper 250 feet of sediments that comprise the Dune Sand Aquifer and 180-FTE Aquifer is primarily sand with some discontinuous thin clay layers. The manner in which groundwater levels respond in a given observation well isolated in the upper 250 feet of sediments will vary depending on if the monitoring well is screened in the lower portion of the aquifer or the upper portion of such a thick aquifer. The groundwater model documented in the Project DEIR includes multiple model layers in both the Dune Sand Aquifer and 180-FTE Aquifer. However, only one model layer within the Dune Sand Aquifer contains the water table, which responds in accordance with the specific yield value. The underlying model layers not containing the water table (such as the 180-FTE Aquifer model layers) respond in accordance with lower semi-confined to confined storage coefficient values. Thus, the test well impacts are appropriately represented in the model with respect to aquifer confinement. Again, Hopkins is making passing references here to the modeling effort, for which he does not provide a review in his letter and is not the subject of Special Condition 11.

19) ***Middle of Page 5. "The decrease in salinity at MW-4S demonstrates the slant well is pulling groundwater from the semi-perched Dune Sand aquifer that provides a protective water level along the coast south of the Salinas River."***

The potential slight decreasing trend observed at MW-4S requires further evaluation to determine if it is real, or due to minor instrument drift. Regardless, the lack of change in the salinity trend with onset of Test Slant well pumping and when Test Slant Well pumping ceased demonstrates that the Test Slant Well is not influencing salinity at MW-4S. Hopkins statement that the Dune Sand aquifer at MW-4S is perched is incorrect; the Dune Sand Aquifer is in hydraulic connection with the 180-FTE Aquifer at the MW-4 location (see TM1 – Summary of Results – Exploratory Boreholes posted on the Project website). The groundwater level at MW-4S does not respond to pumping of the Test Slant Well; thus, the Test Slant Well is not "pulling groundwater" from the Dune Sand aquifer at the MW-4 location. Available monitoring well data (Attachment B) and distance-drawdown analysis (Attachment C) demonstrate that the Test Slant is only drawing in water from the Dune Sand Aquifer from within radius of approximately

1,000 feet from the Test Slant Well. In reality, over 90 percent of the water flowing into the Test Slant Well will be derived from the ocean (see Project DEIR). Thus, to the extent that the undeveloped Dune Sand Aquifer provides a "protective water level along the coast", any potential impacts from Test Slant Well pumping will be negligible.

20) ***Middle of Page 5. Portion of paragraph that begins with "This protective layer is provided by…" and ends with "…we recommend that you request the Coastal Commission evaluate and include mitigation to address the impacts of the slant test well on this beneficial condition as part of any amendment to the test well permit."***

As explained in the Response to Comment 19 above, any potential impacts from the Test Slant Well pumping on the Dune Sand Aquifer beyond a radius of approximately 1,000 feet are negligible. Furthermore, the performance standards already included in Special Condition 11 provides a conservative level of protection for groundwater levels and salinity in the Dune Sand Aquifer.

21) ***Bottom of Page 5. "In summary, Cal-Am's monitoring for the slant well demonstrates that (1) water levels in the 180-foot aquifer at MW-4 have dropped more than 1.5 feet since operation pumping began (using any data point prior to the commencement of long-term pumping; and (2) the drop in water level (from pre-pumping conditions) was caused at least in part, if not mostly, by the test well. Therefore, we believe Cal-Am is required to obtain an amendment from the Coastal Commission before it can resume pumping."***

The data and analysis presented in the current HWG letter demonstrate that essentially all of the decline in water levels at MW-4 since Test Slant Well pumping began is related to the regional decline in water levels due to cumulative inland pumping. Due to language originally included in Special Condition 11 (i.e., the decline in water levels at MW-4 being due at least in part to pumping of Test Slant Well), the performance standard of 1.5 feet of drawdown has effectively been reduced to zero feet of drawdown. As this was not the intent of the CCC Special Condition 11, the current HWG Letter is intended to provide modifications to the Special Condition 11 to clarify the original intent of the performance standard. With the adoption of the proposed language modifications to Special Condition 11, the CCC can authorize Test Slant Well pumping to resume with continued collection of monitoring data for comparison to the originally intended performance standard.

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APPENDIX G-3

Monterey Peninsula Water Supply Project – Data Supporting the Threshold Monitoring Values for Compliance with Special Condition 11 of Coastal Development Permits (CDPs) A-3-MRA-14-0050 and 9-14-1735.

October 2, 2015

October 2, 2015

Charles Lester
Executive Director
c/o Tom Luster
California Coastal Commission
45 Freemont, Suite 2000
San Francisco, CA 94105-2219

Delivered By E-mail

Subject: Monterey Peninsula Water Supply Project – Data Supporting the Threshold Monitoring Values for Compliance with Special Condition 11 of Coastal Development Permits (CDPs) A-3-MRA-14-0050 and 9-14-1735.

Dear Mr. Luster:

The purpose of this letter is to briefly summarize the hydrogeologic conditions that support the use of the thresholds values called for in Special Condition 11 of Coastal Development Permits (CDPs) A-3-MRA-14-0050 and 9-14-1735. The California Coastal Commission issued Coastal Development Permits (CDPs) A-3-MRA-14-0050 and 9-14-1735 on December 8, 2014. The Language of Special Condition 11 - Protection of Nearby Well is reproduced below:

> *PRIOR TO STARTING PROJECT-RELATED PUMP TESTS, the Permittee shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells and shall provide to the Executive Director the baseline water and Total Dissolved Solids ("TDS") levels in those wells prior to commencement of pumping from the test well. The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells. During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pump test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The*

Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit.

Special Condition 11 language contains of seven distinct directives as outlined below. The test slant well program has maintained compliance with all component directives.

1) Shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells

   IN COMPLIANCE: Three monitoring well cluster consisting of three monitoring wells each for a total of nine wells were installed on the CEMEX property prior to operation of the test slant. In addition, the CEMEX North well was added to the monitoring network along with monitoring of the test slant well for a total of eleven (11) monitoring points within 2,000 feet of the TSW. A new offsite monitoring well cluster including three wells (MW-5) was constructed near the entrance of the Monterey Pennisula Landfill. A Monterey County Pollution Control Agency well was added to the monitoring network. Monitoring Wells MW-6, MW-7, MW-8, and MW-9 with three monitoring wells each, have also been added to monitoring network for a total of 16 off-site monitoring wells.

2) Shall provide to the Executive Director the baseline water and Total Dissolved Solids ("TDS") levels in those wells prior to commencement of pumping from the test well.

   IN COMPLIANCE: Data was collected from the Special Condition Monitoring network and reported in seven consecutive weekly reports. At the end of this period, a Baseline Report was prepared outlining the construction of the Special Condition 11 Monitoring network and providing groundwater level and groundwater quality data from February 19, 2015 through April 15, 2015.

3) During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices.

   IN COMPLIANCE: Electronic data logging devices have been installed in the monitoring network since each monitoring well was constructed. The electronic devices record both electrical conductance and water levels (via changes in pressure). In addition, daily hand

levels were collected to validate electronic water level data before, during, and after the pumping period. Weekly hand level data have been collected since August of 2015

4) The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request.
IN COMPLIANCE: Data has been continuously collected from the Special Condition Monitoring network and uploaded weekly to the publicly available CalAm website since the commencement of pumping on April 22, 2015. The first weekly report was uploaded within one week of the start of pumping the test slant well and has continued on a weekly basis. A total of twenty two (22) weekly monitoring reports have been made public. Weekly reports have continued to be uploaded after the TSW was turned off on June 5, 2015.

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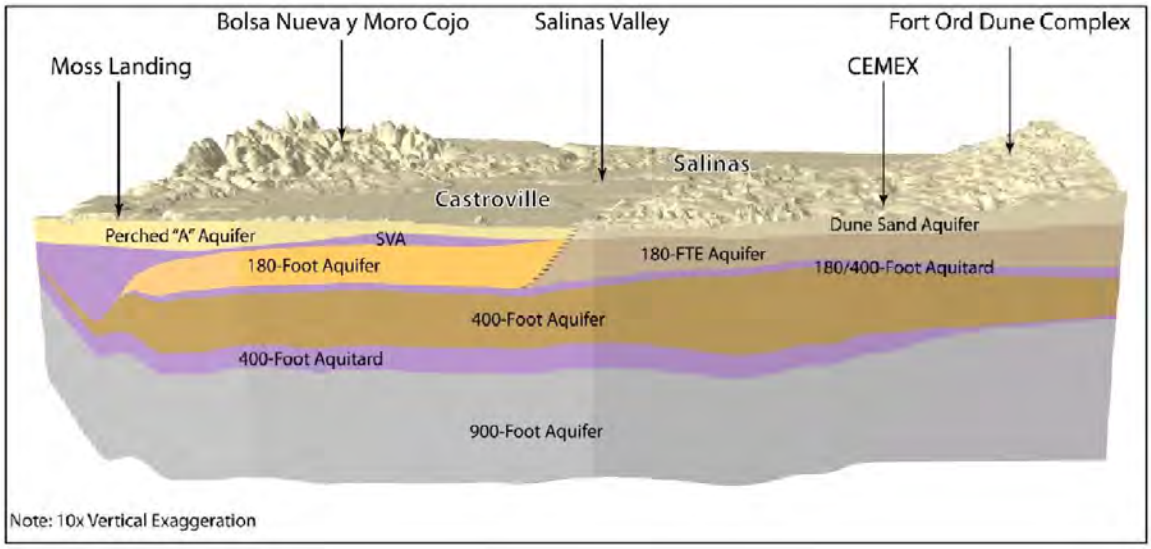
5) If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pump test and inform the Executive Director.
IN COMPLIANCE: The TSW was voluntarily shut off prior to reaching the threshold a decrease in water levels of more than one-and-one-half foot, or in an increase in TDS levels of more than two thousand parts per million from pre-pump test conditions.
6) The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director.
IN COMPLIANCE: The HWG reviewed the data and issued an analysis of the test data July 22, 2015.

7) If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit.
IN COMPLIANCE: The TSW has remained shut off, while the CCC goes through the investigation and analysis of the data in order to determine the appropriate amendment to the permit which will continue to be protective of near-by wells.

Background of Special Condition 11 Threshold Changes in Groundwater levels

The Hydrogeology Working Group (HWG) was formed as a result of the 2013 Settlement Agreement. The HWG is composed of hydrogeologic experts that represent key stakeholders for groundwater use and management in the Salinas Valley and Monterey Peninsula area of central California. The group has been actively involved through all stages of the project including: the project hydrogeologic investigation planning, monitoring well construction, groundwater model construction, and currently in the analysis of monitoring data. By addressing all stages of the project hydrogeologic analysis, the HWG can ensure that hydrogeologic conditions of the project area have been accurately characterized so that the groundwater model created from the field data would represent an assessment tool that the settling parties could be confident for evaluating project impacts from the TSW.

The data collected from the hydrogeologic field investigations completed in 2013 was used to prepare the interpretations of hydrostratigraphic relationships from Moss Landing and CEMEX areas. A conceptual model of the hydrostratigraphic units from the Moss Landing to CEMEX area as interpreted from data is shown below:



During the review process of the investigation data, the HWG recommended that a focused groundwater model of the CEMEX area be constructed using the detailed lithologic and water quality data collected from the CEMEX site lithologic and water quality borings. The previously constructed North Marina Groundwater Model (NMGWM) is an 8 –Layer model with a 200 ft x

200 ft cell size. The Focused CEMEX model (CM) was constructed with 14-Layers and a cell size of 20 ft x 20 ft. The detailed data collected from the boreholes at the CEMEX site was used for model input parameters (i.e. model layer thickness, hydraulic conductivity, storativity, and initial groundwater levels). The newly constructed CM was used to predict the response of the proposed Test Slant Well (TSW) pumping at the locations of the proposed monitoring wells and the vicinity around the CEMEX site. A draft report entitled "Results of Test Slant Well Predictive Scenarios Using the Focused CEMEX Area Model" was issued on July 8, 2014. The report provides a prediction of drawdown in the Dune Sand aquifer and 180-FTE aquifer in the vicinity of the CEMEX. Two scenarios were considered: 1) A TSW constructed at an angle 19 degrees below the horizontal with a total screen length of 588 lineal feet along the angle of the well in both the Dune Sand and 180-FT aquifers, and 2) A TSW constructed at an angle of 10 degrees with a total screen length of 830 lineal feet. Both scenarios assumed pumping at a rate of 2,500 gallons per minute (gpm) for a period of eight months. The table below provides a summary of the predictive scenarios for the TSW pumping

Layer	Aquifer/ Aquitard	Scenario 1 (19 Degrees Below Horizontal)				Scenario 2 (10 Degrees Below Horizontal)			
		MW-1	MW-2	MW-3	MW-4	MW-1	MW-2	MW-3	MW-4
Layer 1	**Benthic Zone**								
Layer 2	Dune Sand	-2.7	-2.0	-1.5	-1.0	-4.0	-2.0	-1.2	-0.8
Layer 3	Dune Sand	-2.9	-2.0	-1.5	-1.0	-4.2	-2.0	-1.1	-0.8
Layer 4	Dune Sand	-3.4	-2.0	-1.5	-1.0	-4.1	-2.0	-1.2	-0.8
Average Dune Sand		**-3.0**	**-2.0**	**-1.5**	**-1.0**	**-4.1**	**-2.0**	**-1.2**	**-0.8**
Layer 5	SVA	Not Present in CEMEX area							
Layer 6	180-FTE	-6.2	-3.1	-1.9	-1.2	-3.4	-2.1	-1.4	-0.8
Layer 7	180-FTE	-5.7	-3.7	-2.4	-1.3	-2.2	-1.7	-1.2	-0.8
Layer 8	180-FTE	-4.9	-3.5	-2.5	-1.3	-1.3	-1.1	-1.0	-0.7
Average 180-FTE		**-5.6**	**-3.4**	**-2.3**	**-1.2**	**-2.3**	**-1.6**	**-1.2**	**-0.8**

During preparation of Special Condition 11 for Coastal Development Permits (CDPs) A-3-MRA-14-0050 and 9-14-1735 which addresses "Protection of Nearby Well" the potential impacts to nearby wells from the proposed TSW pumping were considered by determining a drawdown

threshold that could be measured in a monitoring well near the limit of the CEMEX property (Monitoring Well 4-series, located about 1,900 feet from the TSW) that would ensure that off-site wells would be exposed to a negligible impact from the TSW long-term pumping program. The modeling indicated the anticipated average drawdown of 1-Foot in the Dune Sand aquifer at the MW-4 location. The drawdown in the Dune Sand aquifer would be assessed by groundwater level measurements collected from the Dune Sand aquifer completion (MW-1S) at the MW-4 site. An average drawdown of 1.2-FT drawdown was anticipated in the 180-FTE aquifer at the MW-4 series location to be measured by drawdown measurements in the 180-FTE (MW-1M).

Using a distance drawdown relationship from the average values shown in the table above, and selecting threshold value of 1.5 Feet was selected for MW-4, it was predicted that a drawdown off-site of 0.5 feet might occur at a distance of about 4,000 feet and negligible drawdown would be anticipated at a distance of about 6,000 feet in the 180-FTE aquifer. The threshold value is overly conservative in that there are no active pumping wells screened in 180-FT aquifer within 6,000 feet of the TSW and an additional drawdown of 0.5 feet or 1.5 feet in a pumping well screened at the depth of the 180-FTE aquifer would have a negligible impact on the operation of the well.

Results of Field Monitoring During TSW Pumping Period

In reviewing groundwater level trends from the period before and during TSW pumping, the HWG members agreed on the following:

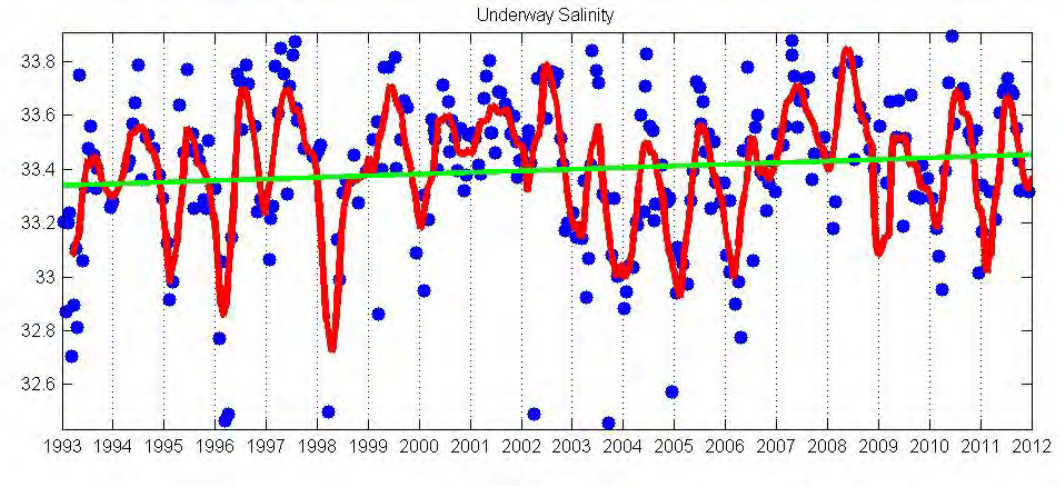
1) Test Slant Well pumping data indicates impacts only to the shallow (Dune Sand aquifer) and middle (180FTE aquifer) groundwater levels have occurred in MW-1 and MW-3.
2) Test Slant Well pumping data indicates no effects on or impacts to deep groundwater levels in the CEMEX North Well, MW-1D and MW-3D.
3) Test Slant Well pumping data indicates there may be up to 0.25 feet of drawdown in MW-4M, up to 0.1 feet of drawdown in MW-4S and no impact in the MW-4D, and MW-5 monitoring wells (deep, middle, shallow).
4) As such, the radius of influence of the Test Slant Well pumping (at an average discharge rate of 2,000 gpm), is in the vicinity of MW-4, with negligible drawdown beyond MW-4 series.

The CM model predicted an average drawdown in the Dune Sand Aquifer and the 180-FTE aquifer at MW-4 to be 1.0 FT and 1.2 FT respectively, at the end of eight months of pumping, while pumping at a rate of 2,500 gpm. The model was programmed to simulate equal production from the Dune Sand aquifer and 180-FTE aquifer. The TSW was pumped at a rate of 2,000 gpm.

Preliminary analysis indicates that approximately 80% of the flow was from the Dune Sand aquifer and 20% from the 180-FTE aquifer. The TSW, pumping at a rate of 2,000 gpm may have resulted in 0.25 feet drawdown from TSW pumping in MW-4M after six weeks of pumping in either aquifer. The field responses in the aquifers from TSW pumping confirm that the predictive modeling accurately represent the anticipated responses of the aquifers to TSW pumping. In addition, the Special Condition 11 drawdown threshold is protective of off-site wells.

Background of Special Condition 11 Threshold Changes in Groundwater Total Dissolved Solids

The Monterey Bay Aquarium Research Institute (MBARI) started a program of semi-monthly time series cruises to several stations within and off-shore of Monterey Bay. In 2012, MBARI published time series parameters at stations in central Monterey Bay from the 23 years, 1989-2012, of sampling at the station. The figure below was published by MBARI in 2012 as Figure 3(b) of their paper entitled "Monterey Bay Time-Series: 23 Years of Measuring Physical, Chemical, and Biological Variables," presented at the International Time-Series Methods Workshop in Bermuda in November, 2012. The units on the left hand axis are practical salinity units (psu) which are equivalent to parts per thousand. Multiplying these values by 1,000 will provide salinity parts per million (ppm).



The data in the figure above shows that seawater averaged over depth in Monterey Bay showed at variation from approximately 32,400 ppm to approximately 34,000 ppm or about 1,600 ppm.

In addition, natural variations in salinity could also occur from seasonal changes in ground water levels. The project area is located in an area known for seawater intrusion of the both the 180-FTE aquifer and the 400-FT aquifer. Historical movement of seawater due to landward pumping of municipal and agricultural wells have occurred at rates which would vary based on the ability

of different subsurface geologic layers to transmit water (i.e. variations with depth of the hydraulic conductivity). Since the geologic units are stratified, the salinity at different depths can also show variations. The water quality samples collected from the CEMEX borings showed vertical stratification in total dissolved solids. Monitoring wells screened over intervals which contain water with varying salinity may show a change in some changes in salinity simply from mixing of water when sampling. Therefore, the TDS threshold change of 2,000 ppm necessarily includes consideration for the complexity of near shore subsurface salinity. The Special Condition 11 TDS threshold was selected at 2,000 ppm to ensure that potential increases in salinity at the monitoring well would not, at a minimum be due to natural salinity variations in seawater nor be caused by simple mixing of vertically TDS stratified groundwater.

Results of Field Monitoring for TDS at MW-4 During TSW Pumping Period

Prior to and after the initiation of the long-term test slant well pumping test, the level of total dissolved solids in MW-4 monitoring wells were monitored daily through use of dedicated down hole transducers with electrical conductivity probes. The electrical conductivity in MW-4S showed a slightly decreasing trend, of approximately 1,000 us/cm or about 640 mg/L[1]. The electrical conductivity in MW-4M has increased approximately 900 us/cm or about 576 mg/L. The electrical conductivity in MW-4D has remained the same.

Groundwater level data collected from monitoring wells before initiation of the test (March 20, 2015) and approximately one month after the test commenced showed that groundwater levels in MW-4M were higher at the coast than inland. The data validates the reported historical seawater intrusion identified in the 180-FTE by others. These conditions suggest that slight increase in electrical conductivity in MW-4M is not associated with test slant well pumping but rather from ongoing inland pumping. Therefore, further increases in TDS are anticipated from regional inland groundwater production and apart from test slant well pumping.

The Special Condition 11 Threshold of an increase of 2,000 ppm at MW-4 is conservative and protective of nearby wells.

[1] An Electrical Conductivity to TDS ratio of 0.64 was used to calculate TDS from electrical conductivity. The TDS:EC ratio was calculated from water quality data collected in the regional borehole study in 2013/2014. The TDS:EC ratio will be refined from water quality data from each monitoring well when sufficient data becomes available

Sincerely,

The Hydrogeologic Working Group

Dennis Williams, Tim Durbin, Martin Feeney, Peter Leffler

Dennis Williams

ABSENT

Tim Durbin,

Martin Feeney

Peter Leffler

APPENDIX H

Methodology and Calculations for Prediction of Ocean Water Percentage for Proposed MPSWP Production Wells (HWG 2017)

September 15, 2017

Mr. Ian Crooks
California American Water Company
4701 Beloit Drive
Sacramento, CA 93838

Subject: Methodology and Calculations for Prediction of Ocean Water Percentage for Proposed MPSWP Production Wells

Dear Mr. Crooks:

The Hydrogeology Working Group (HWG) was tasked with calculation of the anticipated ocean water percentage (OWP) to complement modeling work being performed by HydroFocus for the Monterey Peninsula Water Supply Project (MPWSP) Draft Environmental Impact Report (EIR). The superposition approach developed by HydroFocus in their modeling effort does not directly provide the ocean water percentage pumped by the project wells; therefore, the HWG has developed two different methodologies to provide estimates of the OWP for two MPWSP scenarios. The first approach involves development of an analytical equation to describe mixing of water within the capture volume, and the second approach involves numerical modeling using the existing CEMEX Model. This letter describes the first approach using an analytical equation.

1.0 Introduction

The proposed MPWSP (Project) includes a desalinization plant with feedwater supplied from angled (slant) wells located near the Monterey Bay. To maximize the OWP in the pumped water, the proposed project wells extend at low angles to penetrate near shore and offshore subsea aquifer systems. A critical operational consideration of the slant wells is the OWP. In this TM, OWP is defined as:

$$OWP = 100 \times (C_{pw} - 500)/(C_s - 500)$$

where C_{pw} = Salinity (TDS in mg/L) concentration from project wells,
C_s = Salinity (TDS in mg/L) concentration of ocean water
500 = Assumed Fresh Water TDS in mg/L.

1.1 Purpose

This letter describes the overall methodology, derivation of the analytical equation, parameter inputs (to the equation), and results of application of the equation to various project scenarios and ranges of parameter inputs. The purpose of this letter is to present the methodology and calculations (i.e., development and application on an equation/model) to predict the percentage of ocean water that will be derived from the proposed MPWSP production wells during the Project life.

1.2 Capture-Volume Concepts

The OWP depends of the geometry of the three-dimensional capture volume associated with the operation of the Project wells. The capture volume is the volume from which the wells will draw water.

The geometry of a capture volume is determined by the configuration of the streamlines produced by the pumping from the wells. A streamline corresponds to the travel path (i.e., flow line) of a water molecule moving in the direction of decreasing hydraulic gradient, and it has the property that flow does not cross a streamline.

Figure 1 shows the geometry of a two-dimensional capture volume produced by two wells within a regional groundwater flow scenario. This is a simplified or idealized conceptualization of the proposed Project wells. To simulate this analytically, an image well system is used to create the constant head boundary of the ocean. As an example, Well A is a pumping well and Well B is an imaginary injection well representing the ocean recharge boundary (Todd, 1980). The regional flow is from west to east. The capture volume is delineated by the bold line. With respect to the Project, Well A corresponds to the collection of slant wells, Well B corresponds to the ocean-water inflow induced by the slant wells, and the regional flow corresponds to the eastward background groundwater flow at the shoreline. The Monterey Bay shore is the vertical line located between wells A and B.

The boundary of a two-dimensional capture zone is defined by two streamlines. Both streamlines start at the upstream stagnation point. The path of one streamline is around the northern side of the capture volume to the downstream stagnation point, and the path of the other streamline is around the southern side of the capture volume to the downstream stagnation point. The stagnation points are points of zero groundwater movement. The upstream stagnation point is imaginary, but is created by the balance of the theoretical source (imaginary injection well) versus the actual sink (slant well pumping), which is simply the superposition of the imaginary image well ("westward push" of the injected water) with the real slant well pumping ("eastward push" of the regional groundwater flow). The downstream stagnation point is real, and is created by the balance of the westward pull of the pumped water against the eastward pull of the regional groundwater flow. Because groundwater flow obeys flow within and with the direction of streamlines, the bounding northern and southern streamlines define an isolated region within the regional flow.

The geometry of the capture volume associated with the actual slant well layout is much more complex than shown on **Figure 1**. However, the principles associated with the simplified conceptualization apply to the complex reality. **Figure 2** shows a representation of the expected capture-volume features. **Figure 2a** shows a plan view of the capture volume, **Figure 2b** shows an east-west cross section through the capture volume, and **Figure 2c** shows a north-south cross section through the capture volume. The general shape of the capture volume is that of a walnut shell half with the open side up. The surface of the capture volume is defined by streamline surfaces that correspond with the outer surface of the walnut shell. In other words, the capture volume is an isolated volume within the background regional groundwater flow.

The OWP depends on the salinity (i.e., total dissolved solids (TDS)) within the capture volume. Initially, the salinity is the background salinity before the Project starts operating. Subsequently, the Project pumping induces inflow to the capture volume of ocean water, which changes the salinity within the capture volume. Eventually, the ocean water floods the entire capture volume, and the salinity within the capture volume reaches a steady state. Concurrent with these events, the capture volume evolves. Initially, no capture volume exists. Subsequently, the capture volume appears and then expands.

Eventually, the capture volume becomes fully developed. However, the formation of the capture volume and the salinity within the capture volume occur on different time scales and are time dependent. The development of the capture volume occurs much more rapidly than the establishment of a steady-state salinity within the capture volume. While the boundaries of the capture volume evolve fairly quickly to a steady-state configuration (over a period of a few months), the salinity within the capture volume takes several years to evolve to steady-state conditions.

Based on this difference in response times, the groundwater flow and salinity dynamics can be analyzed differently. The development of the capture volume can be treated as an instantaneous occurrence, but the evolution of salinity within the capture volume must be treated as a transient event.

2.0 Development of Equation for Calculating OWP

2.1 Water-Budget and Salinity-Budget Equations

The equation for calculating the OWP is based on the water and salinity budgets for the capture volume for the Project wells. The water budget represents the steady-state inflows and outflows after equilibrium is reached, which occurs several months to a few years after the Project pumping is started. The steady-state water inflows to the capture volume are seawater inflow from Monterey Bay and recharge from precipitation on the land surface overlying the capture volume. The steady-state water outflow from the capture volume is the pumping from the Project wells. For the steady-state condition, the inflows equal the outflow, which can be stated as:

$$\left[\text{Water Inflow}\right] = \left[\text{Water Outflow}\right] \tag{1a}$$

or

$$Q_S + Q_R = Q_P \tag{1b}$$

where Q_S is the rate of seawater inflow to the capture volume (acre-ft/yr), Q_R is the rate of precipitation recharge to the capture volume (acre-ft/yr), and Q_P is the rate of pumping from the capture volume (acre-ft/yr).

While the steady-state water budget can be used to formulate an equation for calculating the OWP, a transient-state salinity budget is required. The mass inflows to the capture volume are total dissolved solids (TDS) concentration of the ocean inflow times the volumetric rate of inflow from the ocean plus the TDS concentration of the precipitation recharge times the precipitation recharge inflow rate. The mass outflow from the capture volume is the TDS concentration within pumped water times the pumping rate of the Project wells. For the transient-state condition, the mass inflows minus the mass outflow equals the rate of change in mass stored within the capture volume, which can be stated as:

$$\left[\text{Mass Inflows}\right]-\left[\text{Mass Outflow}\right]=\left[\text{Rate of Change in Mass Storage}\right] \quad (2a)$$

or

$$Q_S C_S + Q_R C_R - Q_P C = V\frac{dC}{dt} \quad (2b)$$

where C_S is the seawater TDS (mg/L), C_R is the recharge TDS (mg/L), C is the volumetrically averaged groundwater TDS within capture volume (mg/L), V is the water volume within capture volume (acre-ft), and *t* is time (year). The TDS within the Project pumped water is assumed to be the same as the concentration within the capture volume. Equation 2b in mathematics is called an ordinary differential equation (Boyce and DiPrima, 2013). The term dC/dt is the mathematical notation for indicating the change in a quantity. Here the change is that of the volume-weighted average TDS within the capture volume with respect to time.

2.2 Solution for Salinity-Balance Equation

The solution to Equation 2b yields the change with time for the TDS within the capture volume, which is assumed to be identical to the change in the TDS with the Project pumped water. To solve for the change in TDS, Equation 2b first is put into a standard form by defining some new quantities having the form:

$$a = \frac{Q_P}{V} \quad (3)$$

and

$$b = \left(\frac{Q_S C_S + Q_R C_R}{V}\right) \quad (4)$$

Correspondingly, Equation 2b becomes:

$$\frac{dC}{dt} = -aC + b \quad (5)$$

which is a form that can be found in many textbooks on ordinary differential equations (Boyce and DiPrima, 2013). The solution to this equation (Boyce and DiPrima, 2013) is:

$$C = \frac{b}{a} + k_1 \exp(-at) \quad (6)$$

where k_1 is a constant that depends on the initial condition. Here, the initial condition is the TDS concentration within the capture volume at the start of the Project pumping. The notation $\exp(-at)$ represents the exponential function for the argument $-at$. At time $t = 0$, the constant is expressed as:

$$k_1 = C_0 - \frac{b}{a} \tag{7}$$

where C_0 is the average TDS within the capture volume at the start of the Project pumping. Substituting Equation 7 into Equation 6 yields the solution to Equation 2b in the form:

$$C = \frac{b}{a} + \left(C_0 - \frac{b}{a} \right) \exp(-at) \tag{8}$$

Given specifications of the water inflows and outflow, the TDS concentrations within the inflows and outflow, the volume of the capture volume, and the TDS concentration within the capture volume, Equation 8 yields the change over time in the TDS within the capture volume and correspondingly in the Project pumped water. That result can be normalized to the seawater TDS to obtain the change over time in the OWP.

3.0 Application of Equation for Calculating OWP

3.1 Model Parameters

The application of Equation 8 requires the specification of model parameters particular to conditions within the vicinity of the MPWSP production wells. The parameters include the capture volume, precipitation recharge, precipitation recharge salinity (TDS), seawater salinity (TDS), groundwater salinity (TDS) within the capture volume, and aquifer porosity (i.e., specific yield).

3.1.1 Capture Volume

The volume of the capture volume was derived from an analysis completed by HydroFocus. They used a particle-tracking approach to delineate the three-dimensional boundary surface of the capture volume. Subsequently, they quantified the aquifer-material volume within the capture volume. The results of the capture volume analysis are provided in **Attachment A.** The model used for the capture volume analysis is described in more detail in the HydroFocus report (2017).

3.1.1.1 Hydraulic Gradient

The capture volume is dependent on the regional groundwater flow in the vicinity of the proposed MPWSP production wells. For a particular production rate, the area and volume of the capture volume decrease with increased strength of the regional flow. To address this dependency, HydroFocus identified the capture volume for a range regional-flow strengths, where the flow strength was that corresponding to a particular hydraulic gradient across the model domain.

HydroFocus reviewed groundwater level data for the model domain area and preliminary groundwater contour maps prepared by GeoScience. Based on available data, HydroFocus determined that the regional inland hydraulic gradient may vary from 0.0004 to 0.0011 with an average of 0.0007. Three different hydraulic gradients (0.0004, 0.0007, and 0.0011) were applied to the revised and updated North Marina Groundwater Model for the capture volume analysis conducted by HydroFocus. Because the updated groundwater model is based on the superposition approach, the zero gradients in the model were modified by changing heads at the inland boundaries to create the three different gradients for the capture volume analysis. Additional details on model and capture volume analysis are provided in HydroFocus (2017).

It should be noted that hydraulic gradients estimated by HydroFocus were intended to be representative of the entire North Marina Model domain. However, the hydraulic gradients at the coast and in the CEMEX project vicinity are steeper than the average calculated by HydroFocus for the entire model domain. Review of the hydraulic gradients for the Dune Sand Aquifer and 180-FTE Aquifer in the vicinity of the MPWSP production wells indicated a range from 0.0005 to 0.0018. Thus, for the purposes of the analysis described in this TM, the steepest regional hydraulic gradient evaluated by HydroFocus (0.0011) actually provides an average local hydraulic gradient in the vicinity of the project site. A more representative lower bound for local hydraulic gradient is the 0.0007 value included in the HydroFocus assessment. The analytical model results for the 0.0004 gradient are not considered valid in this evaluation, because the 0.0004 gradient is not representative of the range of local hydraulic gradients. A representative upper bound value for local hydraulic gradient would be on the order of 0.0015, but this value was not available from the HydroFocus calculations. Therefore, an upper bound gradient analysis is not included in this evaluation; however, it is clear that it would show more rapid mixing of seawater than indicated for the results using a gradient of 0.0011.

3.1.1.2 Capture Volume Model Results

The results of the capture volume model analysis are provided in **Attachment A**, and the model is described in more detail in HydroFocus (2017). The tabulated results show the amount of recharge, area, and volume of the six different capture volumes (three for each pumping rate). As would be expected the capture zone area and volume decrease with increasing hydraulic gradients. The average annual precipitation recharge (in inches/year) for each capture zone was calculated as the average recharge (AF/month) divided by the capture zone area (acres) of Model Layer 2 (Dune Sand Aquifer) and applying the appropriate factors to convert from feet/month to inches/year. The aquifer thickness for each capture zone (used as input to the equation) was calculated as the area times the thickness for each aquifer added together divided by the area of the Dune Sand Aquifer. These calculations are provided in **Attachment A**.

3.1.2 Precipitation Recharge Quantity

The long-term average annual precipitation for the CEMEX area (36.7167, -121.7993) of 14.82 inches was based on PRISM monthly data for 1981 to 2010 (http://www.prism.oregonstate.edu/explorer/). The average annual precipitation derived from PRSIM data is consistent with local weather stations in Salinas. The average annual precipitation for the City of Salinas was 15.5 inches from 1961 to 1990 (http://www.usclimatedata.com/climate/salinas/california/united-states/usca0971); the average annual precipitation for Salinas Municipal Airport was 13.3 inches from 1878 to 2016

(http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7669); and the average annual precipitation for the Salinas 2 E station was 14.6 inches from 1958 to 2005 (http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?casali+nca). Overall, Salinas weather stations indicate a range of long-term precipitation averages for the City of Salinas at various locations and over various time periods of 13.3 to 15.5 inches/year, thus, it is assumed that the PRISM average annual precipitation of 14.82 inches is a reasonable long-term average at CEMEX.

Water balance calculations were used to calculate the range of groundwater recharge from precipitation in the CEMEX area (**Attachment B**). The analysis uses monthly average values of precipitation and Class A pan evaporation to calculate monthly average recharge. The coastal Monterey Bay area is encompassed by the Zone 8 Evaporative Demand area in DWR Bulletin 113-3 (1975). In order to provide a range of possible conditions, a range of pan coefficients were applied in the water balance analysis to obtain net evaporation from bare soil. As indicated in **Attachment B**, the calculated precipitation recharge ranged from 1.4 to 4.4 inches/year. This amount of precipitation recharge represents approximately 10 to 30 percent of the estimated long-term annual average of 14.8 inches for the CEMEX area. Additional recharge would also occur via excess irrigation recharge over a portion of the capture zone areas.

The amount of recharge within the capture zone area of the project wells in the North Marina Groundwater Model (NMGWM) ranges from 4.6 to 5.0 inches/year, depending on the shape and size of the capture zone in the Dune Sand Aquifer for the various combinations of project pumping rates (15.5 vs. 24.1 MGD) and hydraulic gradients (0.0004, 0.0007, and 0.0011). The model value is a combination of precipitation and excess irrigation recharge.

An important consideration is that the CEMEX area is comprised of unconsolidated dune sands with minimal fines and sparse vegetation. This area is characterized by rapid infiltration, lack of runoff, and reduced transpiration compared to other areas. Therefore, the water balance calculations summarized in **Attachment B** may tend to underestimate groundwater recharge.

Based on review of available data related to precipitation and soil type (dune sand) in the project area, the potential range of precipitation recharge within the capture zone area for the OWP analysis was estimated to be 10 (1.5 inches/year) to 50 percent (7.4 inches/year) of the long-term average annual precipitation (14.8 inches/year), with an average (best estimate) of 5.0 inches/year.

3.1.3 Precipitation Recharge Salinity

The estimated range of precipitation recharge total dissolved solids (TDS) is from 10 mg/L to 200 mg/L. The low end is bounded by the TDS of precipitation before it interacts with the soil (California SWRCB, June 2016). The upper end represents a reasonable high-end TDS concentration after infiltrating precipitation migrates through the vadose zone and just before it reaches the water table. The average (best estimate) value for precipitation recharge TDS is 100 mg/L.

3.1.4 Seawater Salinity

The likely range for seawater TDS was based on 12 monthly samples for one year from February 2015 to January 2016 at the Cal Am–1 station located about 1,200 feet offshore of the Test Slant Well Location (average of 33,500 mg/L with range from 32,000 to 36,000 mg/L), and a surf zone sampling event in February 2016 (about 35,000 mg/L). Other data (e.g., four stations around the outfall, regional stations)

are primarily reported as salinity in PSU units and are not directly convertible to TDS; thus, these data were not used for this analysis. Based on available data, the seawater salinity was assumed to range from 33,000 to 35,000 mg/L with a best estimate of 33,500 mg/L.

3.1.5 Specific Yield

The specific yield of the capture volume was evaluated based on review of monitoring well lithologic logs (as represented by MW-1), literature review, and model input data (TM2 – CEMEX Model Update). Review of lithologic log for MW-1 generally indicates soil types as summarized in **Table 1**. In general, specific yield may serve as a proxy for effective porosity for coarse-grained materials.

Table 1. Summary of Lithology and Specific Yield for MW-1

Well I.D.	Aquifer	Depth Interval	Saturated Thickness	Description	Specific Yield (%)
MW-1S	Dune Sand	5 to 45	?	Fine to Coarse Sand	23-28
MW-1S	Dune Sand	45 to 95	50	75-100% VF to Coarse Sand; up to 5% Silt; up to 25% F-C Gravel	8-28
MW-1M	180-FTE	95 to 148	53	75-100% F to Coarse Sand; up to 25% Silt; up to 15% F-C Gravel	8-28
MW-1M	180-FTE	148 to 167	19	15-85% F to Medium Sand; 20-80% Clay	3-28
MW-1M	180-FTE	167-205	37	85-95% F to Medium Sand; 5-15% Clay/Silt	3-28
MW-1M	180-FTE	205-225	20	Mixture of Silt, Clayey Sand, Sand w/ Clay, and F-C Sand	3-28
Overall				Sand with no clay/silt	23-28
Overall				Sand/Gravel with 5-25% silt	8-28
Overall				Sand/Clay/Silt mixtures	3-28

Note: Specific yield values were based on Fetter (1994) and Todd (1980).

The potential specific yield range of 0.03 to 0.28 was evaluated by calibration to TSW water quality (i.e., TDS) data. The specific yield calibration results are summarized in **Table 2**. As indicated in **Table 2**, comparison and calibration to TSW water quality data indicate that the optimum value for specific yield in the analytical equation is approximately 0.15.

Based on review of available data, review of lithologic logs in terms of a general assessment of the proportion of the various lithologies, and calibration to TSW water quality data, the range of specific yield values for sediments in the capture volume for the OWP sensitivity analysis was set at 5 to 25 percent, with an average (best estimate) specific yield value of 15 percent.

Table 2a. Calibration of Porosity to Test Slant Well Data from April 2015 to November 2016 (1.6 years)

Porosity	Initial TDS	Average Percent Difference	Absolute Value Percent Difference	Comments
0.03	25,400	-5.35	5.35	overpredicts 0 to 1.6 years
0.05	25,400	-4.3	5.0	underpredicts 0 to 0.12 years, overpredicts 0.6 to 1.6 years
0.08	25,400	-2.8	4.3	underpredicts 0 to 0.12 years, overpredicts 0.6 to 1.6 years
0.1	25,400	-1.8	3.6	underpredicts 0 to 0.12 years, overpredicts 0.6 to 1.6 years
0.13	25,400	-0.3	2.9	underpredicts 0 to 0.12 years, approximiately correct 0.6 to 1.1 years, overpredicts 1.2 to 1.6 years
0.15	25,400	0.7	2.6	underpredicts 0 to 0.12 years, approximately correct 0.6 to 1.6 years
0.18	25,400	1.9	2.7	underpredicts 0 to 1.1 years, approximately correct 1.2 to 1.6 years
0.2	25,400	2.6	2.8	underpredicts 0 to 1.1 years, approximately correct 1.2 to 1.6 years
0.25	25,400	4.2	4.2	underpredicts 0 to 1.1 years, approximately correct 1.2 to 1.6 years
0.28	25,400	5.0	5.0	underpredicts 0 to 1.6 years
0.3	25,400	5.4	5.4	underpredicts 0 to 1.6 years

Table 2b. Calibration of Initial TDS to Test Slant Well Data from April 2015 to November 2016 (1.6 years)

0.15	24,000	2.2	3.5	underpredicts 0 to 1.1 years, approximately correct 1.2 to 1.6 years
0.15	24,500	1.6	3.2	underpredicts 0 to 1.1 years, approximately correct 1.2 to 1.6 years
0.15	25,000	1.1	2.9	underpredicts 0 to 0.12 years, approximately correct 0.6 to 1.6 years
0.15	25,400	0.7	2.6	underpredicts 0 to 0.12 years, approximately correct 0.6 to 1.6 years
0.15	26,000	0	2.45	underpredicts 0 to 0.12 years, approximately correct 0.6 to 1.6 years
0.15	26,500	-0.55	2.35	underpredicts 0 to 0.12 years, approximately correct 0.6 to 1.6 years
0.15	27,000	-1.1	2.25	approximately correct 0 to 1.1 years, overpredicts 1.2 to 1.6 years
0.15	27,500	-1.6	2.3	approximately correct 0 to 1.1 years, overpredicts 1.2 to 1.6 years
0.15	28,000	-2.2	2.5	approximately correct 0 to 1.1 years, overpredicts 1.2 to 1.6 years

3.1.6 Initial/Ambient Groundwater Salinity within Capture Volume

The assessment of initial/ambient groundwater salinity within the capture volume was based upon review of the capture volumes for the various model runs, groundwater quality data for monitoring wells within the capture volume, groundwater quality data for the Test Slant Well (TSW), and calibration to TSW groundwater quality results.

The combined review of monitoring well TDS data with TSW TDS data collected during the long term pumping test clearly indicated the dominance of near shore TDS concentrations in pumped water from the TSW. Comparison of the initial TSW TDS concentrations (24,850 – 25,400 mg/L), the TSW TDS concentration after one week of pumping (26,000 mg/L), and the range of monitoring well TDS concentrations demonstrates that higher TDS values of monitoring wells nearest the ocean are the most representative of ambient TDS for model input. This is to be expected because the TSW screens are located adjacent to the ocean and initial water flowing into the TSW would be anticipated to be derived from ambient water adjacent to the ocean.

Calibration of the initial/ambient TDS value to TSW water quality data indicates a reasonable range for initial/ambient TDS is from 25,000 to 27,000 mg/L with an optimum value of 26,000 mg/L (**Table 2**). A sensitivity range of ambient groundwater TDS from 24,000 to 28,000 mg/L was evaluated in this study.

3.1.7 Summary of Parameter Values

Based on a review of available data related to the key input parameters for OWP calculations, the average (best estimate) values and ranges for sensitivity analyses are summarized in **Table 3**.

Table 3. Averages and Ranges of Input Parameters for OWP Calculation Sensitivity Analyses

Parameter	Minimum	Best Estimate	Maximum
Precipitation Recharge Quantity	1.6 inches	5.0 inches	8.0 inches
Precipitation Recharge TDS	10 mg/L	100 mg/L	200 mg/L
Seawater TDS	33,000 mg/L	33,500 mg/L	35,000 mg/L
Specific Yield	0.05	0.15	0.25
Initial/Ambient Groundwater TDS	24,000 mg/L	26,000 mg/L	28,000 mg/L

3.2 Estimated Salinity of Pumped Water

3.2.1 Introduction

The salinity of pumped water was estimated using an Excel spreadsheet to implement the equation described in a previous section of this TM. Application of the equation to the ongoing Test Slant Well pumping is described below to with regard to calibration of specific yield and ambient salinity summarized in **Table 2**. The OWP of pumped water was then calculated for three base cases (of different hydraulic gradients) for both the 15.5 and 24.1 MGD projects. In addition, sensitivity analyses were conducted for the 0.0011 hydraulic gradient for selected input parameters.

3.2.2 Calibration to Test Slant Well Field Data

In order to better understand the predictive capabilities of the equation described in this TM and utilize TSW data for calibration of key input parameters, the salinity of TSW discharge water collected over the

initial 1.6 years (since long-term TSW pumping began in April 2015) was compared to output from the Excel spreadsheet. This required assessment of the size of the capture zone for the pumping of the test slant well, which was evaluated using the basic analytical equations for the width of the capture zone and the distance from the pumping well to the stagnation points (Fetter, 1994). Input to the analytical equations included K of 250 feet/day, pumping rate of 2,000 gpm, aquifer thickness of 200 feet, and hydraulic gradient of 0.001. The resulting capture zone area is approximately 80 acres.

An initial comparison/calibration was made using an ambient TDS of 25,400 mg/L and adjusting porosity (specific yield) within a range of 0.03 to 0.3. The best match of predicted to observed salinity was achieved with a porosity/specific yield of 0.15. The porosity/specific yield was then held constant at 0.15 and ambient TDS was evaluated in a range from 24,000 to 28,000 mg/L based on water quality data for the test slant well in April 2015 and nearby monitoring wells. Other inputs included precipitation recharge of 5 inches/year, and precipitation recharge salinity of 100 mg/L. These results indicated the best match was achieved with ambient TDS of 26,000 to 26,500 mg/L. The Excel spreadsheet OWP analysis along with a comparison to field TSW water quality data are provided in **Attachment C** and summarized in **Table 2**.

3.2.3 Evaluation of MPWSP Alternatives

3.2.3.1 Evaluation of 15.5 MGD Scenario

The MPWSP scenario that involved pumping of 15.5 MGD was evaluated for a range of hydraulic gradients (which affect size of capture volume), which subsequently affects the time necessary for seawater to flood the capture volume. The results of the OWP analysis for the 15.5 MGD Scenario are summarized in **Table 4** and detailed calculations are provided in **Attachment D**. The results of the OWP analysis indicate that the ultimate ocean water percentage (OWP) ranges from approximately 96 to 99 percent for the base case scenarios with three different hydraulic gradients. The OWP at the end of one year of continuous project pumping is predicted to range from about 88 to 93 percent (for 0.0007 and 0.0011 gradients), the time to reach an OWP of 90 percent is 0.7 to 1.4 years, and the time to reach an OWP of 95% is 1.4 to 2.9 years. A sensitivity analysis was completed for selected variables for the 0.0011 hydraulic gradient base case, which showed an ultimate OWP range from 96.4 to 99.6 (compared to base case of 98.8%), a time to reach OWP of 90% ranging from 0.3 to 1.2 years (compared to base case of 0.7 years), and a time to reach OWP of 95% ranging from 0.5 to 1.9 years (compared to base case of 1.4 years).

Table 4. Summary of 15.5 MGD Scenario OWP Analysis

Hydraulic Gradient	Ambient Groundwater TDS (mg/L)	Porosity	OWP End Year 1	OWP End Year 2	OWP End Year 5	Time to Reach 90% OWP (years)	Time to Reach 95% OWP (years)	Max OWP	Comments
0.0004	26,000	0.15	82.6	86.3	92.4	3.5	9.1	95.8	Not a Representative Local Gradient
0.0007	26,000	0.15	87.6	92.7	97.0	1.4	2.9	97.6	Minimum Gradient
0.0011	26,000	0.15	92.9	97.2	98.8	0.7	1.4	98.8	Average Gradient
0.0011	25,400	0.15	92.4	97.1	98.8	0.9	1.6	98.8	Assume TSW GW TDS
0.0011	24,000	0.15	91.3	96.8	98.8	0.9	1.6	98.8	Minimum GW TDS
0.0011	28,000	0.15	94.6	97.7	98.8	0.5	1.1	98.8	Maximum GW TDS
0.0011	26,000	0.05	98.4	98.8	98.8	0.3	0.5	98.8	Minimum Porosity
0.0011	26,000	0.25	88.9	94.3	98.4	1.2	2.3	98.8	Maximum Porosity
0.0011	26,000	0.15	92.9	97.2	98.8	0.7	1.4	98.8	Min Recharge TDS
0.0011	26,000	0.15	92.9	97.2	98.8	0.7	1.4	98.8	Max Recharge TDS
0.0011	26,000	0.15	93.5	98.0	99.6	0.7	1.3	99.6	Min Recharge Amount
0.0011	26,000	0.15	92.5	96.7	98.2	0.8	1.5	98.2	Max Recharge Amount
0.0011	26,000	0.15	93.3	97.3	98.8	0.7	1.3	98.8	Min Seawater TDS
0.0011	26,000	0.15	92.0	97.0	98.8	0.8	1.5	98.8	Max Seawater TDS

3.2.3.2 Evaluation of 24.1 MGD Scenario

The MPWSP scenario that involved pumping of 24.1 MGD was evaluated for a range of hydraulic gradients (which affect size of capture volume), which subsequently affects the time necessary for seawater to flood the capture volume. The results of the OWP analysis for the 24.1 MGD Scenario are summarized in **Table 5** and detailed calculations are provided in **Attachment D**. The results of the OWP analysis indicate that the ultimate ocean water percentage (OWP) ranges from approximately 96 to 98

percent for the base case scenarios with three different hydraulic gradients. The OWP at the end of one year of continuous project pumping is predicted to range from about 87 to 90 percent (for 0.0007 and 0.0011 gradients), the time to reach an OWP of 90 percent is 1.0 to 1.5 years, and the time to reach an OWP of 95% is 2.0 to 3.1 years. A sensitivity analysis was completed for several variables for the 0.0011 hydraulic gradient base case, which showed an ultimate OWP range of 97.2 to 99.4 (compared to base case of 98.1%), a time to reach OWP of 90% ranging from 0.4 to 1.7 years (compared to base case of 1.0 years), and a time to reach OWP of 95% ranging from 0.7 to 3.1 years (compared to base case of 2.0 years).

Table 5. Summary of 24.1 MGD Scenario OWP Analysis

Hydraulic Gradient	Ambient Groundwater TDS (mg/L)	Porosity	OWP End Year 1	OWP End Year 2	OWP End Year 5	Time to Reach 90% OWP (years)	Time to Reach 95% OWP (years)	Max OWP	Comments
0.0004	26,000	0.15	82.4	86.2	92.4	3.5	8.5	96.3	Not a Representative Local Gradient
0.0007	26,000	0.15	87.1	92.2	96.9	1.5	3.1	97.7	Minimum Gradient
0.0011	26,000	0.15	90.3	95.1	97.9	1.0	2.0	98.1	Average Gradient
0.0011	25,400	0.15	89.6	94.9	97.9	1.1	2.1	98.1	Assume TSW GW TDS
0.0011	24,000	0.15	88.0	94.3	97.9	1.3	2.2	98.1	Minimum GW TDS
0.0011	28,000	0.15	92.5	96.0	98.0	0.7	1.6	98.1	Maximum GW TDS
0.0011	26,000	0.05	97.0	98.0	98.1	0.4	0.7	98.1	Minimum Porosity
0.0011	26,000	0.25	86.5	91.6	97.0	1.7	3.3	98.1	Maximum Porosity
0.0011	26,000	0.15	90.3	95.1	97.9	1.0	2.0	98.1	Min Recharge TDS
0.0011	26,000	0.15	90.3	95.2	98.0	1.0	2.0	98.1	Max Recharge TDS
0.0011	26,000	0.15	91.1	96.3	99.3	0.9	1.7	99.4	Min Recharge Amount
0.0011	26,000	0.15	89.7	94.4	97.0	1.1	2.3	97.2	Max Recharge Amount
0.0011	26,000	0.15	90.7	95.3	98.0	1.0	1.9	98.1	Min Seawater TDS
0.0011	26,000	0.15	89.0	94.7	97.9	1.2	2.1	98.1	Max Seawater TDS

3.2.4 Discussion of OWP Results

Review of the results indicates that prediction of the short-term OWP is most influenced by the initial TDS concentration and porosity. The near term impact of the initial concentration is logical because the higher the initial concentration, the higher one would expect the pumped water concentration to be in the first year or so of project operation. The porosity is important because it controls the volume of aquifer that must be flushed to replace ambient brackish groundwater with ocean water. The lower the porosity the less the total volume of aquifer within the capture volume; thus, lower porosity results in higher near term salinity of the pumped water. The long term OWP is most influenced by the amount of recharge that occurs within the capture volume. This is logical because groundwater recharge is the only ongoing source of low TDS water that contributes to the capture volume. Therefore, greater overall groundwater recharge corresponds to a lower OWP, as indicated by the sensitivity analyses.

4.0 Summary and Conclusions

An equation was derived to calculate the expected ocean water percentage from the proposed project wells using basic assumptions as represented by the following equations:

$$[\text{Mass Inflows}] - [\text{Mass Outflow}] = [\text{Rate of Change in Mass Storage}]$$

or

$$Q_S C_S + Q_R C_R - Q_P C = V \frac{dC}{dt}$$

where Q_S is the rate of seawater inflow to the capture volume, Q_R is the rate of precipitation recharge to the capture volume, and Q_P is the rate of pumping from the capture volume, C_S is the seawater TDS, C_R is the recharge TDS, C is the volumetrically averaged groundwater TDS within capture volume, V is the water volume within capture volume, and *t* is time. The TDS within the Project pumped water is assumed to be the same as the concentration within the capture volume (C). The solution to the above Equation takes the form:

$$C = \frac{b}{a} + \left(C_0 - \frac{b}{a} \right) \exp(-at)$$

where

$a = \frac{Q_P}{V}$; $b = \left(\frac{Q_S C_S + Q_R C_R}{V} \right)$; and C_0 is the average TDS within the capture volume at the start of the Project pumping. Given parameter input values for proposed project well pumping rates, precipitation recharge rate, ocean water salinity, precipitation recharge salinity, capture volumes, ambient groundwater salinity, and effective porosity, the above equation yields the change over time in

the TDS within the capture volume and correspondingly in the Project pumped water. These results are normalized to the seawater TDS to obtain the change over time in the OWP.

The major conclusions of the OWP analysis are the following:

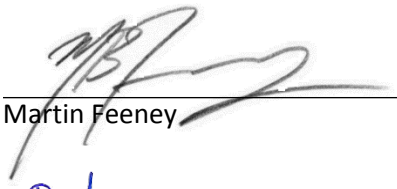
- The hydraulic gradients estimated by HydroFocus and used to model capture zones underestimate the hydraulic gradients in the project site vicinity. Therefore, results for the highest gradient used in this analysis (0.0011) are more representative of the average local gradient and the 0.0007 gradient is more representative of the minimum local gradient. Therefore, the 0.0004 gradient results are not considered in these conclusions.
- The primary conclusion of this study is that the long-term equilibrium ocean water percentage is estimated to range from 96 to 99 percent.
- The short-term ocean water percentage is estimated to range from 87-93% for one year and 92-97% for two years.
- Based on the scenarios evaluated, the continuous pumping time to reach 90% OWP is estimated to range from about 0.3 to 1.7 years.
- Based on the scenarios evaluated, the continuous pumping time to reach 95% OWP is estimated to range from about 0.5 to 3.1 years.

Sincerely,

The Hydrogeologic Working Group (Dennis Williams, Tim Durbin, Martin Feeney, Peter Leffler)

Dennis Williams

Tim Durbin



Martin Feeney

Peter Leffler

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FIGURES

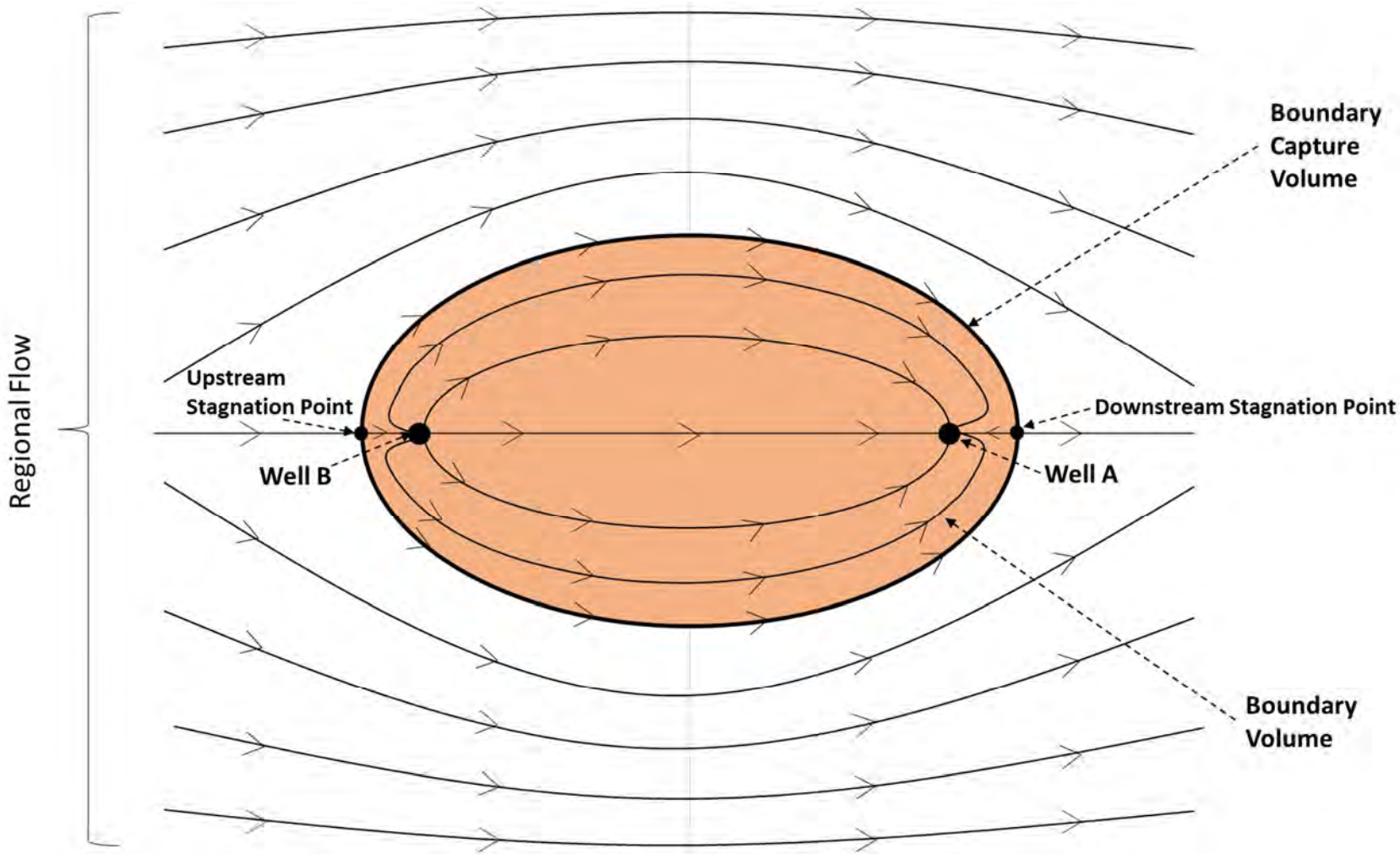

Figure 1 – Capture Zone Schematic

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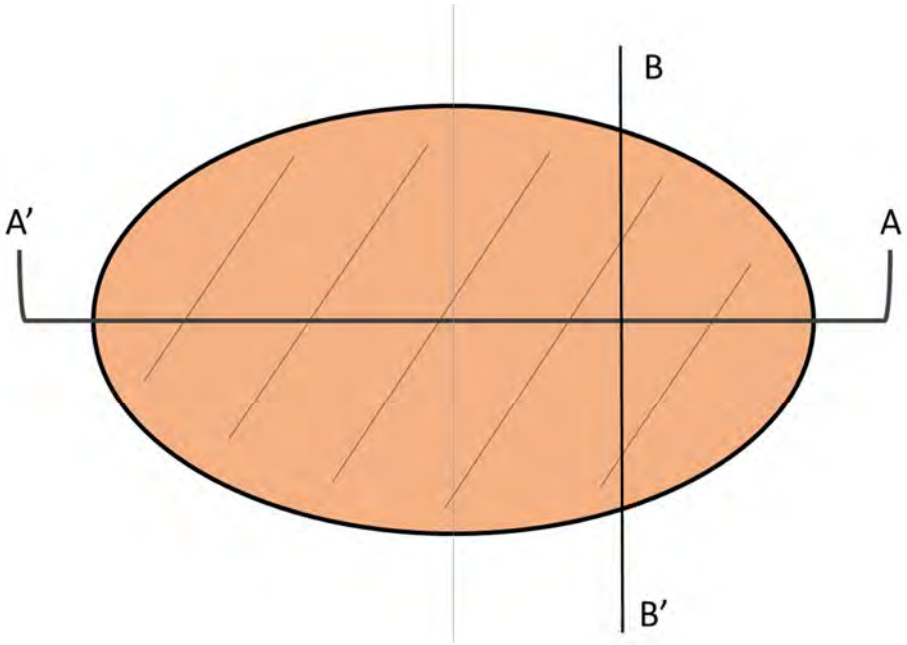

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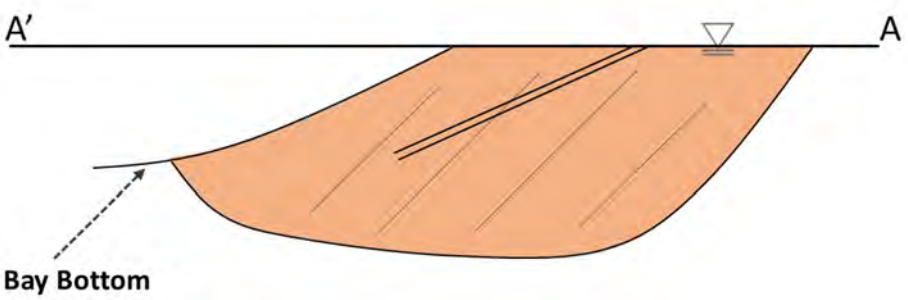

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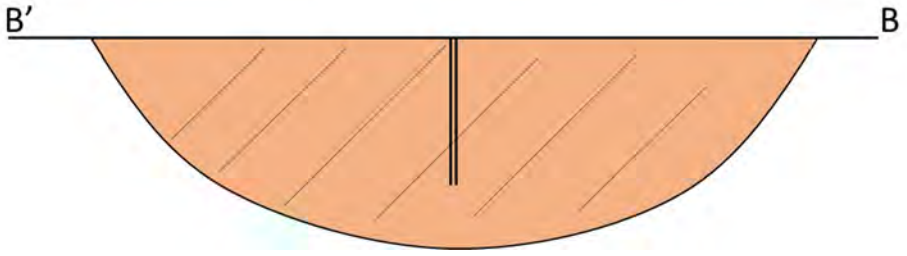

Figure 2 – Capture Volume Cross-Sections

ATTACHMENT A

Table A-1. Capture Zone Analysis Summary

Site	Pumping Rate (MGD)	Average Gradient	Capture Zone	Calibrated NMGWM (1979-2011) Minimum Recharge (AF/month)	Calibrated NMGWM (1979-2011) Maximum Recharge (AF/month)	Calibrated NMGWM (1979-2011) Average Recharge (AF/month)	Capture Zone Area of Model Cells (ft2)		Capture Zone Area of Model Cells (acres)		Capture Zone Volume of Model Cells (ft3)		Capture Zone Volume of Model Cells (AF)	
							Dune Sand/A-Aquifer Layer 2	180-FT/180-FTE Aquifer Layer 4	Dune Sand/A-Aquifer Layer 2	180-FT/180-FTE Aquifer Layer 4	Dune Sand/A-Aquifer Layer 2 + 3	180-FT/180-FTE Aquifer Layer 4	Dune Sand/A-Aquifer Layer 2 + 3	180-FT/180-FTE Aquifer Layer 4
CEMEX	24.1	-0.0004	Ocean	20.3	1075	80.6	103,240,000	98,240,000	2,370	2,255	8,878,786,404	15,915,278,805	203,829	365,365
CEMEX	24.1	-0.0007	Ocean	11.0	656	46.5	63,920,000	43,200,000	1,467	992	5,483,088,001	6,547,617,998	125,874	150,313
CEMEX	24.1	-0.0011	Ocean	8.8	538	39.1	52,840,000	23,080,000	1,213	530	4,729,366,801	3,313,562,398	108,571	76,069
CEMEX	15.5	-0.0004	Ocean	13.3	777	54.4	74,480,000	56,120,000	1,710	1,288	6,355,194,000	8,707,177,598	145,895	199,889
CEMEX	15.5	-0.0007	Ocean	8.1	502	34.8	43,360,000	22,280,000	995	511	3,927,669,601	3,197,953,599	90,167	73,415
CEMEX	15.5	-0.0011	Ocean	3.3	278	15.6	21,440,000	13,760,000	492	316	1,958,632,000	1,927,258,801	44,964	44,244

				Inches/Year	Thickness (feet)	Thickness (feet)	Combined Aquifers Adjusted Thickness (feet)
CEMEX	24.1	-0.0004	Ocean	4.9	86	162	240
CEMEX	24.1	-0.0007	Ocean	4.6	86	152	188
CEMEX	24.1	-0.0011	Ocean	4.6	90	144	152
CEMEX	15.5	-0.0004	Ocean	4.6	85	155	202
CEMEX	15.5	-0.0007	Ocean	5.0	91	144	164
CEMEX	15.5	-0.0011	Ocean	4.6	91	140	181

Using the shapefile "Capture_zones_with_gradient", definition queired in GIS each individual capture zone
For each capture zone, selected cells from the NMGWM which have their centroids within the capture zone
1. Calculated recharge for each capture zone
    Created individual zone files using the selected cells from the layer 2 capture zones as a separate zone from the remaining model cells
    Ran ZONEBUDGET on the calibrated NMGWM
    For each stress period, summarized recharge within the capture zone cells by minimum, maximum, and average
2. Calculated area for each capture zone
    For each selected cell within the capture zone, calculated the area by multiplying by the cell length and width (200' x 200')
    Summed all areas
    Converted area from square feet to acres
3. Calculated volume for each capture zone
    For each selected cell within the capture zone, calculated the volume by multiplying by the cell length and width (200' x 200') by the cell thickness in ft
        For Dune Sand/A-Aquifer, the cell area was multiplied by the thickness of layer 2 + thickness of layer 3
        For 180-FT/180-FTE, the cell area was multipled by the thickness of layer 4
    Summed all volumes
    Converted volume from cubic feet to acre-feet

ATTACHMENT B

Table B-1. Precipitation Recharge Water Balance for CEMEX Site Area - Average Conditions

Month	Precip	ETo	Net Infiltration	
January	2.88	1.24	1.64	
February	2.93	1.68	1.25	
March	2.46	3.10	0.00	
April	1.30	3.90	0.00	
May	0.37	4.65	0.00	
June	0.07	5.10	0.00	
July	0.02	4.96	0.00	
August	0.03	4.65	0.00	
September	0.15	3.90	0.00	
October	0.69	2.79	0.00	
November	1.61	1.80	0.00	
December	2.31	1.24	1.07	
Annual	14.82	39.01	3.96	27% of Average Annual Precip

Notes: Monthly Precipitation Data from Prism 1981-2010 Averages;
Eto based on CIMIS Zone 2; Net Infiltration Calcs assume no soil moisture holding capacity from one month to next and no runoff

Table B-2. Precipitation Recharge Water Balance for CEMEX Site Area - Maximum Conditions

Month	Precip	ETo	Net Infiltration	
January	2.88	0.93	1.95	
February	2.93	1.40	1.53	
March	2.46	2.48	0.00	
April	1.30	3.30	0.00	
May	0.37	4.03	0.00	
June	0.07	4.50	0.00	
July	0.02	4.65	0.00	
August	0.03	4.03	0.00	
September	0.15	3.30	0.00	
October	0.69	2.48	0.00	
November	1.61	1.20	0.41	
December	2.31	0.62	1.69	
Annual	14.82	32.92	5.58	38% of Average Annual Precip

Notes: Monthly Precipitation Data from Prism 1981-2010 Averages;
Eto based on CIMIS Zone 1; Net Infiltration Calcs assume no soil moisture holding capacity from one month to next and no runoff

Table B-3. Precipitation Recharge Water Balance for CEMEX Site Area - Minimum Conditions

Month	Precip	ETo	Net Infiltration	
January	2.88	1.86	1.02	
February	2.93	2.24	0.69	
March	2.46	3.72	0.00	
April	1.30	4.80	0.00	
May	0.37	5.27	0.00	
June	0.07	5.70	0.00	
July	0.02	5.58	0.00	
August	0.03	5.27	0.00	
September	0.15	4.20	0.00	
October	0.69	3.41	0.00	
November	1.61	2.40	0.00	
December	2.31	1.86	0.45	
Annual	14.82	46.31	2.16	15% of Average Annual Precip

Notes: Monthly Precipitation Data from Prism 1981-2010 Averages;
Eto based on CIMIS Zone 1; Net Infiltration Calcs assume no soil moisture holding capacity from one month to next and no runoff

ATTACHMENT C

Table C-1a. OWP Analysis for Test Slant Well with Initial TDS of 25,400 mg/L and Specific Yield of 0.15.

Parameters			t (yr)	C	Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres										
B	200.0	ft	0		25400.0	75.5	25400.0	75.5				
ϕ	0.15		0.06		26000.9	77.3	27600.0	82.1	4.8		4.8	
V	2,400.0	acre-ft	0.12		26555.2	79.0	29100.0	86.7	7.7		7.7	
QS	3,193	acre-ft/yr	0.3		27973.4	83.3	TSW Off					
QR	33	acre-ft/yr	0.4		28625.1	85.2	TSW Off					
QP	3,226	acre-ft/yr	0.5		29194.8	87.0	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6		29692.8	88.5	29800.0	88.8	0.3		0.3	
CR	100	mg/L	0.7		30128.2	89.8	30100.0	89.7	-0.1		0.1	
C0	25,400	mg/L	0.8		30508.9	90.9	31400.0	93.6	2.7		2.7	
			0.9		30841.6	91.9	TSW Off					
			1		31132.5	92.8	TSW Pumping Restart 5/2/16					
a	1.34		1.1		31386.9	93.6	32200.0	96.1	2.5		2.5	
b	44,565		1.2		31609.2	94.3	31000.0	92.4	-1.8		1.8	
			1.3		31803.6	94.9	30800.0	91.8	-3.0		3.0	
			1.4		31973.5	95.4	31200.0	93.0	-2.3		2.3	
			1.5		32122.1	95.8	31400.0	93.6	-2.2		2.2	
			1.6		32251.9	96.2	31800.0	94.8	-1.4	0.65	1.4	2.63
			2		32627.3	97.4						
			2.5		32885.4	98.1						
			3		33017.1	98.5						
			4		33118.8	98.8						
			5		33145.3	98.9						
			6		33152.2	98.9						
			7		33154.0	99.0						
			8		33154.4	99.0						
			9		33154.6	99.0						
			10		33154.6	99.0						
			12		33154.6	99.0						
			14		33154.6	99.0						
			16		33154.6	99.0						
			18		33154.6	99.0						
			20		33154.6	99.0						
			22		33154.6	99.0						
			24		33154.6	99.0						
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			28		33154.6	99.0						
			30		33154.6	99.0						
			32		33154.6	99.0						
			35		33154.6	99.0						
			38		33154.6	99.0						
			40		33154.6	99.0						
			41		33154.6	99.0						
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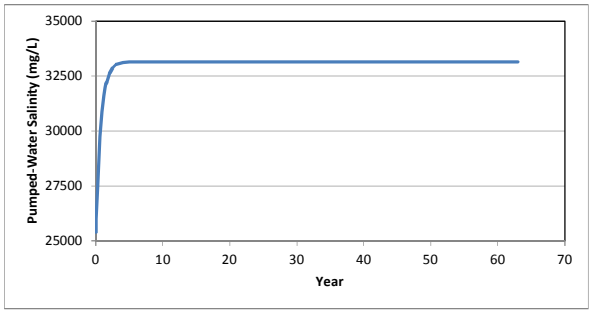

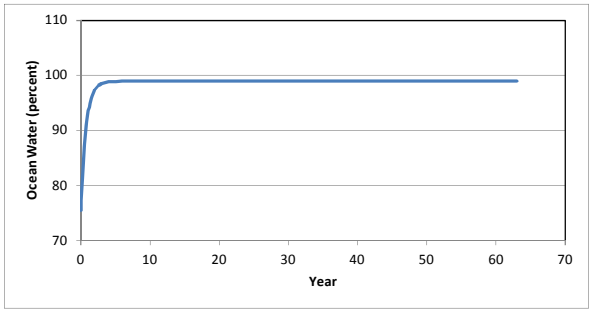

Table C-1b. OWP Analysis for Test Slant Well with Initial TDS of 25,400 mg/L and Specific Yield of 0.05.

Parameters			t (yr)	C	Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres										
B	200.0	ft	0		25400.0	75.5	25400.0	75.5				
ϕ	0.05		0.06		27066.5	80.5	27600.0	82.1	1.6		1.6	
V	800.0	acre-ft	0.12		28374.9	84.5	29100.0	86.7	2.2		2.2	
QS	3,193	acre-ft/yr	0.3		30841.6	91.9	TSW Off					
QR	33	acre-ft/yr	0.4		31609.2	94.3	TSW Off					
QP	3,226	acre-ft/yr	0.5		32122.1	95.8	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6		32464.7	96.9	29800.0	88.8	-8.1		8.1	
CR	100	mg/L	0.7		32693.7	97.6	30100.0	89.7	-7.9		7.9	
C0	25,400	mg/L	0.8		32846.6	98.0	31400.0	93.6	-4.4		4.4	
			0.9		32948.8	98.3	TSW Off					
			1		33017.1	98.5	TSW Pumping Restart 5/2/16					
a	4.03		1.1		33062.7	98.7	32200.0	96.1	-2.6		2.6	
b	133,696		1.2		33093.2	98.8	31000.0	92.4	-6.3		6.3	
			1.3		33113.6	98.8	30800.0	91.8	-7.0		7.0	
			1.4		33127.2	98.9	31200.0	93.0	-5.8		5.8	
			1.5		33136.3	98.9	31400.0	93.6	-5.3		5.3	
			1.6		33142.4	98.9	31800.0	94.8	-4.1	-4.33	4.1	5.02
			2		33152.2	98.9						
			2.5		33154.3	99.0						
			3		33154.6	99.0						
			4		33154.6	99.0						
			5		33154.6	99.0						
			6		33154.6	99.0						
			7		33154.6	99.0						
			8		33154.6	99.0						
			9		33154.6	99.0						
			10		33154.6	99.0						
			12		33154.6	99.0						
			14		33154.6	99.0						
			16		33154.6	99.0						
			18		33154.6	99.0						
			20		33154.6	99.0						
			22		33154.6	99.0						
			24		33154.6	99.0						
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			28		33154.6	99.0						
			30		33154.6	99.0						
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			40		33154.6	99.0						
			41		33154.6	99.0						
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			44		33154.6	99.0						
			45		33154.6	99.0						
			46		33154.6	99.0						
			47		33154.6	99.0						
			48		33154.6	99.0						
			49		33154.6	99.0						
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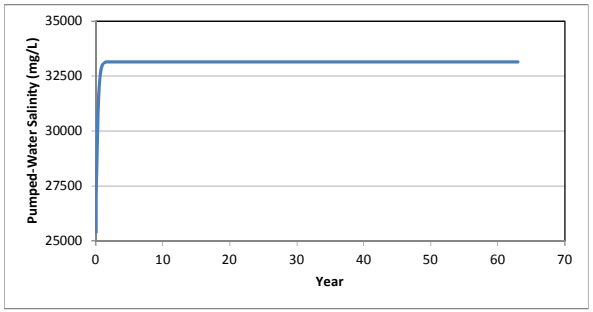

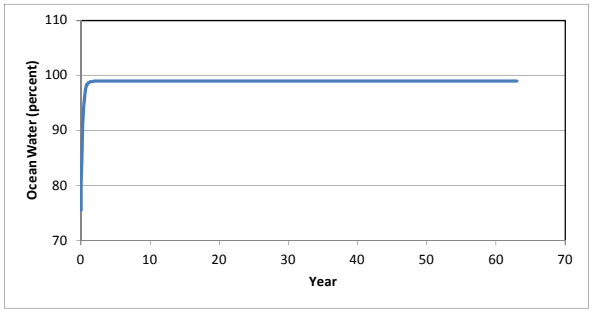

Table C-1c. OWP Analysis for Test Slant Well with Initial TDS of 25,400 mg/L and Specific Yield of 0.25.

Parameters			t (yr)	C Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres									
B	200.0	ft	0	25400.0	75.5	25400.0	75.5				
ϕ	0.25		0.06	25766.3	76.6	27600.0	82.1	5.6		5.6	
V	4,000.0	acre-ft	0.12	26115.3	77.6	29100.0	86.7	9.0		9.0	
QS	3,193	acre-ft/yr	0.3	27066.5	80.5	TSW Off					
QR	33	acre-ft/yr	0.4	27538.2	81.9	TSW Off					
QP	3,226	acre-ft/yr	0.5	27973.4	83.3	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6	28374.9	84.5	29800.0	88.8	4.3		4.3	
CR	100	mg/L	0.7	28745.2	85.6	30100.0	89.7	4.1		4.1	
C0	25,400	mg/L	0.8	29086.9	86.6	31400.0	93.6	7.0		7.0	
			0.9	29402.1	87.6	TSW Off					
			1	29692.8	88.5	TSW Pumping Restart 5/2/16					
a	0.81		1.1	29961.0	89.3	32200.0	96.1	6.8		6.8	
b	26,739		1.2	30208.5	90.0	31000.0	92.4	2.4		2.4	
			1.3	30436.8	90.7	30800.0	91.8	1.1		1.1	
			1.4	30647.4	91.4	31200.0	93.0	1.7		1.7	
			1.5	30841.6	91.9	31400.0	93.6	1.7		1.7	
			1.6	31020.8	92.5	31800.0	94.8	2.4	4.19	2.4	4.19
			2	31609.2	94.3						
			2.5	32122.1	95.8						
			3	32464.7	96.9						
			4	32846.6	98.0						
			5	33017.1	98.5						
			6	33093.2	98.8						
			7	33127.2	98.9						
			8	33142.4	98.9						
			9	33149.2	98.9						
			10	33152.2	98.9						
			12	33154.1	99.0						
			14	33154.5	99.0						
			16	33154.6	99.0						
			18	33154.6	99.0						
			20	33154.6	99.0						
			22	33154.6	99.0						
			24	33154.6	99.0						
			26	33154.6	99.0						
			28	33154.6	99.0						
			30	33154.6	99.0						
			32	33154.6	99.0						
			35	33154.6	99.0						
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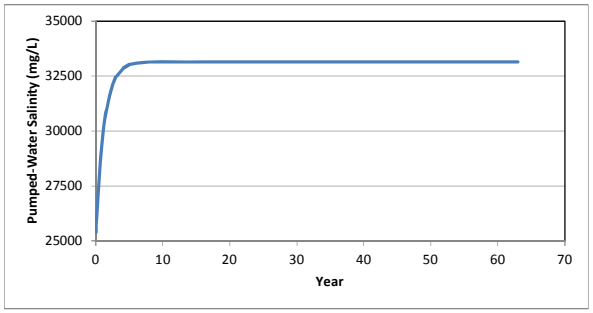

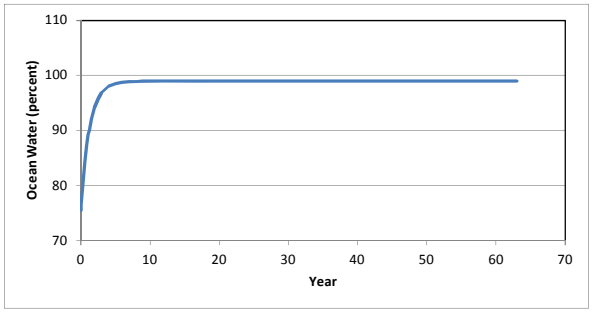

Table C-2a. OWP Analysis for Test Slant Well with Initial TDS of 26,000 mg/L and Specific Yield of 0.15.

Parameters			t (yr)	C	Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres										
B	200.0	ft	0		26000.0	77.3	25400.0	75.5				
ϕ	0.15		0.06		26554.4	79.0	27600.0	82.1	3.2		3.2	
V	2,400.0	acre-ft	0.12		27065.8	80.5	29100.0	86.7	6.2		6.2	
QS	3,193	acre-ft/yr	0.3		28374.3	84.5	TSW Off					
QR	33	acre-ft/yr	0.4		28975.5	86.3	TSW Off					
QP	3,226	acre-ft/yr	0.5		29501.2	87.9	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6		29960.7	89.3	29800.0	88.8	-0.5		0.5	
CR	100	mg/L	0.7		30362.4	90.5	30100.0	89.7	-0.8		0.8	
C0	26,000	mg/L	0.8		30713.6	91.6	31400.0	93.6	2.1		2.1	
			0.9		31020.6	92.5	TSW Off					
			1		31289.0	93.3	TSW Pumping Restart 5/2/16					
a	1.34		1.1		31523.6	94.0	32200.0	96.1	2.0		2.0	
b	44,565		1.2		31728.8	94.6	31000.0	92.4	-2.2		2.2	
			1.3		31908.1	95.2	30800.0	91.8	-3.4		3.4	
			1.4		32064.9	95.7	31200.0	93.0	-2.6		2.6	
			1.5		32201.9	96.1	31400.0	93.6	-2.4		2.4	
			1.6		32321.8	96.4	31800.0	94.8	-1.6	0.00	1.6	2.45
			2		32668.1	97.5						
			2.5		32906.2	98.2						
			3		33027.8	98.6						
			4		33121.5	98.9						
			5		33146.0	98.9						
			6		33152.4	98.9						
			7		33154.0	99.0						
			8		33154.5	99.0						
			9		33154.6	99.0						
			10		33154.6	99.0						
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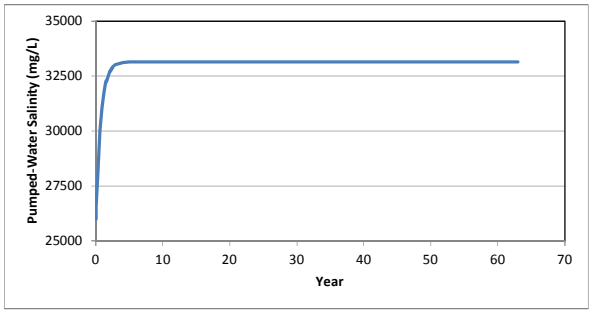

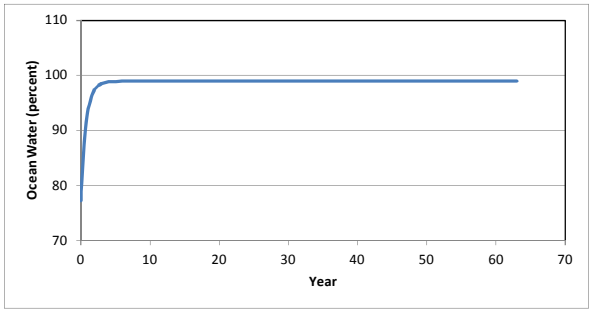

Table C-2b. OWP Analysis for Test Slant Well with Initial TDS of 24,000 mg/L and Specific Yield of 0.15.

Parameters			t (yr)	C	Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres										
B	200.0	ft	0		24000.0	71.2	25400.0	75.5				
ϕ	0.15		0.06		24709.3	73.4	27600.0	82.1	8.8		8.8	
V	2,400.0	acre-ft	0.12		25363.7	75.3	29100.0	86.7	11.3		11.3	
QS	3,193	acre-ft/yr	0.3		27038.0	80.4	TSW Off					
QR	33	acre-ft/yr	0.4		27807.3	82.7	TSW Off					
QP	3,226	acre-ft/yr	0.5		28479.9	84.8	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6		29067.8	86.6	29800.0	88.8	2.2		2.2	
CR	100	mg/L	0.7		29581.8	88.1	30100.0	89.7	1.6		1.6	
C0	24,000	mg/L	0.8		30031.2	89.5	31400.0	93.6	4.1		4.1	
			0.9		30424.0	90.7	TSW Off					
			1		30767.5	91.7	TSW Pumping Restart 5/2/16					
a	1.34		1.1		31067.7	92.6	32200.0	96.1	3.4		3.4	
b	44,565		1.2		31330.2	93.4	31000.0	92.4	-1.0		1.0	
			1.3		31559.7	94.1	30800.0	91.8	-2.3		2.3	
			1.4		31760.3	94.7	31200.0	93.0	-1.7		1.7	
			1.5		31935.6	95.3	31400.0	93.6	-1.6		1.6	
			1.6		32089.0	95.7	31800.0	94.8	-0.9	2.18	0.9	3.54
			2		32532.2	97.1						
			2.5		32836.8	98.0						
			3		32992.3	98.5						
			4		33112.3	98.8						
			5		33143.6	98.9						
			6		33151.7	98.9						
			7		33153.9	99.0						
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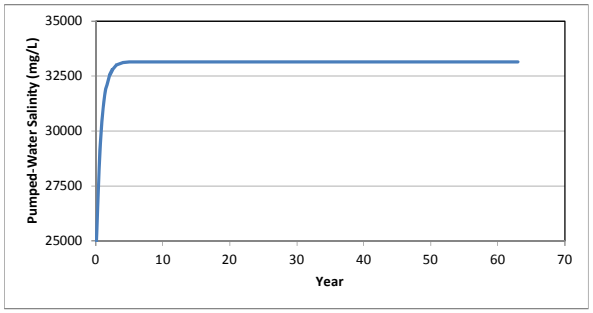

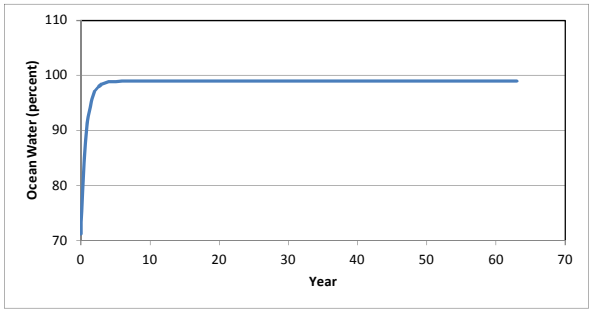

Table C-2c. OWP Analysis for Test Slant Well with Initial TDS of 28,000 mg/L and Specific Yield of 0.15.

Parameters			t (yr)	C	Predicted (mg/L)	OWP Predicted (percent)	C Actual (mg/L)	OWP Actual (percent)	OWP Difference (Actual - Predicted)	Avg. OWP Difference	OWP Abs. Difference (Actual - Predicted)	Abs. OWP Difference
A	80	acres										
B	200.0	ft	0		28000.0	83.3	25400.0	75.5				
ϕ	0.15		0.06		28399.4	84.5	27600.0	82.1	-2.4		2.4	
V	2,400.0	acre-ft	0.12		28767.8	85.7	29100.0	86.7	1.0		1.0	
QS	3,193	acre-ft/yr	0.3		29710.6	88.5	TSW Off					
QR	33	acre-ft/yr	0.4		30143.8	89.8	TSW Off					
QP	3,226	acre-ft/yr	0.5		30522.4	91.0	TSW Pumping Restart 10/27/15					
CS	33,500	mg/L	0.6		30853.5	92.0	29800.0	88.8	-3.2		3.2	
CR	100	mg/L	0.7		31142.9	92.9	30100.0	89.7	-3.2		3.2	
C0	28,000	mg/L	0.8		31395.9	93.6	31400.0	93.6	0.0		0.0	
			0.9		31617.1	94.3	TSW Off					
			1		31810.5	94.9	TSW Pumping Restart 5/2/16					
a	1.34		1.1		31979.6	95.4	32200.0	96.1	0.7		0.7	
b	44,565		1.2		32127.4	95.8	31000.0	92.4	-3.4		3.4	
			1.3		32256.6	96.2	30800.0	91.8	-4.4		4.4	
			1.4		32369.5	96.6	31200.0	93.0	-3.5		3.5	
			1.5		32468.3	96.9	31400.0	93.6	-3.2		3.2	
			1.6		32554.6	97.1	31800.0	94.8	-2.3	-2.18	2.3	2.49
			2		32804.1	97.9						
			2.5		32975.6	98.4						
			3		33063.2	98.7						
			4		33130.8	98.9						
			5		33148.4	98.9						
			6		33153.0	98.9						
			7		33154.2	99.0						
			8		33154.5	99.0						
			9		33154.6	99.0						
			10		33154.6	99.0						
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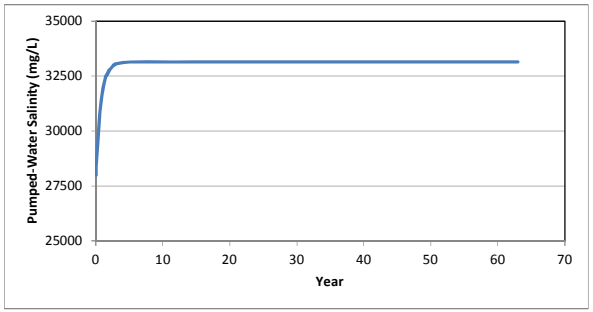

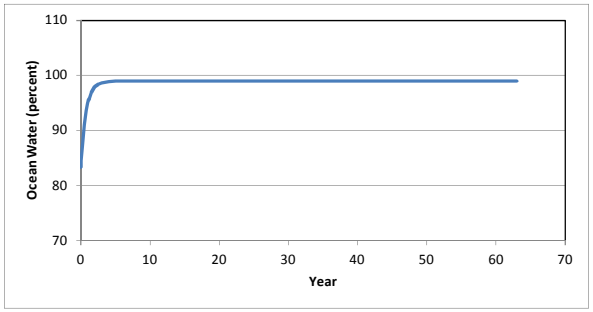

ATTACHMENT D

Table D-1. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0004.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,710	acres			
B	202	ft	0	26000.0	77.3
ϕ	0.15		1	27745.0	82.6
V	51,813.0	acre-ft	2	28993.1	86.3
QS	16,650	acre-ft/yr	3	29885.8	89.0
QR	713	acre-ft/yr	4	30524.3	91.0
QP	17,363	acre-ft/yr	5	30981.1	92.4
CS	33,500	mg/L	6	31307.7	93.4
CR	100	mg/L	7	31541.4	94.1
C0	26,000	mg/L	8	31708.5	94.6
			9	31828.0	94.9
			10	31913.5	95.2
a	0.34		11	31974.7	95.4
b	10,766		12	32018.4	95.5
			13	32049.7	95.6
			14	32072.1	95.7
			15	32088.1	95.7
			16	32099.6	95.8
			17	32107.7	95.8
			18	32113.6	95.8
			19	32117.8	95.8
			20	32120.8	95.8
			21	32122.9	95.8
			22	32124.5	95.8
			23	32125.6	95.8
			24	32126.3	95.8
			25	32126.9	95.8
			26	32127.3	95.8
			27	32127.6	95.8
			28	32127.8	95.8
			29	32127.9	95.8
			30	32128.1	95.8
			31	32128.1	95.8
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			33	32128.2	95.8
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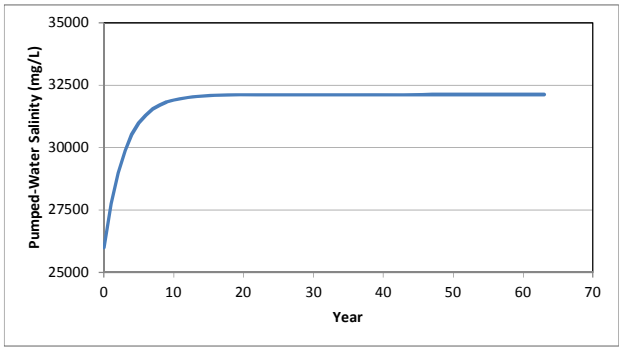

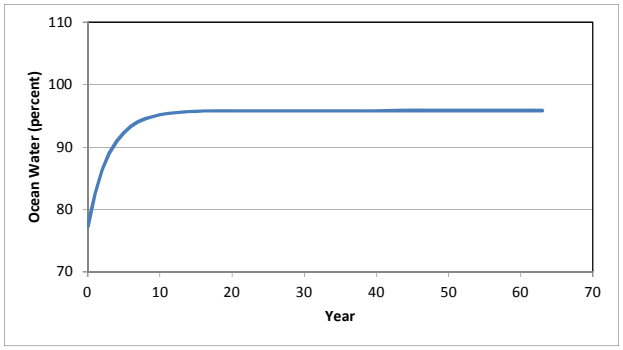

Table D-2. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0007.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	995	acres			
B	164	ft	0	26000.0	77.3
ϕ	0.15		1	29404.8	87.6
V	24,477.0	acre-ft	2	31079.8	92.7
QS	16,948	acre-ft/yr	3	31903.9	95.2
QR	415	acre-ft/yr	4	32309.3	96.4
QP	17,363	acre-ft/yr	5	32508.7	97.0
CS	33,500	mg/L	6	32606.8	97.3
CR	100	mg/L	7	32655.1	97.4
C0	26,000	mg/L	8	32678.9	97.5
			9	32690.5	97.5
			10	32696.3	97.6
a	0.71		11	32699.1	97.6
b	23,197		12	32700.5	97.6
			13	32701.2	97.6
			14	32701.5	97.6
			15	32701.7	97.6
			16	32701.8	97.6
			17	32701.8	97.6
			18	32701.8	97.6
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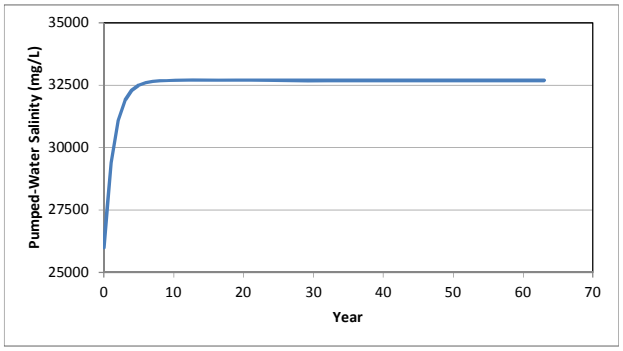

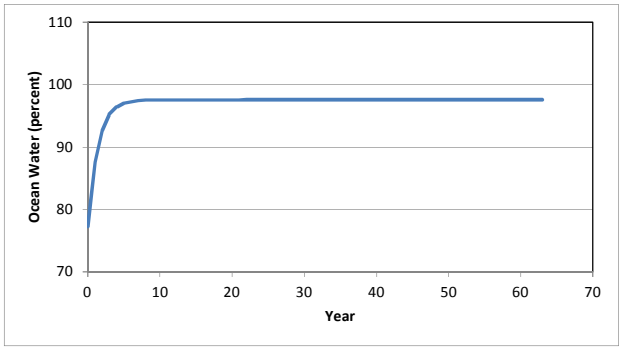

Table D-3. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.15		1	31168.6	92.9
V	13,357.8	acre-ft	2	32577.4	97.2
QS	17,158	acre-ft/yr	3	32961.4	98.4
QR	205	acre-ft/yr	4	33066.1	98.7
QP	17,363	acre-ft/yr	5	33094.6	98.8
CS	33,500	mg/L	6	33102.4	98.8
CR	100	mg/L	7	33104.5	98.8
C0	26,000	mg/L	8	33105.1	98.8
			9	33105.3	98.8
			10	33105.3	98.8
a	1.30		11	33105.3	98.8
b	43,032		12	33105.3	98.8
			13	33105.3	98.8
			14	33105.3	98.8
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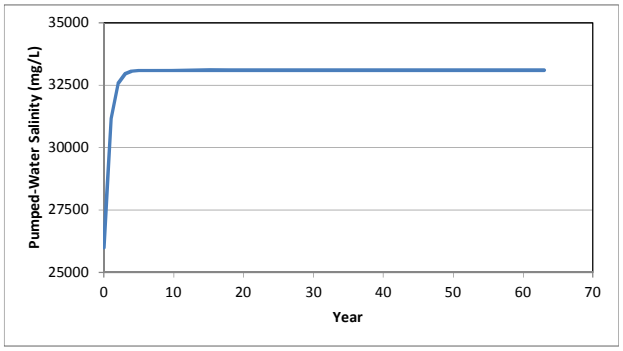

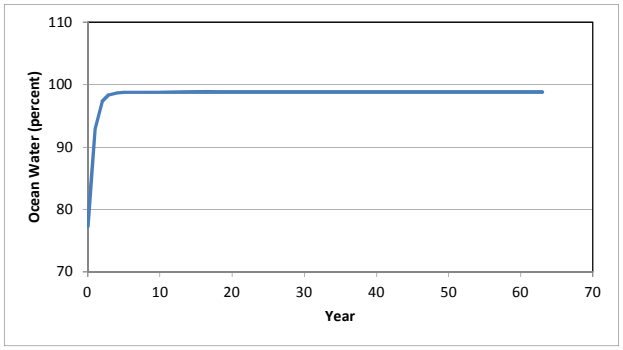

Table D-4. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Test Slant Well Groundwater TDS.

Parameters		
A	492	acres
B	181	ft
ϕ	0.15	
V	13,357.8	acre-ft
QS	17,158	acre-ft/yr
QR	205	acre-ft/yr
QP	17,363	acre-ft/yr
CS	33,500	mg/L
CR	100	mg/L
C0	25,400	mg/L
a	1.30	
b	43,032	

t (yr)	C (mg/L)	OWP (percent)
0	25400.0	75.5
1	31005.1	92.4
2	32532.9	97.1
3	32949.3	98.3
4	33062.8	98.7
5	33093.7	98.8
6	33102.2	98.8
7	33104.5	98.8
8	33105.1	98.8
9	33105.3	98.8
10	33105.3	98.8
11	33105.3	98.8
12	33105.3	98.8
13	33105.3	98.8
14	33105.3	98.8
15	33105.3	98.8
16	33105.3	98.8
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32	33105.3	98.8
33	33105.3	98.8
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39	33105.3	98.8
40	33105.3	98.8
41	33105.3	98.8
42	33105.3	98.8
43	33105.3	98.8
44	33105.3	98.8
45	33105.3	98.8
46	33105.3	98.8
47	33105.3	98.8
48	33105.3	98.8
49	33105.3	98.8
50	33105.3	98.8
51	33105.3	98.8
52	33105.3	98.8
53	33105.3	98.8
54	33105.3	98.8
55	33105.3	98.8
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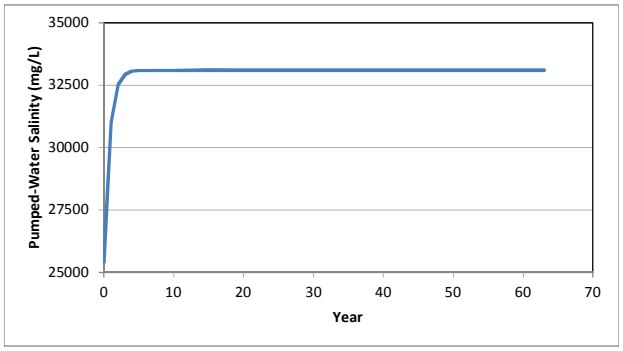

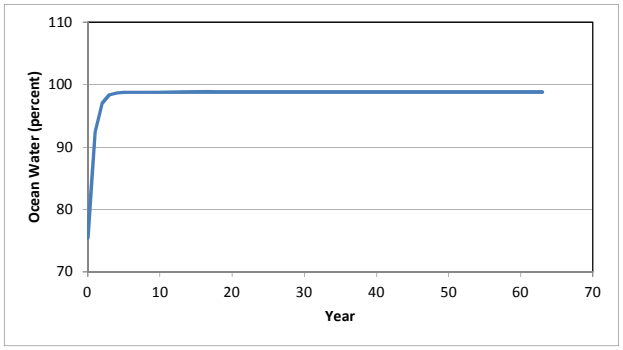

Table D-5. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Minimum Groundwater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	24000.0	71.2
ϕ	0.15		1	30623.4	91.3
V	13,357.8	acre-ft	2	32428.8	96.8
QS	17,158	acre-ft/yr	3	32920.9	98.2
QR	205	acre-ft/yr	4	33055.1	98.7
QP	17,363	acre-ft/yr	5	33091.6	98.8
CS	33,500	mg/L	6	33101.6	98.8
CR	100	mg/L	7	33104.3	98.8
C0	24,000	mg/L	8	33105.1	98.8
			9	33105.3	98.8
			10	33105.3	98.8
a	1.30		11	33105.3	98.8
b	43,032		12	33105.3	98.8
			13	33105.3	98.8
			14	33105.3	98.8
			15	33105.3	98.8
			16	33105.3	98.8
			17	33105.3	98.8
			18	33105.3	98.8
			19	33105.3	98.8
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			26	33105.3	98.8
			27	33105.3	98.8
			28	33105.3	98.8
			29	33105.3	98.8
			30	33105.3	98.8
			31	33105.3	98.8
			32	33105.3	98.8
			33	33105.3	98.8
			34	33105.3	98.8
			35	33105.3	98.8
			36	33105.3	98.8
			37	33105.3	98.8
			38	33105.3	98.8
			39	33105.3	98.8
			40	33105.3	98.8
			41	33105.3	98.8
			42	33105.3	98.8
			43	33105.3	98.8
			44	33105.3	98.8
			45	33105.3	98.8
			46	33105.3	98.8
			47	33105.3	98.8
			48	33105.3	98.8
			49	33105.3	98.8
			50	33105.3	98.8
			51	33105.3	98.8
			52	33105.3	98.8
			53	33105.3	98.8
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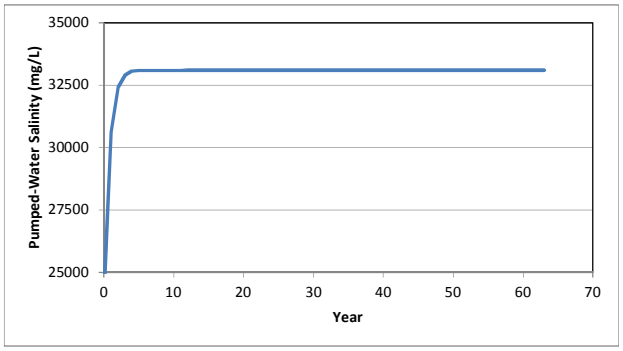

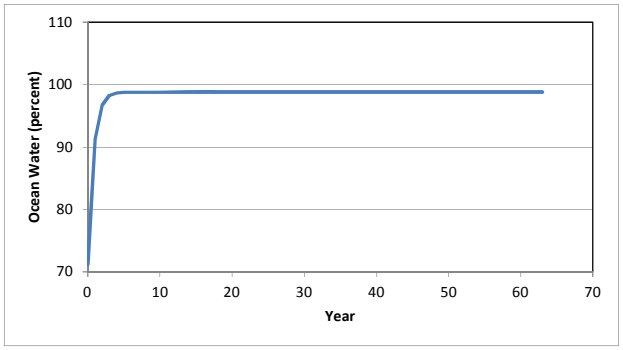

Table D-6. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Maximum Groundwater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	28000.0	83.3
ϕ	0.15		1	31713.7	94.6
V	13,357.8	acre-ft	2	32726.0	97.7
QS	17,158	acre-ft/yr	3	33001.9	98.5
QR	205	acre-ft/yr	4	33077.2	98.7
QP	17,363	acre-ft/yr	5	33097.7	98.8
CS	33,500	mg/L	6	33103.2	98.8
CR	100	mg/L	7	33104.8	98.8
C0	28,000	mg/L	8	33105.2	98.8
			9	33105.3	98.8
			10	33105.3	98.8
a	1.30		11	33105.3	98.8
b	43,032		12	33105.3	98.8
			13	33105.3	98.8
			14	33105.3	98.8
			15	33105.3	98.8
			16	33105.3	98.8
			17	33105.3	98.8
			18	33105.3	98.8
			19	33105.3	98.8
			20	33105.3	98.8
			21	33105.3	98.8
			22	33105.3	98.8
			23	33105.3	98.8
			24	33105.3	98.8
			25	33105.3	98.8
			26	33105.3	98.8
			27	33105.3	98.8
			28	33105.3	98.8
			29	33105.3	98.8
			30	33105.3	98.8
			31	33105.3	98.8
			32	33105.3	98.8
			33	33105.3	98.8
			34	33105.3	98.8
			35	33105.3	98.8
			36	33105.3	98.8
			37	33105.3	98.8
			38	33105.3	98.8
			39	33105.3	98.8
			40	33105.3	98.8
			41	33105.3	98.8
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			45	33105.3	98.8
			46	33105.3	98.8
			47	33105.3	98.8
			48	33105.3	98.8
			49	33105.3	98.8
			50	33105.3	98.8
			51	33105.3	98.8
			52	33105.3	98.8
			53	33105.3	98.8
			54	33105.3	98.8
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			56	33105.3	98.8
			57	33105.3	98.8
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			59	33105.3	98.8
			60	33105.3	98.8
			61	33105.3	98.8
			62	33105.3	98.8
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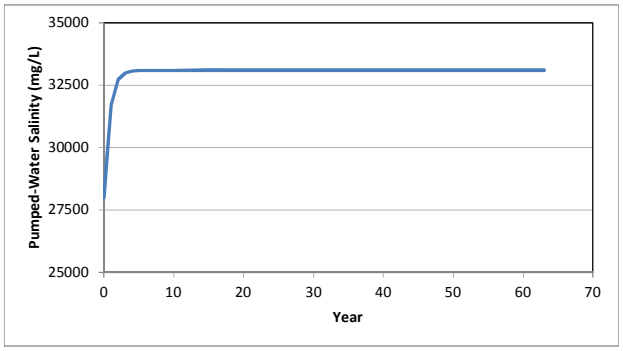

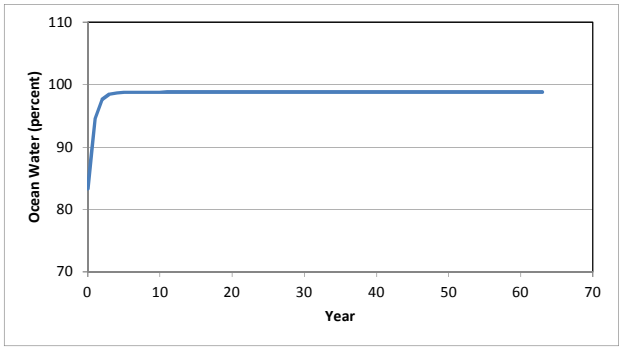

Table D-7. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 and Minimum Porosity.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.05		1	32961.4	98.4
V	4,452.6	acre-ft	2	33102.4	98.8
QS	17,158	acre-ft/yr	3	33105.3	98.8
QR	205	acre-ft/yr	4	33105.3	98.8
QP	17,363	acre-ft/yr	5	33105.3	98.8
CS	33,500	mg/L	6	33105.3	98.8
CR	100	mg/L	7	33105.3	98.8
C0	26,000	mg/L	8	33105.3	98.8
			9	33105.3	98.8
			10	33105.3	98.8
a	3.90		11	33105.3	98.8
b	129,095		12	33105.3	98.8
			13	33105.3	98.8
			14	33105.3	98.8
			15	33105.3	98.8
			16	33105.3	98.8
			17	33105.3	98.8
			18	33105.3	98.8
			19	33105.3	98.8
			20	33105.3	98.8
			21	33105.3	98.8
			22	33105.3	98.8
			23	33105.3	98.8
			24	33105.3	98.8
			25	33105.3	98.8
			26	33105.3	98.8
			27	33105.3	98.8
			28	33105.3	98.8
			29	33105.3	98.8
			30	33105.3	98.8
			31	33105.3	98.8
			32	33105.3	98.8
			33	33105.3	98.8
			34	33105.3	98.8
			35	33105.3	98.8
			36	33105.3	98.8
			37	33105.3	98.8
			38	33105.3	98.8
			39	33105.3	98.8
			40	33105.3	98.8
			41	33105.3	98.8
			42	33105.3	98.8
			43	33105.3	98.8
			44	33105.3	98.8
			45	33105.3	98.8
			46	33105.3	98.8
			47	33105.3	98.8
			48	33105.3	98.8
			49	33105.3	98.8
			50	33105.3	98.8
			51	33105.3	98.8
			52	33105.3	98.8
			53	33105.3	98.8
			54	33105.3	98.8
			55	33105.3	98.8
			56	33105.3	98.8
			57	33105.3	98.8
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			59	33105.3	98.8
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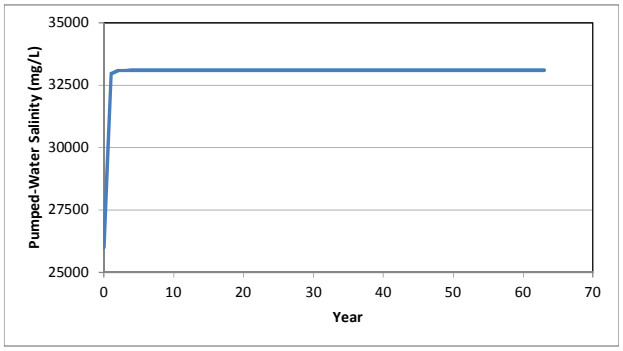

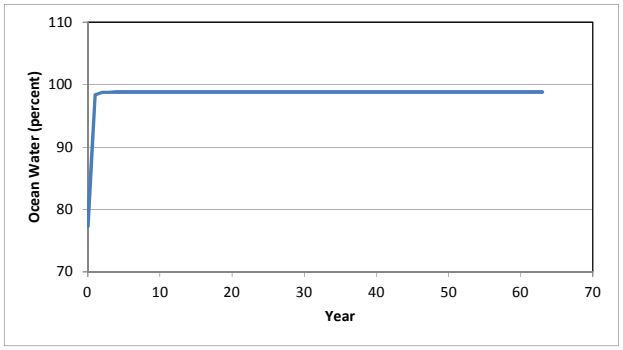

Table D-8. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 and Maximum Porosity.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.25		1	29847.9	88.9
V	22,263.0	acre-ft	2	31612.0	94.3
QS	17,158	acre-ft/yr	3	32420.7	96.7
QR	205	acre-ft/yr	4	32791.5	97.9
QP	17,363	acre-ft/yr	5	32961.4	98.4
CS	33,500	mg/L	6	33039.4	98.6
CR	100	mg/L	7	33075.1	98.7
C0	26,000	mg/L	8	33091.5	98.8
			9	33099.0	98.8
			10	33102.4	98.8
a	0.78		11	33104.0	98.8
b	25,819		12	33104.7	98.8
			13	33105.1	98.8
			14	33105.2	98.8
			15	33105.3	98.8
			16	33105.3	98.8
			17	33105.3	98.8
			18	33105.3	98.8
			19	33105.3	98.8
			20	33105.3	98.8
			21	33105.3	98.8
			22	33105.3	98.8
			23	33105.3	98.8
			24	33105.3	98.8
			25	33105.3	98.8
			26	33105.3	98.8
			27	33105.3	98.8
			28	33105.3	98.8
			29	33105.3	98.8
			30	33105.3	98.8
			31	33105.3	98.8
			32	33105.3	98.8
			33	33105.3	98.8
			34	33105.3	98.8
			35	33105.3	98.8
			36	33105.3	98.8
			37	33105.3	98.8
			38	33105.3	98.8
			39	33105.3	98.8
			40	33105.3	98.8
			41	33105.3	98.8
			42	33105.3	98.8
			43	33105.3	98.8
			44	33105.3	98.8
			45	33105.3	98.8
			46	33105.3	98.8
			47	33105.3	98.8
			48	33105.3	98.8
			49	33105.3	98.8
			50	33105.3	98.8
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			59	33105.3	98.8
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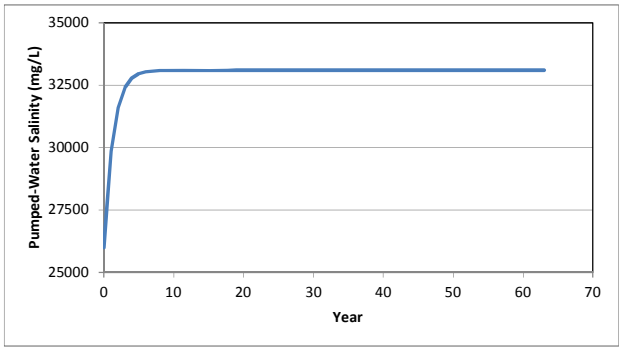

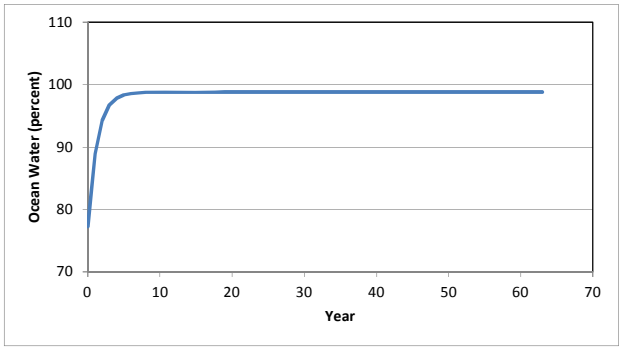

Table D-9. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Minimum Recharge TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.15		1	31167.8	92.9
V	13,357.8	acre-ft	2	32576.4	97.2
QS	17,158	acre-ft/yr	3	32960.4	98.4
QR	205	acre-ft/yr	4	33065.1	98.7
QP	17,363	acre-ft/yr	5	33093.6	98.8
CS	33,500	mg/L	6	33101.4	98.8
CR	10	mg/L	7	33103.5	98.8
C0	26,000	mg/L	8	33104.1	98.8
			9	33104.2	98.8
			10	33104.3	98.8
a	1.30		11	33104.3	98.8
b	43,030		12	33104.3	98.8
			13	33104.3	98.8
			14	33104.3	98.8
			15	33104.3	98.8
			16	33104.3	98.8
			17	33104.3	98.8
			18	33104.3	98.8
			19	33104.3	98.8
			20	33104.3	98.8
			21	33104.3	98.8
			22	33104.3	98.8
			23	33104.3	98.8
			24	33104.3	98.8
			25	33104.3	98.8
			26	33104.3	98.8
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			28	33104.3	98.8
			29	33104.3	98.8
			30	33104.3	98.8
			31	33104.3	98.8
			32	33104.3	98.8
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			34	33104.3	98.8
			35	33104.3	98.8
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			57	33104.3	98.8
			58	33104.3	98.8
			59	33104.3	98.8
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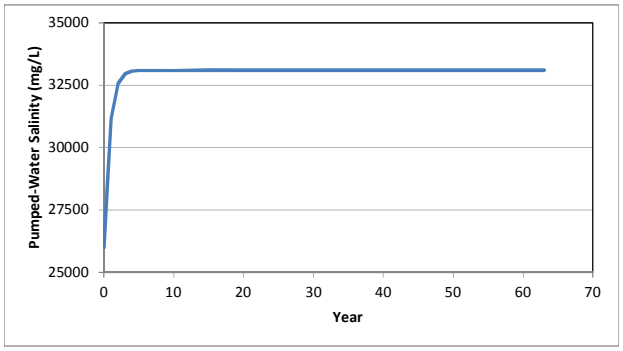
			61	33104.3	98.8
			62	33104.3	98.8
			63	33104.3	98.8



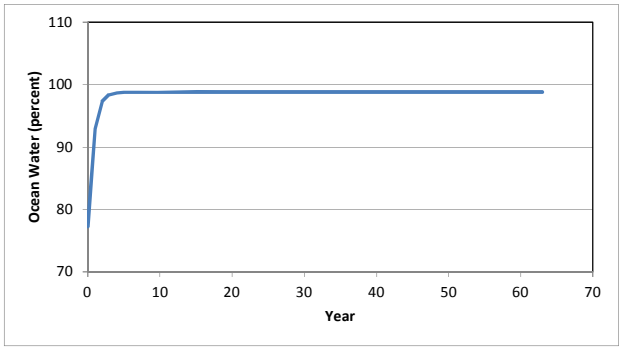


Table D-10. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Maximum Recharge TDS.

Parameters		
A	492	acres
B	181	ft
ϕ	0.15	
V	13,357.8	acre-ft
QS	17,158	acre-ft/yr
QR	205	acre-ft/yr
QP	17,363	acre-ft/yr
CS	33,500	mg/L
CR	200	mg/L
C0	26,000	mg/L
a	1.30	
b	43,033	

t (yr)	C (mg/L)	OWP (percent)
0	26000.0	77.3
1	31169.5	92.9
2	32578.5	97.2
3	32962.6	98.4
4	33067.3	98.7
5	33095.8	98.8
6	33103.6	98.8
7	33105.7	98.8
8	33106.3	98.8
9	33106.5	98.8
10	33106.5	98.8
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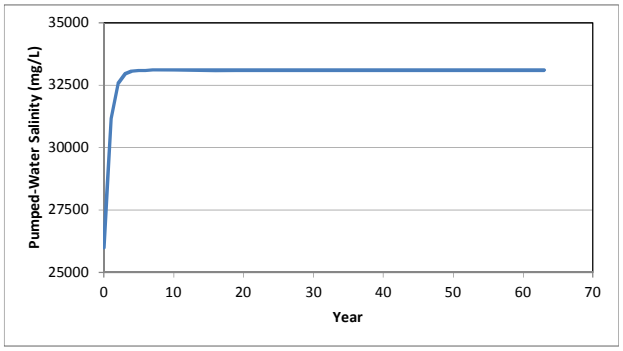

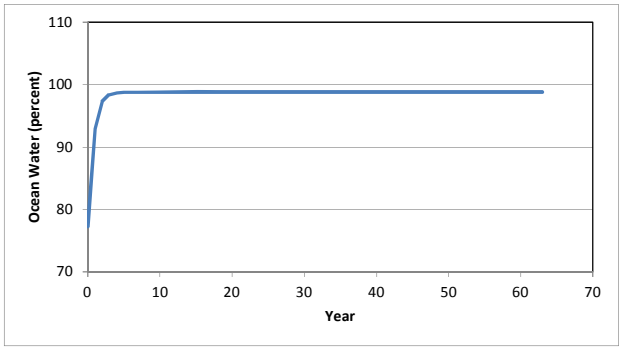

Table D-11. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 and Minimum Groundwater Recharge.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.15		1	31369.6	93.5
V	13,357.8	acre-ft	2	32833.3	98.0
QS	17,302	acre-ft/yr	3	33232.2	99.2
QR	62	acre-ft/yr	4	33340.9	99.5
QP	17,363	acre-ft/yr	5	33370.6	99.6
CS	33,500	mg/L	6	33378.7	99.6
CR	100	mg/L	7	33380.9	99.6
C0	26,000	mg/L	8	33381.5	99.6
			9	33381.6	99.6
			10	33381.7	99.6
a	1.30		11	33381.7	99.6
b	43,391		12	33381.7	99.6
			13	33381.7	99.6
			14	33381.7	99.6
			15	33381.7	99.6
			16	33381.7	99.6
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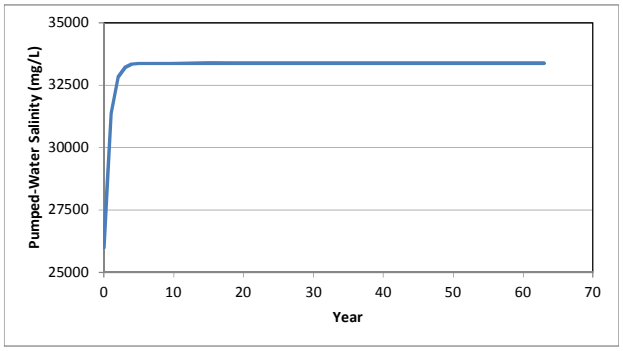

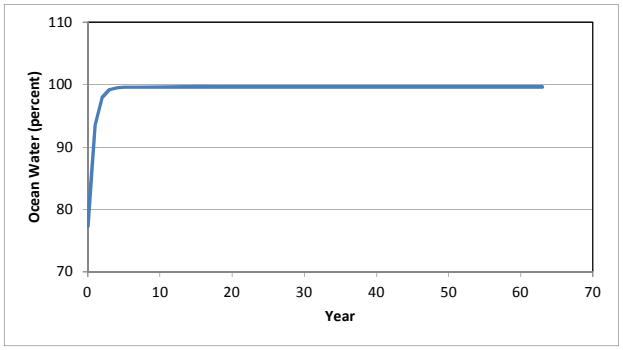

Table D-12. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 and Maximum Groundwater Recharge.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	77.3
ϕ	0.15		1	31030.9	92.5
V	13,357.8	acre-ft	2	32402.2	96.7
QS	17,059	acre-ft/yr	3	32776.0	97.8
QR	304	acre-ft/yr	4	32877.9	98.1
QP	17,363	acre-ft/yr	5	32905.6	98.2
CS	33,500	mg/L	6	32913.2	98.2
CR	100	mg/L	7	32915.3	98.2
C0	26,000	mg/L	8	32915.8	98.2
			9	32916.0	98.2
			10	32916.0	98.2
a	1.30		11	32916.1	98.2
b	42,786		12	32916.1	98.2
			13	32916.1	98.2
			14	32916.1	98.2
			15	32916.1	98.2
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			35	32916.1	98.2
			36	32916.1	98.2
			37	32916.1	98.2
			38	32916.1	98.2
			39	32916.1	98.2
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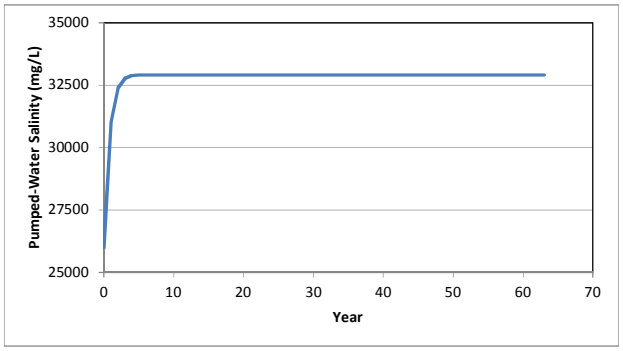

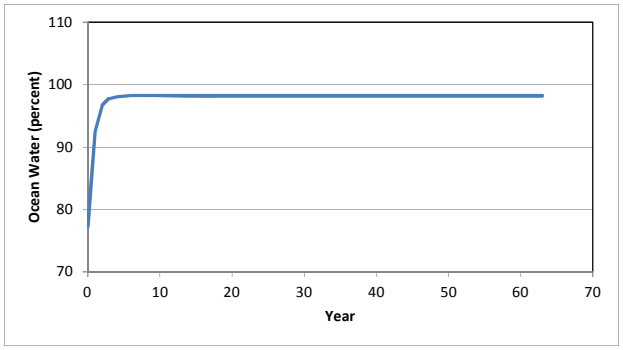

Table D-13. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Minimum Seawater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	78.5
ϕ	0.15		1	30809.2	93.3
V	13,357.8	acre-ft	2	32120.0	97.3
QS	17,158	acre-ft/yr	3	32477.4	98.4
QR	205	acre-ft/yr	4	32574.8	98.7
QP	17,363	acre-ft/yr	5	32601.3	98.8
CS	33,000	mg/L	6	32608.5	98.8
CR	100	mg/L	7	32610.5	98.8
C0	26,000	mg/L	8	32611.0	98.8
			9	32611.2	98.8
			10	32611.2	98.8
a	1.30		11	32611.2	98.8
b	42,389		12	32611.2	98.8
			13	32611.2	98.8
			14	32611.2	98.8
			15	32611.2	98.8
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			50	32611.2	98.8
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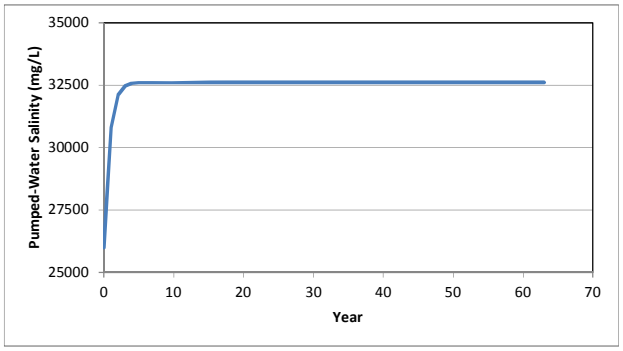

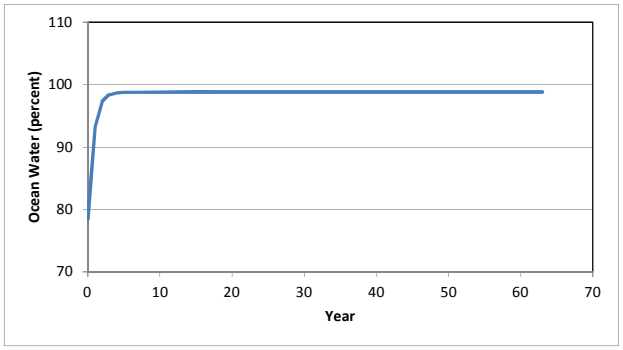

Table D-14. OWP Analysis for 15.5 MGD with Hydraulic Gradient of 0.0011 with Maximum Seawater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	492	acres			
B	181	ft	0	26000.0	73.9
ϕ	0.15		1	32246.8	92.0
V	13,357.8	acre-ft	2	33949.6	97.0
QS	17,158	acre-ft/yr	3	34413.7	98.3
QR	205	acre-ft/yr	4	34540.2	98.7
QP	17,363	acre-ft/yr	5	34574.7	98.8
CS	35,000	mg/L	6	34584.1	98.8
CR	100	mg/L	7	34586.7	98.8
C0	26,000	mg/L	8	34587.4	98.8
			9	34587.5	98.8
			10	34587.6	98.8
a	1.30		11	34587.6	98.8
b	44,958		12	34587.6	98.8
			13	34587.6	98.8
			14	34587.6	98.8
			15	34587.6	98.8
			16	34587.6	98.8
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			18	34587.6	98.8
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			20	34587.6	98.8
			21	34587.6	98.8
			22	34587.6	98.8
			23	34587.6	98.8
			24	34587.6	98.8
			25	34587.6	98.8
			26	34587.6	98.8
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			28	34587.6	98.8
			29	34587.6	98.8
			30	34587.6	98.8
			31	34587.6	98.8
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			37	34587.6	98.8
			38	34587.6	98.8
			39	34587.6	98.8
			40	34587.6	98.8
			41	34587.6	98.8
			42	34587.6	98.8
			43	34587.6	98.8
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			45	34587.6	98.8
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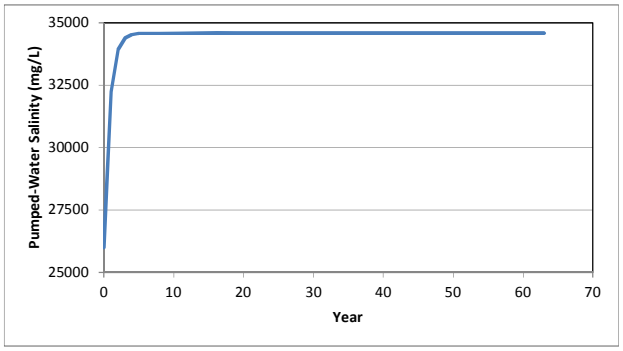

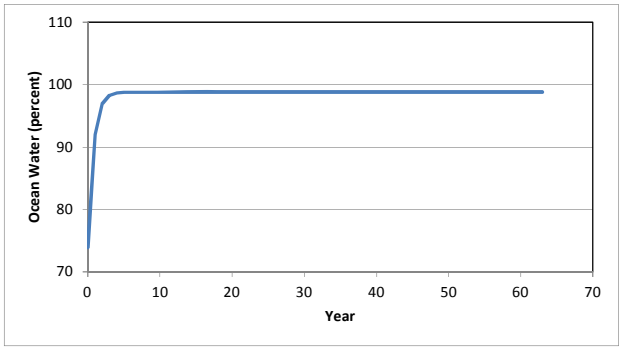

Table D-15. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0004.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	2,370	acres			
B	240	ft	0	26000.0	77.3
ϕ	0.15		1	27702.9	82.4
V	85,320.0	acre-ft	2	28943.9	86.2
QS	26,012	acre-ft/yr	3	29848.2	88.9
QR	988	acre-ft/yr	4	30507.2	90.9
QP	27,000	acre-ft/yr	5	30987.4	92.4
CS	33,500	mg/L	6	31337.4	93.4
CR	100	mg/L	7	31592.4	94.2
C0	26,000	mg/L	8	31778.2	94.8
			9	31913.6	95.2
			10	32012.3	95.5
a	0.32		11	32084.3	95.7
b	10,214		12	32136.7	95.9
			13	32174.9	96.0
			14	32202.7	96.1
			15	32223.0	96.1
			16	32237.7	96.2
			17	32248.5	96.2
			18	32256.4	96.2
			19	32262.1	96.2
			20	32266.3	96.3
			21	32269.3	96.3
			22	32271.5	96.3
			23	32273.1	96.3
			24	32274.3	96.3
			25	32275.1	96.3
			26	32275.8	96.3
			27	32276.2	96.3
			28	32276.6	96.3
			29	32276.8	96.3
			30	32277.0	96.3
			31	32277.1	96.3
			32	32277.2	96.3
			33	32277.3	96.3
			34	32277.3	96.3
			35	32277.4	96.3
			36	32277.4	96.3
			37	32277.4	96.3
			38	32277.4	96.3
			39	32277.4	96.3
			40	32277.4	96.3
			41	32277.4	96.3
			42	32277.4	96.3
			43	32277.4	96.3
			44	32277.4	96.3
			45	32277.4	96.3
			46	32277.4	96.3
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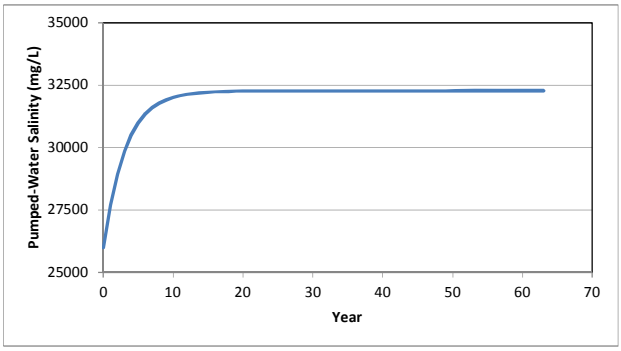

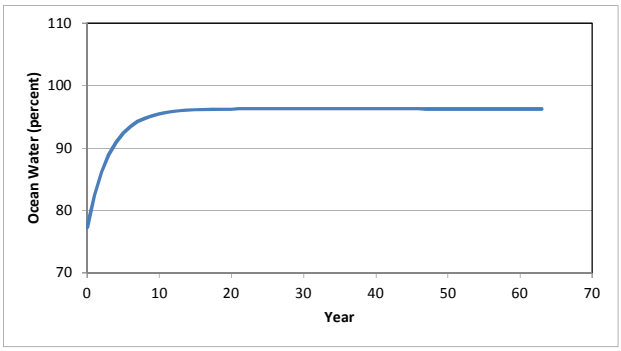

Table D-16. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0007.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,467	acres			
B	188	ft	0	26000.0	77.3
ϕ	0.15		1	29232.3	87.1
V	41,369.4	acre-ft	2	30915.2	92.2
QS	26,388	acre-ft/yr	3	31791.5	94.8
QR	612	acre-ft/yr	4	32247.7	96.2
QP	27,000	acre-ft/yr	5	32485.2	96.9
CS	33,500	mg/L	6	32608.9	97.3
CR	100	mg/L	7	32673.3	97.5
C0	26,000	mg/L	8	32706.8	97.6
			9	32724.3	97.6
			10	32733.4	97.7
a	0.65		11	32738.1	97.7
b	21,370		12	32740.6	97.7
			13	32741.9	97.7
			14	32742.5	97.7
			15	32742.9	97.7
			16	32743.1	97.7
			17	32743.2	97.7
			18	32743.2	97.7
			19	32743.2	97.7
			20	32743.2	97.7
			21	32743.2	97.7
			22	32743.3	97.7
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			28	32743.3	97.7
			29	32743.3	97.7
			30	32743.3	97.7
			31	32743.3	97.7
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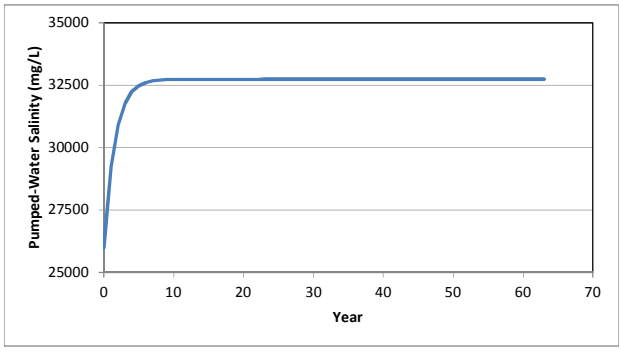

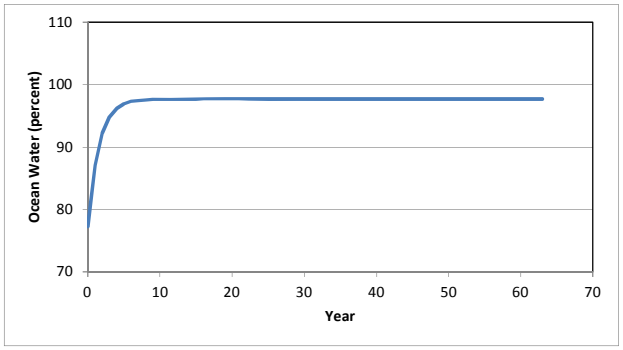

Table D-17. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.15		1	30284.6	90.3
V	27,656.4	acre-ft	2	31898.7	95.1
QS	26,494	acre-ft/yr	3	32506.8	97.0
QR	506	acre-ft/yr	4	32735.8	97.7
QP	27,000	acre-ft/yr	5	32822.1	97.9
CS	33,500	mg/L	6	32854.6	98.0
CR	100	mg/L	7	32866.9	98.1
C0	26,000	mg/L	8	32871.5	98.1
			9	32873.2	98.1
			10	32873.9	98.1
a	0.98		11	32874.1	98.1
b	32,094		12	32874.2	98.1
			13	32874.3	98.1
			14	32874.3	98.1
			15	32874.3	98.1
			16	32874.3	98.1
			17	32874.3	98.1
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			36	32874.3	98.1
			37	32874.3	98.1
			38	32874.3	98.1
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			40	32874.3	98.1
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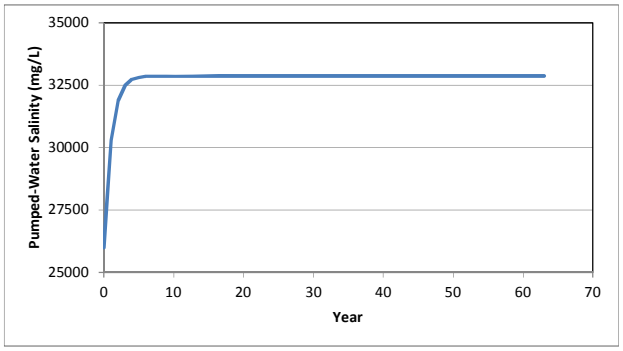

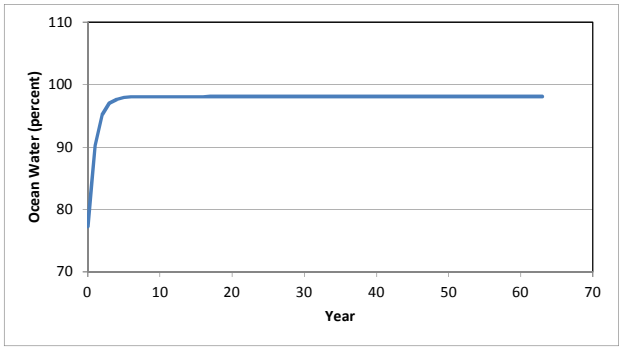

Table D-18. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 with Test Slant Well Groundwater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	25400.0	75.5
ϕ	0.15		1	30058.6	89.6
V	27,656.4	acre-ft	2	31813.6	94.9
QS	26,494	acre-ft/yr	3	32474.7	96.9
QR	506	acre-ft/yr	4	32723.8	97.6
QP	27,000	acre-ft/yr	5	32817.6	97.9
CS	33,500	mg/L	6	32852.9	98.0
CR	100	mg/L	7	32866.2	98.1
C0	25,400	mg/L	8	32871.2	98.1
			9	32873.1	98.1
			10	32873.9	98.1
a	0.98		11	32874.1	98.1
b	32,094		12	32874.2	98.1
			13	32874.3	98.1
			14	32874.3	98.1
			15	32874.3	98.1
			16	32874.3	98.1
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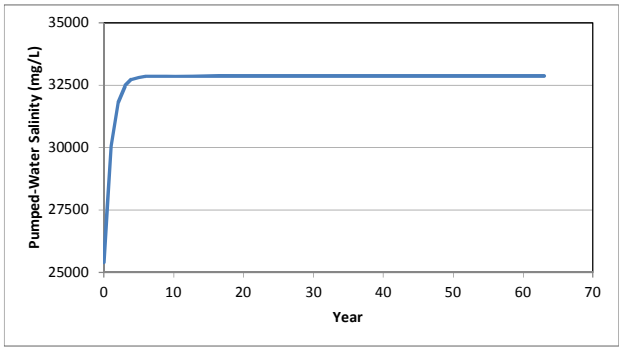

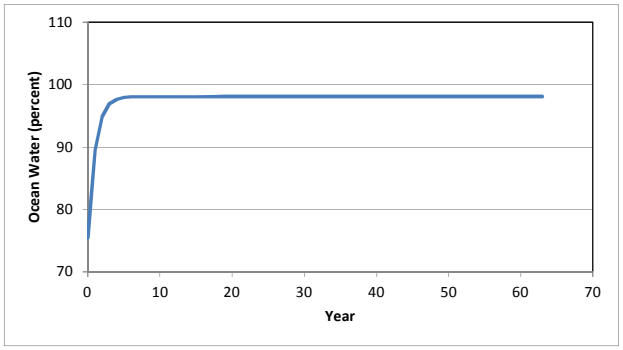

Table D-19. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 with Minimum Groundwater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	24000.0	71.2
ϕ	0.15		1	29531.2	88.0
V	27,656.4	acre-ft	2	31614.9	94.3
QS	26,494	acre-ft/yr	3	32399.9	96.7
QR	506	acre-ft/yr	4	32695.6	97.6
QP	27,000	acre-ft/yr	5	32807.0	97.9
CS	33,500	mg/L	6	32848.9	98.0
CR	100	mg/L	7	32864.7	98.1
C0	24,000	mg/L	8	32870.7	98.1
			9	32872.9	98.1
			10	32873.8	98.1
a	0.98		11	32874.1	98.1
b	32,094		12	32874.2	98.1
			13	32874.3	98.1
			14	32874.3	98.1
			15	32874.3	98.1
			16	32874.3	98.1
			17	32874.3	98.1
			18	32874.3	98.1
			19	32874.3	98.1
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			22	32874.3	98.1
			23	32874.3	98.1
			24	32874.3	98.1
			25	32874.3	98.1
			26	32874.3	98.1
			27	32874.3	98.1
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			50	32874.3	98.1
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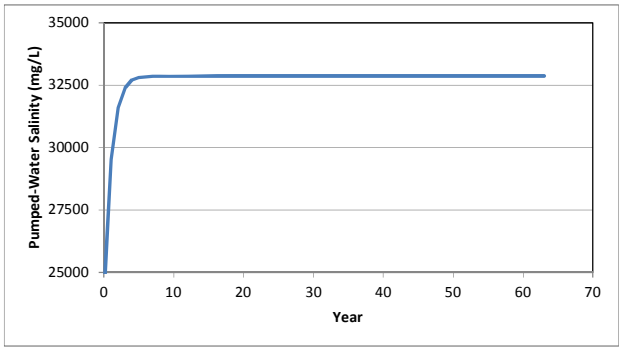

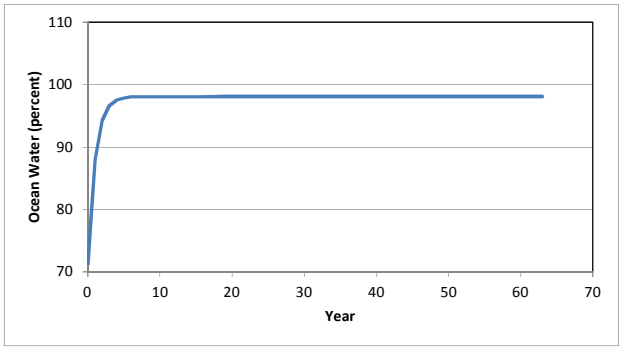

Table D-20. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 with Maximum Groundwater TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	28000.0	83.3
ϕ	0.15		1	31038.1	92.5
V	27,656.4	acre-ft	2	32182.6	96.0
QS	26,494	acre-ft/yr	3	32613.7	97.3
QR	506	acre-ft/yr	4	32776.1	97.8
QP	27,000	acre-ft/yr	5	32837.3	98.0
CS	33,500	mg/L	6	32860.3	98.1
CR	100	mg/L	7	32869.0	98.1
C0	28,000	mg/L	8	32872.3	98.1
			9	32873.5	98.1
			10	32874.0	98.1
a	0.98		11	32874.2	98.1
b	32,094		12	32874.2	98.1
			13	32874.3	98.1
			14	32874.3	98.1
			15	32874.3	98.1
			16	32874.3	98.1
			17	32874.3	98.1
			18	32874.3	98.1
			19	32874.3	98.1
			20	32874.3	98.1
			21	32874.3	98.1
			22	32874.3	98.1
			23	32874.3	98.1
			24	32874.3	98.1
			25	32874.3	98.1
			26	32874.3	98.1
			27	32874.3	98.1
			28	32874.3	98.1
			29	32874.3	98.1
			30	32874.3	98.1
			31	32874.3	98.1
			32	32874.3	98.1
			33	32874.3	98.1
			34	32874.3	98.1
			35	32874.3	98.1
			36	32874.3	98.1
			37	32874.3	98.1
			38	32874.3	98.1
			39	32874.3	98.1
			40	32874.3	98.1
			41	32874.3	98.1
			42	32874.3	98.1
			43	32874.3	98.1
			44	32874.3	98.1
			45	32874.3	98.1
			46	32874.3	98.1
			47	32874.3	98.1
			48	32874.3	98.1
			49	32874.3	98.1
			50	32874.3	98.1
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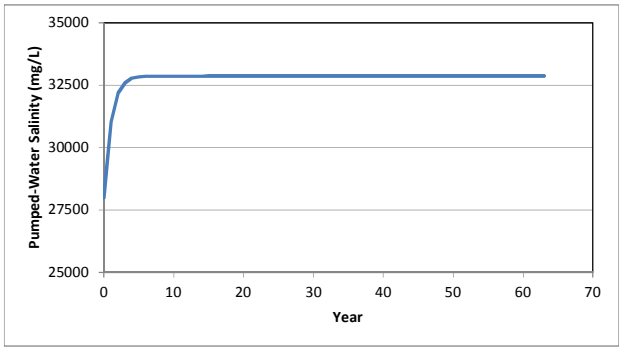

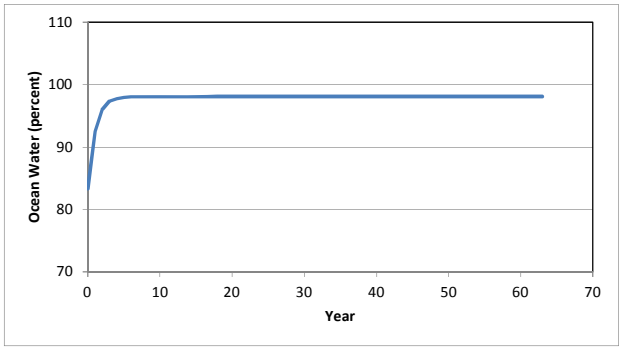

Table D-21. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 and Minimum Porosity.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.05		1	32506.8	97.0
V	9,218.8	acre-ft	2	32854.6	98.0
QS	26,494	acre-ft/yr	3	32873.2	98.1
QR	506	acre-ft/yr	4	32874.2	98.1
QP	27,000	acre-ft/yr	5	32874.3	98.1
CS	33,500	mg/L	6	32874.3	98.1
CR	100	mg/L	7	32874.3	98.1
C0	26,000	mg/L	8	32874.3	98.1
			9	32874.3	98.1
			10	32874.3	98.1
a	2.93		11	32874.3	98.1
b	96,282		12	32874.3	98.1
			13	32874.3	98.1
			14	32874.3	98.1
			15	32874.3	98.1
			16	32874.3	98.1
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			19	32874.3	98.1
			20	32874.3	98.1
			21	32874.3	98.1
			22	32874.3	98.1
			23	32874.3	98.1
			24	32874.3	98.1
			25	32874.3	98.1
			26	32874.3	98.1
			27	32874.3	98.1
			28	32874.3	98.1
			29	32874.3	98.1
			30	32874.3	98.1
			31	32874.3	98.1
			32	32874.3	98.1
			33	32874.3	98.1
			34	32874.3	98.1
			35	32874.3	98.1
			36	32874.3	98.1
			37	32874.3	98.1
			38	32874.3	98.1
			39	32874.3	98.1
			40	32874.3	98.1
			41	32874.3	98.1
			42	32874.3	98.1
			43	32874.3	98.1
			44	32874.3	98.1
			45	32874.3	98.1
			46	32874.3	98.1
			47	32874.3	98.1
			48	32874.3	98.1
			49	32874.3	98.1
			50	32874.3	98.1
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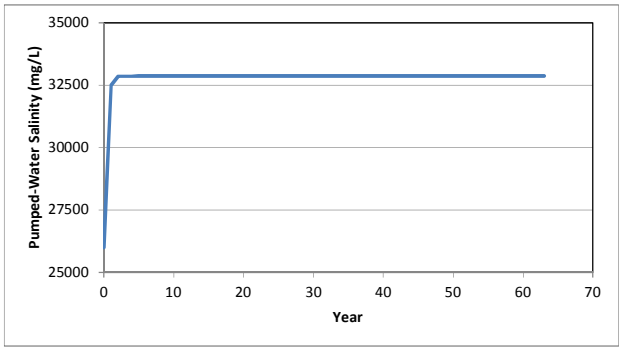

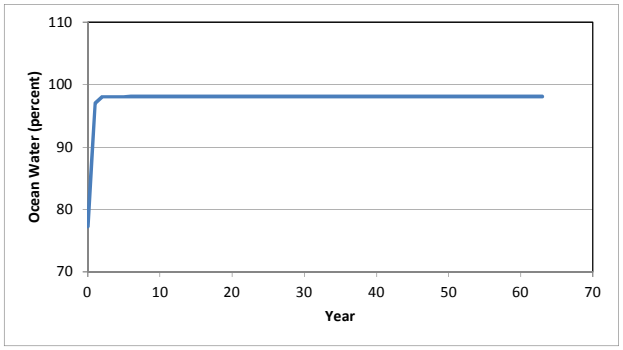

Table D-22. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 and Maximum Porosity.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.25		1	29047.5	86.5
V	46,094.0	acre-ft	2	30744.0	91.6
QS	26,494	acre-ft/yr	3	31688.4	94.5
QR	506	acre-ft/yr	4	32214.1	96.1
QP	27,000	acre-ft/yr	5	32506.8	97.0
CS	33,500	mg/L	6	32669.7	97.5
CR	100	mg/L	7	32760.4	97.8
C0	26,000	mg/L	8	32810.9	97.9
			9	32839.0	98.0
			10	32854.6	98.0
a	0.59		11	32863.3	98.1
b	19,256		12	32868.2	98.1
			13	32870.9	98.1
			14	32872.4	98.1
			15	32873.2	98.1
			16	32873.7	98.1
			17	32874.0	98.1
			18	32874.1	98.1
			19	32874.2	98.1
			20	32874.2	98.1
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			22	32874.3	98.1
			23	32874.3	98.1
			24	32874.3	98.1
			25	32874.3	98.1
			26	32874.3	98.1
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			55	32874.3	98.1
			56	32874.3	98.1
			57	32874.3	98.1
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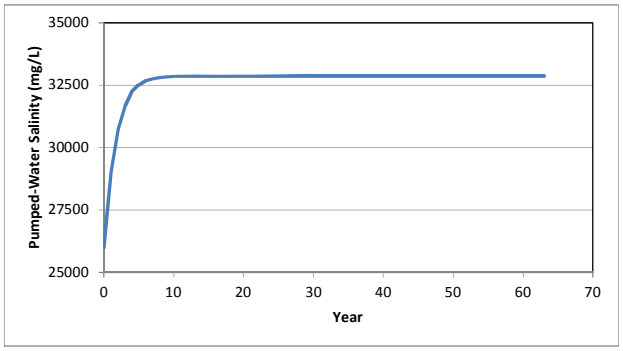

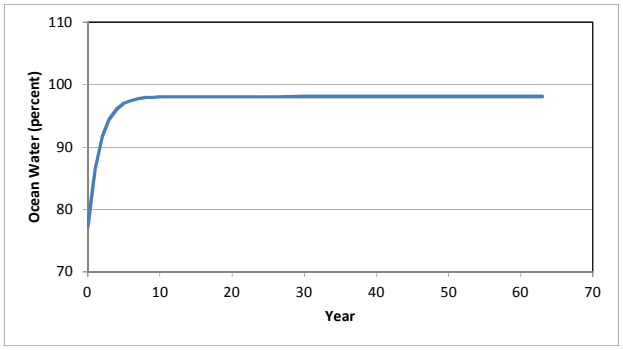

Table D-23. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 and Minimum Recharge TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.15		1	30283.6	90.3
V	27,656.4	acre-ft	2	31897.3	95.1
QS	26,494	acre-ft/yr	3	32505.2	97.0
QR	506	acre-ft/yr	4	32734.2	97.7
QP	27,000	acre-ft/yr	5	32820.5	97.9
CS	33,500	mg/L	6	32853.0	98.0
CR	10	mg/L	7	32865.2	98.1
C0	26,000	mg/L	8	32869.8	98.1
			9	32871.5	98.1
			10	32872.2	98.1
a	0.98		11	32872.4	98.1
b	32,092		12	32872.5	98.1
			13	32872.6	98.1
			14	32872.6	98.1
			15	32872.6	98.1
			16	32872.6	98.1
			17	32872.6	98.1
			18	32872.6	98.1
			19	32872.6	98.1
			20	32872.6	98.1
			21	32872.6	98.1
			22	32872.6	98.1
			23	32872.6	98.1
			24	32872.6	98.1
			25	32872.6	98.1
			26	32872.6	98.1
			27	32872.6	98.1
			28	32872.6	98.1
			29	32872.6	98.1
			30	32872.6	98.1
			31	32872.6	98.1
			32	32872.6	98.1
			33	32872.6	98.1
			34	32872.6	98.1
			35	32872.6	98.1
			36	32872.6	98.1
			37	32872.6	98.1
			38	32872.6	98.1
			39	32872.6	98.1
			40	32872.6	98.1
			41	32872.6	98.1
			42	32872.6	98.1
			43	32872.6	98.1
			44	32872.6	98.1
			45	32872.6	98.1
			46	32872.6	98.1
			47	32872.6	98.1
			48	32872.6	98.1
			49	32872.6	98.1
			50	32872.6	98.1
			51	32872.6	98.1
			52	32872.6	98.1
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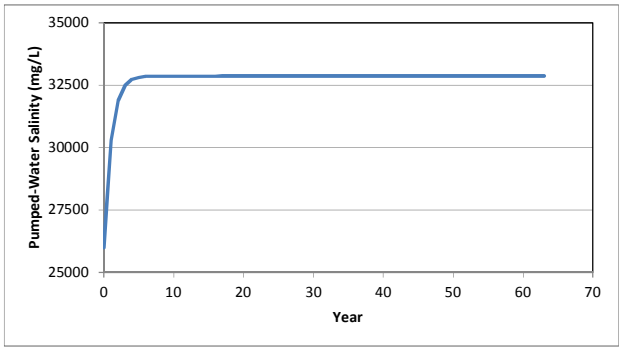

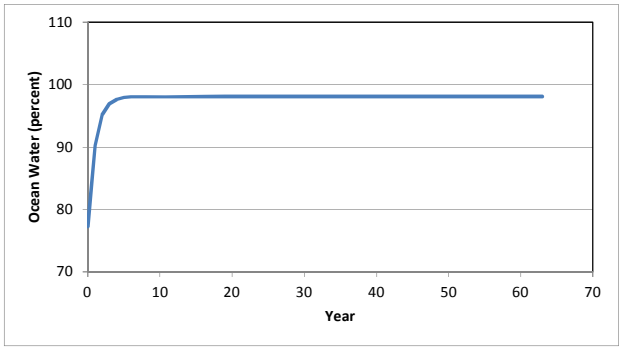

Table D-24. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 and Maximum Recharge TDS.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.15		1	30285.8	90.3
V	27,656.4	acre-ft	2	31900.3	95.2
QS	26,494	acre-ft/yr	3	32508.5	97.0
QR	506	acre-ft/yr	4	32737.7	97.7
QP	27,000	acre-ft/yr	5	32824.0	98.0
CS	33,500	mg/L	6	32856.5	98.1
CR	200	mg/L	7	32868.8	98.1
C0	26,000	mg/L	8	32873.4	98.1
			9	32875.1	98.1
			10	32875.8	98.1
a	0.98		11	32876.0	98.1
b	32,096		12	32876.1	98.1
			13	32876.1	98.1
			14	32876.1	98.1
			15	32876.2	98.1
			16	32876.2	98.1
			17	32876.2	98.1
			18	32876.2	98.1
			19	32876.2	98.1
			20	32876.2	98.1
			21	32876.2	98.1
			22	32876.2	98.1
			23	32876.2	98.1
			24	32876.2	98.1
			25	32876.2	98.1
			26	32876.2	98.1
			27	32876.2	98.1
			28	32876.2	98.1
			29	32876.2	98.1
			30	32876.2	98.1
			31	32876.2	98.1
			32	32876.2	98.1
			33	32876.2	98.1
			34	32876.2	98.1
			35	32876.2	98.1
			36	32876.2	98.1
			37	32876.2	98.1
			38	32876.2	98.1
			39	32876.2	98.1
			40	32876.2	98.1
			41	32876.2	98.1
			42	32876.2	98.1
			43	32876.2	98.1
			44	32876.2	98.1
			45	32876.2	98.1
			46	32876.2	98.1
			47	32876.2	98.1
			48	32876.2	98.1
			49	32876.2	98.1
			50	32876.2	98.1
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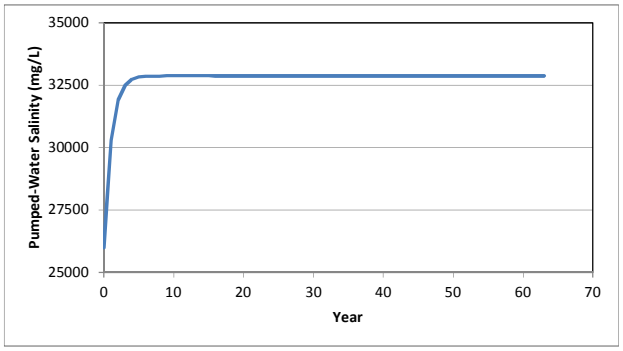

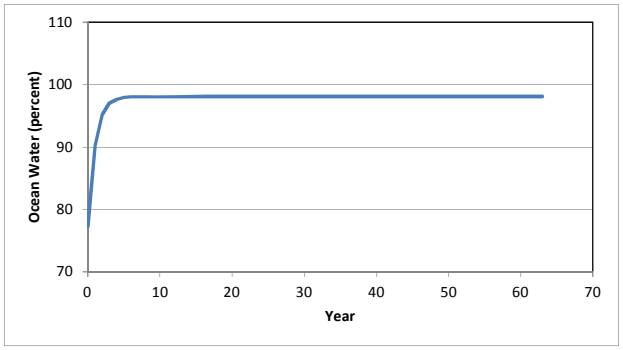

Table D-25. OWP Analysis for 24.1 MGD with Hydraulic Gradient of 0.0011 and Minimum Groundwater Recharge.

Parameters			t (yr)	C (mg/L)	OWP (percent)
A	1,213	acres			
B	152	ft	0	26000.0	77.3
ϕ	0.15		1	30557.7	91.1
V	27,656.4	acre-ft	2	32274.7	96.3
QS	26,848	acre-ft/yr	3	32921.5	98.2
QR	152	acre-ft/yr	4	33165.2	99.0
QP	27,000	acre-ft/yr	5	33257.0	99.3
CS	33,500	mg/L	6	33291.5	99.4
CR	100	mg/L	7	33304.6	99.4
C0	26,000	mg/L	8	33309.5	99.4
			9	33311.3	99.4
			10	33312.0	99.4
a	0.98		11	33312.3	99.4
b	32,522		12	33312.4	99.4
			13	33312.4	99.4
			14	33312.4	99.4
			15	33312.4	99.4
			16	33312.4	99.4
			17	33312.4	99.4
			18	33312.4	99.4
			19	33312.4	99.4
			20	33312.4	99.4
			21	33312.4	99.4
			22	33312.4	99.4
			23	33312.4	99.4
			24	33312.4	99.4
			25	33312.4	99.4
			26	33312.4	99.4
			27	33312.4	99.4
			28	33312.4	99.4
			29	33312.4	99.4
			30	33312.4	99.4
			31	33312.4	99.4
			32	33312.4	99.4
			33	33312.4	99.4
			34	33312.4	99.4
			35	33312.4	99.4
			36	33312.4	99.4
			37	33312.4	99.4
			38	33312.4	99.4
			39	33312.4	99.4
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			41	33312.4	99.4
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			49	33312.4	99.4
			50	33312.4	99.4
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			60	33312.4	99.4
			61	33312.4	99.4
			62	33312.4	99.4
			63	33312.4	99.4