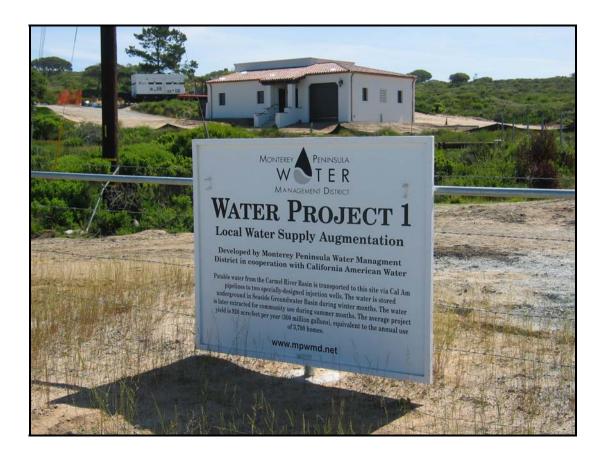
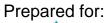


# SUMMARY OF OPERATIONS WATER PROJECT 1 (PHASE 1 ASR PROJECT)

# **WATER YEAR 2011**







**JULY 2012** 



July 31, 2012 Project No. 06-0028

Monterey Peninsula Water Management District Post Office Box 85 Monterey, California 93942-0085

Attention: Mr. Joe Oliver, Water Resources Manager

Subject: Summary of Operations Report; Water Project 1 (Phase 1 ASR Project)

Water Year 2011

Dear Joe:

We are transmitting five copies and one digital image (PDF) of the subject report documenting operations of Water Project 1 (a.k.a. Phase 1 ASR Project) during Water Year 2011 (WY 2011). As you are aware, WY 2011 was an "Above Normal" hydrologic year on the Monterey Peninsula and both project wells (SM ASR-1 and SM ASR-2) were operational and injecting simultaneously for most of the injection season. These factors combined resulted in a total volume of 1,117 acre-feet (af) of water diverted from the Carmel River system for recharge in the Seaside Groundwater Basin, exceeding the previous year's recharge volume of 1,111 af and the project's projected average annual yield of 920 acre-feet per year (afy). To date, a total of approximately 3,750 af have been injected at the Santa Margarita ASR Facility since the project was initiated in 2001.

We appreciate the opportunity to provide assistance to the District on this important project. Please contact us with any questions.

Sincerely,

PUEBLO WATER RESOURCES, INC.

Robert C. Marks, P.G., C.Hg.

Principal Hydrogeologist

**7**Stephen P. Tanner, P.E.

**Principal Engineer** 

Copies submitted: 5 hard and 1 digital (PDF)



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#### INTRODUCTION

### **GENERAL STATEMENT**

Presented in this report is a summary of operations of Water Project 1 (a.k.a. Phase 1 ASR Project) during Water Year 2011 (WY 2011)<sup>1</sup>. Water Project 1 is part of the Monterey Peninsula Water Management District's (MPWMD or District) and California American Water's (CAW) cooperative implementation of Aquifer Storage and Recovery (ASR) on the Monterey Peninsula. The Water Project 1 site (known as the Santa Margarita ASR Facility) is located on a parcel leased by the District on former Fort Ord property along General Jim Moore Boulevard in the northeast corner of the City of Seaside, California, and is shown on **Figure 1** - Site Location Map. During WY 2011, approximately 1,117 acre-feet (af) were diverted from the Carmel River system for recharge, storage, and subsequent recovery in the Seaside Groundwater Basin (SGB), exceeding the project's projected average annual yield of 920 acrefeet per year.

A graphical summary of historical injection and recovery operations at the Santa Margarita ASR Facility site is shown on **Figure 2**. Shown are the annual injection and recovery volumes at the facility since the inception of injection operations in WY 2001 through the current period of WY 2011. Also presented is a delineation of the various phases of project implementation, starting with the Santa Margarita Test Injection Well (SMTIW) in 2001, which became SM ASR-1 as the project transitioned from a testing program to a permanent project in 2006 (Phase 1 ASR Project), through construction and operation of the second well at the facility in 2010 (SM ASR-2). As shown, having the facility in full operation with two ASR wells injecting simultaneously in since 2010 (combined with above normal rainfall and Carmel River flows during WY 2010 and WY 2011) has resulted in the ability for significant increases in the volume injected annually.

#### **BACKGROUND**

The water supply for the Monterey Peninsula originates from two primary sources: the Carmel River system and the Seaside Groundwater Basin (SGB). ASR is a form of managed aquifer recharge and storage (or "groundwater banking") that involves the conjunctive use of surface and groundwater resources. As applied to the Monterey Peninsula, ASR involves the diversion of excess winter and spring time flows from the Carmel River system for recharge and storage in the SGB. The excess water is captured by California American Water (CAW) wells in the Carmel Valley during periods when flows in the Carmel River exceed fisheries bypass flow requirements, treated to potable drinking water standards, and then conveyed through CAW's distribution system to Seaside. Recharge is accomplished via injection of these excess flows into specially designed ASR wells in the SGB. The recharged water is temporarily stored underground in the SGB, utilizing the available storage space within the aquifer system. During periods of high demand, the same ASR wells and/or existing CAW production wells in the SGB

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<sup>&</sup>lt;sup>1</sup> Water Year 2011 is the period of October 1, 2010 through September 30, 2011.



are used to recover the recharged water, which in turn allows for reduced extractions from the Carmel River system during dry periods.

The District and CAW have been cooperatively developing an ASR project since 1996. These efforts have evolved over time from the performance of various technical feasibility investigations, leading to the construction and testing of pilot- and then full-scale ASR test wells to demonstrate the viability and operational parameters for ASR wells in the SGB. As designed, Water Project 1 is capable of recharging up to the State Water Resources Control Board (SWRCB) water right<sup>2</sup> maximum annual diversion limit of 2,426 acre-feet per year (afy) at a combined injection rate of 6.7 cubic feet per second (equivalent to approximately 3,000 gallons per minute [gpm]), with an average annual yield of approximately 920 afy. Water Project 1 includes two ASR wells (SM ASR-1 and ASR-2) located at the Santa Margarita ASR Facility. SM ASR-1 is designed for an injection capacity of 1,000 to 1,250 gpm and SM ASR-2 is designed for an injection capacity of 1,500 to 1,750 gpm. As-built schematics of SM ASR-1 and SM ASR-2 are presented on **Figures 3 and 4**, respectively.

#### **PURPOSE AND SCOPE**

The overall purpose of the ongoing ASR program is to recharge the SGB with excess treated Carmel River system water when it is available during wet periods for storage and later extraction (recovery) during dry periods. ASR benefits the resources of both systems by raising water levels in the SGB during the recharge and storage periods and reducing extractions from the Carmel River System during dry periods.

The scope of the ongoing data collection, analysis, and reporting program for the ASR program can be categorized into issues generally associated with:

- 1) ASR well hydraulics and performance;
- 2) Aquifer response to injection;
- 3) Movement and dispersion of injected waters, and;
- 4) Water-quality issues associated with geochemical interaction and mixing of injected and native groundwaters.

The ongoing data collection and reporting program is intended to support further demonstration of the capabilities and limitations of ASR in the SGB and to comply with the requirements of the Central Coast Regional Water Quality Control Board (RWQCB) for submitting annual technical reports for the project pursuant to Section 13267 of the California Water Code<sup>3</sup> and the existing General Waiver for Specific Types of Discharges (Resolution R3-2008-0010). A summary of the findings developed from the operation of Water Project 1 during WY 2011 is presented below.

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<sup>&</sup>lt;sup>2</sup> The SWRCB water right for the Phase 1 ASR Project is held jointly by MPWMD and CAW.

<sup>&</sup>lt;sup>3</sup> Letter from Roger W. Briggs, Executive Officer of the Central Coast RWQCB, to Joseph Oliver, Water Resources Manager for MPWMD, dated April 29, 2009.



#### **FINDINGS**

#### **WY 2011 ASR OPERATIONS**

Recharge operations were performed during WY 2011 during the period of December 21, 2010 through May 19, 2011. WY 2011 was classified as an "Above Normal" hydrologic year<sup>4</sup>, and a total volume of approximately 1,117 acre-feet (af) of excess Carmel River system water was diverted by CAW for recharge in the SGB. The recharge water was injected at both SM ASR-1 and SM ASR-2 into the Santa Margarita Sandstone aquifer of the SGB at combined average injection rates ranging from 940 to 3,000 gpm (approximately 4.2 to 13.25 acre-feet per day [afd]).

# **General Recharge Procedures**

ASR recharge source water is potable (treated) water provided from the CAW distribution system. The water is currently diverted by various production well sources in the Carmel Valley system and then conveyed through the Segunda-Crest pipeline network to the ASR Pipeline in General Jim Moore Blvd and then to the Santa Margarita ASR facility site. Recharge of the SGB occurs via injection into both SM ASR-1 and SM ASR-2 during periods of available excess Carmel River system flows from the CAW distribution. Injection water is introduced into the ASR wells via the pump columns. Injection rates are controlled primarily by downhole flow control valves (FCV) installed on the pump columns, and secondarily by valves on the ASR wellhead piping. Injection flow rates and total injected volumes are measured with rate and totalizing meters at each of the wellheads. Positive gauge pressures are maintained at the wellheads during injection to prevent cascading of water into the wells (which can lead to air-binding). Water levels in each of the ASR wells are measured and collected with pressure transducers coupled to data loggers.

#### **Injection Operations Summary**

Injection generally occurs at each of the ASR wells on a continuous basis when flows are available, interrupted only for periodic backflushing (discussed in a following section), which typically occurs on an approximate weekly basis. These weekly periods of continuous injection followed by backflushing are termed in this report as numbered injection "periods" at each well. During WY 2011, a total of 20 and 13 injection periods occurred at SM ASR-1 and SM ASR-2, respectively. Summaries of pertinent injection period operations at SM ASR-1 and SM ASR-2 are presented in **Tables 1 and 2** below, respectively. Field data sheets collected during injection operations are presented in **Appendix A** - Field Data Sheets.

As shown in **Table 1**, the total duration of the 20 injection periods at SM ASR-1 during WY 2011 was approximately 108 days, with a total volume of 560.1 af injected at an average injection rate of approximately 1,190 gpm. As shown in **Table 2**, the total duration of the 13

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<sup>&</sup>lt;sup>4</sup> Based on 101,769 af of unimpaired Carmel River flow at the San Clemente Dam site in WY 2011.



injection periods at SM ASR-2 was approximately 79 days, with a total volume of 554.3 af injected at an average rate of approximately 1,580 gpm. The combined total volume of injection during WY 2011 was 1114 af<sup>5</sup>.

Table 1. WY 2011 Injection Operations Summary - SM ASR-1

Injection Period	Da	tes	Duration	Average Injection Rate	Total Volume
No.	Start	End	(days)	(gpm)	(af)
1	12/21/10	12/22/10	0.8	1,367	5.1
2	12/22/10	12/28/10	5.8	1,540	39.8
3	12/29/10	1/4/11	6.1	1,528	41.0
4	1/4/11	1/10/11	5.8	1,568	40.0
5	1/13/11	1/17/11	4.0	1,586	27.8
6	2/16/11	2/17/11	1.1	1,954	9.8
7	2/19/11	2/24/11	5.0	412	9.2
8	2/24/11	3/2/11	5.7	698	17.7
9	3/4/11	3/10/11	5.7	493	12.4
10	3/10/11	3/14/11	4.0	767	13.4
11	3/18/11	3/23/11	4.9	879	19.2
12	3/23/11	4/1/11	8.9	969	38.3
13	4/1/11	4/3/11	2.2	834	8.3
14	4/5/11	4/13/11	8.0	1,469	52.2
15	4/13/11	4/20/11	6.9	1,246	38.1
16	4/20/11	4/27/11	6.9	1,267	38.6
17	4/27/11	5/3/11	5.8	895	22.9
18	5/4/11	5/11/11	6.9	1,290	39.6
19	5/11/11	5/18/11	7.1	1,572	49.4
20	5/18/11	5/24/11	5.8	1,454	37.3
ASR-1 Sub	totals	_	107.7	1,189	560.1

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<sup>&</sup>lt;sup>5</sup> The slight difference between this value and the 1,117 af value presented on page 2 is due to the relatively small volume of pipeline flushing (approximately 3 af, or 0.3% of the total diversion volume) required to clear particulates from the piping system prior to injection, which was routed to the onsite backflush pit and allowed to percolate into the groundwater basin.



Table 2. WY 2011 Injection Operations Summary - SM ASR-2

Injection Period	Da	tes	Duration	Average Injection Rate	Total Volume
No.	Start	End	(days)	(gpm)	(af)
1	2/18/11	2/19/11	0.8	1,353	4.9
2	2/19/11	2/24/11	5.1	1,497	33.7
3	2/24/11	3/3/11	7.0	1,468	45.5
4	3/3/11	3/10/11	6.9	1,655	50.8
5	3/10/11	3/15/11	4.7	1,619	33.4
6	3/18/11	3/26/11	7.9	1,886	65.4
7	3/26/11	4/1/11	5.8	1,813	46.6
8	4/1/11	4/6/11	5.1	1,693	38.1
9	4/6/11	4/13/11	7.1	1,329	41.6
10	4/13/11	4/20/11	6.9	1,571	48.1
11	4/20/11	4/26/11	5.9	1,853	48.6
12	4/26/11	5/4/11	8.0	1,499	52.8
13	5/16/11	5/24/11	7.8	1,292	44.8
ASR-2 Sub	ototals		79.1	1,579	554.3

Water-level data collected at SM ASR-1 and SM ASR-2 during WY 2011 are presented in **Figures 5 and 6**, respectively. The water-level data show the response of both SM ASR-1 and SM ASR-2 to injection, with a maximum water-level increase of approximately 100 feet at SM ASR-1 and approximately 80 feet at SM ASR-2. Water-level increases due to injection at SM ASR-1 approached, but generally did not exceed, the maximum recommended drawup level of approximately 100 feet. Water-level increases due to injection at SM ASR-2 were maintained well below the recommended maximum drawup level at this well of approximately 140 feet (discussion of the basis for the recommended maximum drawup levels at each well is presented in the Backflushing section below). The water-level data also show ongoing diurnal fluctuations in response to varying injection rates as a result of pressure fluctuations in the CAW distribution system, as well as the drawdown response to routine backflush pumping during the injection season (discussed below).

# **Backflushing**

Most sources of injection water contain trace amounts of solids that slowly accumulate in the pore spaces in the well's gravel pack and adjacent aquifer materials, and the CAW source water is no exception. Periodic backflushing of ASR / injection wells is therefore necessary to maintain well performance by removing materials deposited/accumulated around the well bore during injection. The procedure is similar to backwashing a media filter to remove accumulated material deposited during filtration.



The general rule-of-thumb for ASR wells is to backflush at pumping rates that are at least two times the rate of injection in order to create pore-throat velocities sufficient to remove particles that cling to the surfaces of gravel pack and aquifer grains. A typical and prudent trigger for backflushing is when the amount of water-level drawup during injection equals the available drawdown (as measured from the static water level to the top of the pump bowls) in the well for backflushing. This helps to avoid over-pressurization and compression of plugging materials, thereby maximizing the efficiency of backflushing and limiting the amount of residual plugging.

Based on the several years of testing conducted as part of the Santa Margarita Test Injection Well (SMTIW) project, a weekly backflushing frequency has been determined to be the best operational practice. The general procedure consists of temporarily stopping injection and then pumping the wells at a rates of approximately 2,000 to 3,000 gpm (i.e., at least twice the rate of injection) for a period of approximately 10 to 20 minutes, repeated as necessary to effectively remove particulates from the well screen / gravel pack / aquifer matrix. Backflush water is discharged to the on-site backflush pit, where it percolates back into the groundwater basin.

During backflushing, the initial backflush discharge is usually very turbid and of a deep orange-brown color, becoming cloudy after approximately 5 minutes and then generally clears within 15 to 20 minutes. These observations have been generally consistent throughout the years of operating ASR wells at the Santa Margarita ASR Facility. Additional "incidental" backflushing was also conducted during the WY 2011 storage period, typically as part of water-quality sampling of the stored water. Following routine backflushing operations and brief periods of water-level recovery, controlled 10-minute specific-capacity tests are typically performed to track well production performance and residual plugging between injection periods (discussed in the following section).

#### **Recovery Operations Summary**

Recovery of the volume of water recharged during WY 2011 was performed primarily via existing CAW wells in the SGB (SM ASR-1 and SM ASR-2 had not yet been permitted for recovery into the CAW distribution system). As shown on **Figure 2**, a total of 1,117 af were recovered during the period October 2011 through January 2012. The recovered water was offset by reduced pumping by CAW from the Carmel River system during this period. It is noted that in this context, ASR recovery is essentially an accounting / allocation of CAW's various water rights and pumping from the SGB, and does not represent a "molecule-for-molecule" recovery of the injected water. Rather, the volume recharged essentially increases the operational yield of the SGB by the same amount and can be "recovered" by any of CAW's wells in the SGB and / or the ASR wells themselves. It is anticipated, however, that recovery



operations via SM ASR-1 and / or SM ASR-2 will occur more extensively in the future, once both wells are fully permitted for production into the CAW distribution system<sup>6</sup>.

#### WELL PERFORMANCE

Well performance is generally measured by specific capacity (pumping) and / or specific injectivity (injection), which is the ratio of flow rate (pumping or injection) to water-level change in the well (drawdown or drawup) over a specific elapsed time. The value is expressed as gpm per foot of water level change (gpm/ft). The value normalizes well performance by taking into account differing static water levels and flow rates. As such, specific capacity / injectivity data is useful for comparing well performance over time and at differing flow rates. Decreases in specific capacity / injectivity are indicative of decreases in the hydraulic efficiency of a well due to the effects of plugging. Both injection and production well performance was tracked at SM ASR-1 and SM ASR-2 during WY 2011, as discussed below.

# **Injection Performance**

Injection performance has been tracked at SM ASR-1 since the inception of the ASR program in WY 2002 by measurement and comparison of 24-hour injection specific injectivities (a.k.a. injection specific capacity). Specific injectivity is the ratio of injection rate to water-level rise (drawup) in the well casing.

**SM ASR-1.** A summary of 24-hour specific injectivity for SM ASR-1 for WY 2002 through 2011 is presented in **Table 3** below.

Table 3. Injection Performance Summary - SM ASR-1

Water Year	Injection Rate (gpm)	24-hour DUP (feet)	Specific Injectivity (gpm/ft)	Water Year Change	Comments
WY2002					
Beginning Period	1,570	81.7	19.2		FCV not installed yet in WY2002.
Ending Period	1,164	199.8	6.4	-67%	No recovery pumping performed.
WY2003					
Beginning Period	1,070	70.0	15.5		Recovery pumping performed following
Ending Period	1,007	49.7	20.3	+31%	WY2003 Injection

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<sup>&</sup>lt;sup>6</sup> SM ASR-1 was permitted by California Department of Public Health in October 2011 to produce water into the CAW distribution system, and 49.6 af were produced in October and November 2011. This well is also being utilized to produce water during WY 2012.



Water Year	Injection Rate (gpm)	24-hour DUP (feet)	Specific Injectivity (gpm/ft)	Water Year Change	Comments
WY2004					
Beginning Period	1,383	183.4	7.5		Recovery pumping performed following
Ending Period	1,072	67.4	15.9	+112%	WY2004 Injection
WY2005					
Beginning Period	1,045	46.6	22.4		Injectate dechlorinated in WY2005. No
Ending Period	976	94.1	10.4	-54%	recovery pumping performed.
WY2006					
Beginning Period	1,039	71.5	15.0		Injection procedures consistent and
Ending Period	1,008	62.2	17.5	+17%	performance stable in WY2006. No recovery pumping performed.
WY2007			l	l	
Beginning Period	1,098	92.4	11.9		Only one injection period in WY2007.
Ending Period					No recovery pumping performed.
WY2008					
Beginning Period	979	25.5	38.4		Formal rehabilitation performed prior to
Ending Period	1,063	33.4	31.8	-17%	WY2008 injection
WY 2009					
Beginning Period	1,119	56.1	19.9		Beginning period low specific injectivity
Ending Period	1,069	34.3	31.1	+56%	due to high plugging rate during initial injection period. No recovery pumping performed.
WY 2010					
Beginning Period	1,080	35.6	30.3		Observed decline in performance due
Ending Period	1,326	54.0	24.6	-19%	to residual plugging.
WY 2011					
Beginning Period	1,367	53.0	25.8		See discussion below.
Ending Period	1,454	63.7	22.8	-10%	See discussion below.

As shown in **Table 3**, the 24-hour specific injectivity at the beginning of WY 2011 (Injection Period No. 1) was 25.8 gpm/ft and at the end (Injection Period No. 20) it was 22.8 gpm/ft, an overall decline of approximately 10 percent, indicating that minor residual plugging occurred over the course of the WY 2011 injection season (discussed in a following section).

In reviewing the data in **Table 3**, it should also be noted that there have been differences in the injection methodologies that affected the well performance. The differences in methodologies are due to various tests that have been conducted over the years to determine the best operational parameters for the ASR well. As examples: in WY 2002 the FCV had not



yet been installed to control gas binding; recovery pumping was conducted only in WY 2003 and WY 2004; during WY 2005 the injectate was dechlorinated; and, ASR-1 underwent formal rehabilitation as part of the WY 2007 program (refer to the Summary of Operations Reports for those Water Years for additional details). Therefore, the well performance values and trends need to be viewed carefully within this context.

**SM ASR-2.** A summary of the beginning and ending injection performance at SM ASR-2 for WY 2010 and WY 2011 is presented in **Table 4** below.

Injection 24-hour Specific Water Water Year **DUP** Rate Injectivity Year Comments (gpm) (feet) (gpm/ft) Change WY 2010 Beginning Period 1,017 156.5 6.5 See discussion below **Ending Period** 237 85.0 2.8 -57% WY 2011 Beginning Period 1,497 39.5 37.9 See discussion below **Ending Period** 1,292 34.3 37.7 -0.5%

Table 4. Injection Performance Summary - SM ASR-2

WY 2010 was the first year that SM ASR-2 was in operation injecting Carmel River system water<sup>7</sup>. As shown in **Table 4**, SM ASR-2 experienced an overall decline in injection performance of approximately 57 percent during WY 2010, indicating that significant residual plugging had occurred at the well. Prior to injection in 2011, SM ASR-2 underwent downhole rehabilitation to remove residual plugging materials from the well screen / gravel pack / aquifer matrix (documented in **Appendix B**). As shown in **Table 4**, the 24-hour specific injectivity at the beginning of WY 2011 was 37.9 gpm/ft, representing an approximate order of magnitude improvement in performance compared to the WY 2010 performance. These results indicate that the well rehabilitation effort was very effective at removing residual plugging materials and restoring well performance. At the end of WY 2011, the 24-hr specific injectivity was 37.7 gpm/ft, an insignificant decline of approximately 0.5 percent, indicating that negligible residual plugging occurred at ASR-2 (discussed in a following section) over the course of the WY 2011 injection season.

#### **Pumping Performance**

Pumping performance has also been tracked at ASR-1 since the inception of the SMTIW testing program by measurement and comparison of specific capacity. Specific capacity is the ratio of pumping rate to water-level drawdown in the well casing. Following routine backflushing

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<sup>&</sup>lt;sup>7</sup> Prior to WY 2010, only short-term injection testing had been performed utilizing source water from the Marina Coast Water District. Refer to the WY 2009 Summary of Operations Report for details.



operations and periods of water-level recovery, controlled 10-minute specific-capacity tests are typically performed to track well pumping performance, similar to the tracking of injection performance from 24-hour specific injectivity.

**SM ASR-1.** A summary of injection season beginning and ending 10-minute specific capacity at ASR-1 for WY 2002 through 2010 is presented below in **Table 5**.

Table 5. Pumping Performance Summary - SM ASR-1

Water Year	Pumping Rate (gpm)	10-min DDN (feet)	Specific Capacity (gpm/ft)	Water Year Change	Comments	
WY2002						
Pre-Injection	2,825	45.1	62.6		ECV not installed yet in WV2002	
Post- Injection	2,800	95.3	29.4	-53%	FCV not installed yet in WY2002	
WY2003						
Pre-Injection	2,775	81.9	33.9		Recovery pumping performed	
Post- Injection	2,600	91.7	28.4	-16%	following WY2003 Injection	
WY2004				•		
Pre-Injection	2,000	51.8	38.6		Recovery pumping performed	
Post- Injection	1,700	81.2	20.9	-46%	following WY2004 Injection	
WY2005	'			•		
Pre-Injection	1,900	49.8	38.1		Injectate dechlorinated in WY2005.	
Post- Injection	1,500	87.1	17.2	-55%	No recovery pumping performed.	
WY2006				•		
Pre-Injection	1,500	82.4	18.2		Injection procedures consistent and	
Post- Injection	1,600	74.1	21.6	+19%	performance stable in WY2006. No recovery pumping performed.	
WY2007						
Pre-Injection	1,500	81.7	18.4		Only one injection period in WY2007.	
Post- Injection	1,500	79.4	18.9	+3%	No recovery pumping performed.	
WY2008				•		
Pre-Injection	1,980	31.0	63.8		Formal rehabilitation performed prior	
Post- Injection	2,000	55.6	36.0	-44%	to WY2008 injection. No recovery pumping performed.	
WY 2009						
Pre-Injection	2,000	52.0	38.5		No recovery pumping performed	
Post- Injection	1,900	62.7	30.3	-21%	No recovery pumping performed.	



Water Year	Pumping Rate (gpm)	10-min DDN (feet)	Specific Capacity (gpm/ft)	Water Year Change	Comments
WY 2010					
Pre-Injection	1,900	62.5	30.4		Parformance acceptiblly stable
Post- Injection	2,000	64.2	31.1	+2%	Performance essentially stable.
WY 2011					
Pre-Injection	2,000	64.2	31.1		Performance ecceptically stable
Post- Injection	2,000	64.6	30.1	-3%	Performance essentially stable.

As shown in **Table 5**, the 10-minute production specific capacity overall was relatively stable over the course of WY 2011 (a negligible decline of approximately 3 percent), and has been relatively stable since the end of WY 2009. The relatively stable pumping performance results suggest that routine weekly backflush pumping has been generally effective at removing plugging materials at SM ASR-1 over the past few injection seasons.

Also shown in **Table 5**, the production specific capacity at ASR-1 declined from approximately 63 to 18 gpm/ft over the course of the six-year period of WY 2002 through WY 2007, an overall decline of approximately 70 percent. Following rehabilitation in 2007, the production specific capacity increased to 63.8 gpm/ft, slightly greater than the WY 2002 preinjection specific capacity. These results are comparable to the injection performance, which similarly indicated the efficacy of rehabilitation in restoring the well's hydraulic performance. These findings regarding the effectiveness of rehabilitation of SM ASR-1 in 2007 are comparable to the results recently observed at SM ASR-2.

**SM ASR-2.** A summary of injection season beginning and ending 10-minute specific capacity for SM ASR-2 is presented below in **Table 6**.

Table 6. Pumping Performance Summary - SM ASR-2

Water Year	Pumping Rate (gpm)	10-min DDN (feet)	Specific Capacity (gpm/ft)	Water Year Change	Comments
WY 2010					
Pre-Injection	2,200	117.7	18.7		Pre-injection is after MCWD testing
Post- Injection	2,300	136.9	16.8	-10%	(refer to WY 2009 Summary of Operation report)
WY 2011					
Pre-Injection	3,100	83.9	36.9		See discussion below.
Post- Injection	3,100	93.5	33.2	-10%	See discussion below.

As shown in **Table 6**, the pumping performance of SM ASR-2 improved significantly in WY 2011 compared to WY 2010, with the production specific capacity nearly doubling. The improved performance is as a result of rehabilitation. During WY 2011, pumping performance



was relatively stable, but did experience an overall decrease of approximately 10 percent. This compares with the injection performance results, which showed essentially no change in performance over the course of WY 2011.

It is also noted that SM ASR-1 (and now SM ASR-2) has been operated largely as an injection-only well since its construction in 2001, with significant recovery pumping taking place thus far in only 2003 and 2004 (refer to Figure 2 and the WY 2003 and WY 2004 Summary of Operations Reports for details). As shown in **Table 5**, following recovery pumping events the production performance of SM ASR-1 improved prior to the onset of the following year's injection season. The improved well performance is attributable to the additional removal of fine particulates from the well and near-bore aquifer matrix as a result of the extended pumping. As such, it is anticipated that once SM ASR-1 and SM ASR-2 are operated as true ASR wells as planned (i.e., with seasonal recovery pumping following each injection season), the amount of residual plugging between injection seasons and the attendant frequency of rehabilitation will be reduced.

# **Plugging**

Experience at injection well sites around the world shows that all injection wells are subject to some amount of plugging, because no water source is completely free of particulates, bionutrients, or oxidants, all of which can contribute to well plugging; the CAW source water is no exception. During injection, trace amounts of suspended solids are continually being deposited in the gravel pack and aquifer pore spaces, much as a media filter captures particulates in the filter bed. The effect of plugging is to impede the flow of water from the injection well into the aquifer, causing increased injection heads in the well to maintain a given injection rate, or reduced injection rates at a given head level. Well plugging reduces injection and extraction capacity, and consequently, well life.

Relative measurements of the particulate matter in the injectate have historically been made at the Santa Margarita site through silt density index (SDI) testing during injection. The SDI was originally developed to quantitatively assess particulate concentrations in reverse-osmosis feed waters. The SDI test involves pressure filtration of source water through a 0.45 micron membrane, and observation of the decrease in flow over time; the resulting value of SDI is dimensionless, and used as a comparative value for tracking relative well plugging rates during an injection season (i.e., plugging rates tend to vary with SDI). During WY 2011, SDI measurements ranged between approximately 0.8 to 1.1 the first day of injection and generally remained less than 1.0 for the remainder of the WY 2011 injection season.

Rates of plugging (measured in feet of head increase per day) during injection have historically been estimated at the Santa Margarita Facility ASR wells; however, most analytic methods for determining the rate of plugging are predicated on the injection rates at the subject well(s) being held constant. As discussed in detail in the WY 2010 Summary of Operations Report, injection rates at both SM ASR-1 and SM ASR-2 have varied significantly since the installation of the ASR Pipeline in Gen. Jim Moore Blvd. as a result of pressure fluctuations in the CAW system. These pressure fluctuations persisted throughout most of WY 2011 as well,



and as a result, plugging rates during the WY 2011 injection season cannot be reliably calculated<sup>8</sup>.

Residual plugging, however, can be measured from the WY 2011 data. Residual plugging is the plugging that occurs during injection and remains following backflush pumping. Residual plugging increases drawdown during pumping and drawup during injection, and is manifested as declining specific capacity / injectivity. The presence of residual plugging is indicative of incomplete removal of plugging particulates during backflushing and has the cumulative effect of reducing well performance through time.

As discussed previously, routine 10-minute specific capacity tests have been performed at SM ASR-1 and SM ASR-2 following backflushing events. Presented in **Tables 7 and 8** below are summaries of the residual plugging calculations for SM ASR-1 and SM ASR-2<sup>9</sup>, respectively, during WY 2011.

Pumping 10-min 10-min Normalized Residual Cummulative Q/s<sup>1</sup> Drawdown<sup>2</sup> Test Rate Drawdown Plugging Plugging No. Date (ft) (gpm/ft) (ft) (ft) (gpm) (ft) end WY10 6/2/10 2,000 64.2 31.1 64.2 12/22/10 1,900 65.7 28.9 69.1 4.9 4.9 1 5.9 2 12/29/10 1.800 63.1 28.5 70.1 1.0 1/4/11 1,700 64.8 26.2 76.3 6.1 12.0 4 1/13/11 1.800 67.8 26.6 75.3 -1.0 11.0 5 -8.2 2.9 1/19/11 1,900 63.8 29.8 67.1 7 2/24/11 1,900 67.2 28.3 70.8 3.6 6.5 8 3/11/11 2,000 67.7 29.5 67.7 -3.1 3.5 4/1/11 1,900 72.1 11.<del>7</del> 9 26.3 75.9 8.2 10 4/13/11 2,000 66.5 30.1 66.5 -9.4 2.3 11 5/24/11 1.800 64.6 27.9 71.8 5.3 7.5 71.1 Averages 1,870 66.3 28.2 0.8 7.5 Cummulative

Table 7. Residual Plugging Summary - SM ASR-1

Notes:

1 - Specific Capacity. Ratio of pumping rate to drawdown.

2 - Normalized based on ratio of 2,000 gpm to actual test pumping rate.

<sup>8</sup> This situation has been corrected for WY 2012 through the installation of pressure regulating valves (PRVs) in the injection piping at both SM ASR-1 and SM ASR-2.

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<sup>&</sup>lt;sup>9</sup> Quantification of the amount of residual plugging (as measured in feet of drawdown) requires normalization of drawdown to a reference pumping rate, which allows for comparison of data that have different pumping rates. For SM ASR-1 and SM ASR-2, reference pumping rates of 2,000 and 3,000 gpm, respectively, are utilized as these are the typical maximum pumping rates for each well.



Table 8. Residual Plugging Summary – SM ASR-2

		<b>Pumping</b>	10-min	10-min	Normalized	Residual	Cummulative
Test		Rate	Drawdown	Q/s <sup>1</sup>	Drawdown <sup>2</sup>	Plugging	Plugging
No.	Date	(gpm)	(ft)	(gpm/ft)	(ft)	(ft)	(ft)
1	2/10/11	3,100	83.9	36.9	81.2		
2	2/19/11	2,900	85.8	33.8	88.8	7.6	7.6
3	2/24/11	2,400	91.3	26.3	114.1	25.4	32.9
4	3/10/11	3,000	95.7	31.3	95.7	-18.4	14.5
5	3/15/11	2,500	90.4	27.7	108.5	12.8	27.3
6	3/26/11	3,000	94.9	31.6	94.9	-13.6	13.7
7	4/1/11	3,000	92.0	32.6	92.0	-2.8	10.8
8	5/24/11	3,100	93.5	33.2	90.5	-1.5	9.3
	Averages	2,875	90.9	31.7	95.7	1.3	
	•		_	_	Cı	ummulative	9.3

#### Notes:

- 1 Specific Capacity. Ratio of pumping rate to drawdown.
- 2 Normalized based on ratio of 3,000 gpm to actual test pumping rate.

There is a general positive corollary relationship between maximum water-level drawup during injection and the accumulation of residual plugging, in that residual plugging tends to increase with increased drawup during injection. Water-level drawup during injection is a function of the injection rate, the duration of injection, and the rate of plugging. Identifying the amount of available draw-up for any given injection well and period is a useful guide to avoid over-pressurization and compression of plugging materials while balancing both the rate and duration of injection between backflushing events. As discussed in the Backflushing section of this report, the amount of water-level drawup during injection should not exceed the available drawdown in the well for backflushing in order to maximize the efficacy of backflushing and limit the amount of residual plugging.

As shown on **Figure 5**, the injecting water level was maintained at or below the recommended maximum available drawup at SM ASR-1 (100 feet) during WY 2011, and as shown in **Table 7**, the cumulative residual plugging was limited to 7.5 ft at the end of the season. The lack of significant residual plugging at SM ASR-1 during WY 2011 was manifested as relatively stable specific capacities and injectivities during the injection season (refer to **Tables 3 and 5**).

As shown on **Figure 6**, the injecting water level was maintained well below the recommended maximum available drawup at SM ASR-2 (140 feet) during WY 2011, and as shown in **Table 8**, the cumulative residual plugging was limited to 9.3 ft at the end of the season. Again, the lack of residual plugging at SM ASR-2 during WY 2011 was manifested as relatively stable specific capacities and injectivities during the injection season (refer to **Tables 4 and 6**).



#### **AQUIFER RESPONSE TO INJECTION**

The response of the regional aquifer system to injection at the Water Project 1 site has been monitored since the SMTIW project was initiated in WY 2002. Submersible water-level transducer/data logger units have been installed at eight existing offsite District monitoring well locations in the SGB. In addition, the recently constructed Seaside Middle School (SMS) monitoring wells (SMS Deep and Shallow) have been similarly instrumented. The locations of each offsite monitoring well are shown on Figure 1, and water-level hydrographs for the monitoring wells during WY 2011 are graphically presented on **Figures 7 through 15**. A summary of the regional water-level observations during the WY 2011 injection season is presented in **Table 9** below.

Table 9. Summary of WY 2011 Injection Season Monitoring Well Observations

Well ID	Distance from ASR Site (feet)	Aquifer Monitored	Pre- Injection DTW (ft btoc)	End of Injection DTW (ft btoc)	Net Change (ft)
MW-1	on-site	Tsm	370.7	337.6	+ 33.1
Paralta Test	660	QTp & Tsm	ND	ND	
SMS (Deep)	1,350	Tsm	362.5	ND	
Ord Grove Test	1,600	QTp & Tsm	ND	ND	
Ord Terrace (Deep)	2,260	Tsm	ND	ND	
FO-7 (Deep)	2.420	Tsm	492.8	481.4	+ 11.4
FO-7 (Shallow)	3,420	QTp	ND	453.6	
PCA East (Deep)	6.400	Tsm	89.1	80.9	+ 8.2
PCA East (Shallow)	6,400	QTp	63.3	62.6	+ 0.7
FO-9 (Deep)	7,280	Tsm	ND	ND	
FO-8 (Deep)	7,580	Tsm	ND	ND	

Table 9 Notes:

QTp - Paso Robles aquifer

Tsm - Santa Margarita Sandstone aquifer

DTW - Depth to Water

ND - No Data

NA - Not Applicable

NR – No Response

As shown on the water-level hydrographs, water levels in the Santa Margarita Sandstone (Tsm) aquifer at the start of the WY 2011 recharge season ranged between approximately 20 to 30 feet below sea level. Positive response to injection during WY 2011 was observed at 4 of the 9 monitoring wells completed in the Santa Margarita Sandstone aquifer; however, it is noted that several dataloggers malfunctioned for a variety of reasons during the



water year, making evaluation of the basin water-level response to WY 2011 injection difficult. For the 3 monitoring wells with sufficient data (see **Table 9** above), water-level responses ranged between approximately 8 to 33 feet, decreasing with distance from the ASR wells, as is the typical and expected aquifer response to hydraulic stresses (i.e., injection or pumping).

The available water-level data also show that at the near-coastal monitoring wells (PCA East and FO-9), water levels remained below sea level throughout the injection season. This suggests that the chronic water-level depression in the Tsm aquifer of the SGB was not overcome by response to the injection of 1,117 af of recharge during an approximate 6-month injection season and that the landward groundwater gradient was not completely reversed. Under these water-level conditions, little to no groundwater flow from the Tsm aquifer offshore would be expected to occur and any "losses" associated with ASR project operations from water potentially migrating offshore are highly unlikely.

The limited available data for wells completed in the Paso Robles Formation (QTp) show no discernible response to injection and water levels in this aquifer remained above the water level in the underlying Tsm aquifer during WY 2011. Under these water-level conditions, little to no vertically-upward flow of water from the Tsm to the QTp aquifer would be expected to occur.

# **WATER QUALITY**

#### General

Source water for injection at the Santa Margarita ASR Facility wells is supplied from the CAW municipal water system, primarily from Carmel River system wells which are treated at the CAW Begonia Iron Removal Plant (BIRP) for iron and manganese removal. The BIRP water is also disinfected via free chlorine and a phosphate-based corrosion inhibitor is added to the filtered water before entering the CAW distribution system.

As in previous years, water quality was monitored at the Water Project 1 site during WY 2011 injection and aquifer storage operations. Far-field water quality was also monitored at the CAW Paralta production well and at the newly constructed Seaside Middle School ASR-3 well (SMS ASR-3)<sup>10</sup>. Summaries of the collected water-quality data during WY 2011 are presented in **Tables 10 through 14** below<sup>11</sup>. Analytic laboratory reports are presented in **Appendix C**. A discussion of the water-quality data during WY 2011 is presented below.

<sup>&</sup>lt;sup>10</sup> SMS ASR-3 was utilized as a proxy for the SMS Deep Monitoring Well, which did not have a pump installed in WY2011. A pump has been subsequently installed and utilized for water-quality sampling during WY 2012.

<sup>&</sup>lt;sup>11</sup> It is noted that both the Santa Margarita and Seaside Middle School ASR Facilities were undergoing various phases of facility construction during WY 2011. As a result, there were numerous power interruptions at the facilities that limited water-quality sampling such that the sampling frequency could not be performed at all wells in strict accordance with the Sampling and Analysis Plan for the project. It is anticipated that future sampling will not be so limited.



# **Mixing and Dilution**

Because injection operations have occurred annually at SM ASR-1 over the past 9 Water Years (injection began at this well in WY 2002), the proximate groundwater quality has been altered from the natural subsurface conditions, making a clear distinction between "native" and "non-native" water quality both complex and subjective. In the past, the most illustrative basis for discussing water-quality changes for the ASR project was to consider groundwater conditions immediately prior to the injection season as a baseline. However, establishing baseline conditions is more complex now that injection is occurring at multiple wells and is further complicated as a result of the significant volume of injection that occurred in WY 2010 (approximately 1,111 af). The issue of precisely defining a baseline water-quality condition in the future will be increasingly difficult as injection occurs at multiple wells (e.g., SMS ASR-3 is planned to be operational by the commencement of WY 2012).

Essentially five different "baseline" water-quality conditions exist now, specifically at SM ASR-1, SM ASR-2, SM MW-1, Paralta and SMS ASR-3. To track the general mixing, dilution, and interaction between injected and native groundwaters, chloride ion (Cl<sup>-</sup>) has historically been used for the SGB ASR project as a natural tracer. Chloride ion is very stable, highly soluble and is present in both injected and native ground waters; albeit at a 400 percent concentration differential. The historical Cl<sup>-</sup> concentration of the native groundwaters within the Tsm has averaged approximately 120 milligrams per liter (mg/L) in this area of the basin. Presented in **Table 10** below is a summary of the relative percentages of injection water at each of the monitored wells before WY 2011 injection operations and then at the end of the WY 2011 storage period. Calculation of the injected versus native groundwater (NGW) contribution in a given sample are calculated based on the historical NGW and injected water Cl<sup>-</sup> concentrations.

Table 10. Percent Injectate at Monitor Wells During WY 2011

	Pre-Inje	ection C	onditions	End-St	WY 2011		
Well	Sample	CI	% Injectate	Sample	CI	% Injectate	Change
	Date	(mg/l)	in Water	Date	(mg/l)	in Water	(%)
SM ASR-1	11/15/10	34	91	11/11/11	40	85	-6
SM MW-1	11/12/10	26	100	8/24/11	29	97	-3
Paralta	11/9/10			7/27/11	86	36	
SMS ASR-3	10/22/10	107	14				

As **Table 10** shows, none of the four well locations had the same water quality prior to WY 2011 injection, and each represents a different mix of injectate and native groundwater (NGW) and water from the multiple previous injection seasons. These results range from 100 percent injectate water at SM MW-1 to 14 percent injectate water at SMS ASR-3 prior to the WY 2011 injection season. By the end of the WY 2011 storage period, concentration of injectate water at both SM ASR-1 and SM MW-1 had declined slightly compared to pre-injection conditions, which is likely the (unremarkable) result of groundwater migration westward towards active CAW production wells.



Table 11. Summary of WY 2011 Water Quality Data - Injectate

			Sampling Results						
Parameter	Unit	PQL	12/21/10	2/24/11	3/21/11	4/6/11	4/27/11	5/20/11	WY 2011 Injectate
Sample Description	Ollit	PQL	Injectate	Injectate	Injectate	Injectate	Injectate	Injectate	Averages
Major Cations			mjectate	Injectate	Injectate	Injectate	Injectate	Injectate	Averages
Calcium	mg/L	1	45	41		36		39	40
Magnesium	mg/L	1	13	7		9		12	10
Potasium	mg/L	0.5	3.1	2.8		2.7		2.8	2.9
Sodium	mg/L	1	44	42		41		42	42
Major Anions	Ü								
Bicarbonate (as HCO3-)	mg/L	10	167	160		154		155	159
Chloride	mg/L	1	26	27	27	25	27	26	26
Sulfate	mg/L	1	72	62		59		65	65
General Physical									
рН	Std Units	0.1	7.6	7.6		7.6		7.7	7.6
Specific Conductance (EC)	uS	10	527	468		474		468	484
Total Dissolved Solids	mg/L	10	313	283		283		308	297
Metals									
Arsenic (Total)	ug/L	1	ND	ND		ND		ND	0
Barium (Total)	ug/L	10	54	53		50		49	52
Iron (Dissolved)	ug/L	10	ND	ND		ND		ND	0
Iron (Total)	ug/L	10	15	ND 7		ND 7		ND	3.8
Lithium	ug/L	1	6	7		7			7
Manganese (Dissolved)	ug/L	20	ND ND	ND		ND		ND	0
Manganese (Total)	ug/L	20 1	ND 3	ND 3		ND 3		ND 3	3
Molybdenum Nickel	ug/L	1	2	ND		ND		3	0.7
Selenium	ug/L ug/L	2	ND.	ND ND		ND ND		2	0.7
Strontium (Total)	ug/L ug/L	5	237	206		202		198	211
Uranium (by ICP/MS)	ug/L	1	ND	ND		ND		ND	0
Vanadium (Total)	ug/L	1	ND	ND		ND		ND	0
Zinc (Total)	ug/L	10	311	177		186		167	210
Miscellaneous	- 3								
Alkalinity, Total (as CaCO3)	mg/L	10	137	131		126		127	130
Ammonia-N	mg/L	0.05	ND	ND		ND		ND	0.00
Boron	mg/L	0.05	ND	ND		ND		ND	0.00
Chloramines	mg/L	0.05	0.06	0.05	0.07	0.16	0.15	ND	0.08
Fluoride	mg/L	0.1	0.17	0.22		0.14			0.18
Gross Alpha	pCi/L		2.14 +/- 1.23	1.00 +/- 1.57		2.97 +/- 2.23		0.39 +/- 1.31	
Kjehldahl Nitrogen (Total)	mg/L	0.5	ND	ND		ND		0.6	0.15
Methane	ug/L	0.4	0.43	ND		ND		ND	0.11
Nitrate (as NO3)	mg/L	1	ND	ND		ND		ND	0.0
Nitrite (as Nitrogen)	mg/L	0.1	ND	ND		ND		ND	0
Nitrogen (Total)	mg/L	0.2	ND	ND		ND		0.7	0.2
o-Phosphate-P	mg/L	0.05	0.23	0.17		0.18		0.17	0.19
Phosphorous (Total)	mg/L	0.03	0.46	0.28		0.38		0.35	0.37
Radium 226	pCi/L								
Organic Analyses		4.0	20	44	40	45	44	40	44
Haloacetic Acids (Total)  Dibromoacetic Acid	ug/L ug/L	1.0 1.0	<b>20</b> 3.9	2.2	<b>12</b> 2.1	15 2.4	<b>14</b> 3.0	2.2	14 2.6
Dichloroacetic Acid		1.0	8.8	4.4	5.0	7	6.2	5.8	6.2
Monobromoacetic Acid		1.0	ND	ND	ND	ND	ND	ND	0.00
Monochloroacetic Acid		2.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	0.00
Trichloroacetic Acid		1.0	7.2	4.0	4.5	6.1	4.9	4.5	5.2
Organic Carbon (Dissolved)	mg/L	0.2	1.6	1.1		1.2		1.2	1.3
Organic Carbon (Total)	mg/L	0.2	1.4	1.1		1.5		1.3	1.3
Trihalomethanes (Total)	ug/L	1.0	32	22	15	22	14	27	22
Bromodichloromethane		0.5	11.0	7.9	4.9	9.0	5.2	9.3	7.9
Bromoform	ug/L	0.5	1.1	0.9	0.8	0.5	ND	1.0	0.71
Chloroform		1.0	13.0	7.6	5.9	8.5	5.8	10.0	8.5
Dibromochloromethane		0.5	7.4	5.8	3.4	3.9	3.1	6.7	5.1
Field Parameters				-		-			
Temperature	°C		15.5	16.2	15.7	15.8			15.8
Specific Conductance (EC)	uS		550	480	590	580.0			550
рН	Std Units		7.4	7.4	7.4	7.2			7.4
ORP	mV								0
Free Chlorine Residual	mg/L		0.9	0.7	0.8	0.7			0.8
Dissolved Oxygen	mg/L	ļ	5.2	4.3	5.4	5.8			5.2
Silt Density Index	Std Units	ļ	1.2	1.3	0.9	0.7			1.0
Gas Volume	mL	ļ							
H <sub>2</sub> S	mg/L								



Table 12. Summary of WY 2011 Water-Quality Data - SM ASR-1

Davascratura	11. 7:	DC:	2/24/24	Sampling Results				
Parameter	Unit	PQL	3/21/01	10/8/10	11/15/10	7/20/11	11/11/11	
Sample Description	Davis		NGW	WY 2010 Storage		WY 2011	Storage 171	
Elapsed Storage Time Volume Purged at Sampling	Days 1,000 gals	•		130	168	57	1/1	
	1,000 gais							
Major Cations	/I	- 1	0.5	-	40	38		
Calcium	mg/L mg/L	1	85 19		46 13	12		
Magnesium			5.3		2.9	2.7	3	
Potasium Sodium	mg/L mg/L	0.5 1	5.3 88		2.9 45	41		
Major Anions	my/L	- '	00		45	41		
Bicarbonate (as HCO3-)	mg/L	10	273		172	159	17	
Chloride	mg/L	10	120	34	34	27		
Sulfate	mg/L	1	95	34	74	66		
General Physical	mg/L	,	33			00		
pH	Std Units	0.1	7.1		7.5	7.6	7	
Specific Conductance (EC)	uS	10	1015		547	486	5	
Total Dissolved Solids	mg/L	10	618		328	400		
Metals	mg/L	70	010		020			
Arsenic (Total)	ug/L	1	ND	ND	1	ı	N	
Barium (Total)	ug/L	10	52	55	63	ł		
Iron (Dissolved)	ug/L	10	- 52	33	ND	77	N	
Iron (Total)	ug/L	10	120		194	94		
Lithium	ug/L	1	120	6	7	54	,	
Manganese (Dissolved)	ug/L	20			, ND	ND	N	
Manganese (Total)	ug/L	20	40		23	ND	N.	
Molybdenum	ug/L	1	10	5	6			
Nickel	ug/L	1			ND.	Ì		
Selenium	ug/L	2	ND	2	ND			
Strontium (Total)	ug/L	5	.1.5	226	240		25	
Uranium (by ICP/MS)	ug/L	1		ND	ND			
Vanadium (Total)	ug/L	1		ND	ND		N	
Zinc (Total)	ug/L	10	10	182	212		20	
Miscellaneous	- 3							
Alkalinity, Total (as CaCO3)	mg/L	10	224		141	130	14	
Ammonia-N	mg/L	0.05	0.33		ND	ND	N	
Boron	mg/L	0.05	0.14		ND	ND	N	
Chloramines	mg/L	0.05		ND	ND	ND	N	
Fluoride	mg/L	0.1	0.35		0.18			
Gross Alpha	pCi/L			1.09 +/- 1.58	1.10 +/- 1.60	0.54 +/- 1.54	2.17 +/- 1.	
Kjehldahl Nitrogen (Total)	mg/L	0.5			ND	ND	N	
Methane	ug/L	0.4		ND	0.5	ND	N	
Nitrate (as NO3)	mg/L	1	ND		ND	ND	N	
Nitrite (as Nitrogen)	mg/L	0.1			ND	ND		
Nitrogen (Total)	mg/L	0.2			ND	ND	N	
o-Phosphate-P	mg/L	0.05	0.46		0.19	ND	0.1	
Phosphorous (Total)	mg/L	0.03			0.29	0.30	0.2	
Radium 226	pCi/L			0.096 +/- 0.165	0.000 +/- 0.248	0.051 +/- 0.223	0.000 +/- 0.1	
Organic Analyses								
Haloacetic Acids (Total)	ug/L	1.0		8	4	16	N	
Dibromoacetic Acid		1.0		ND	ND	ND	٨	
Dichloroacetic Acid		1.0		2.3	1.8	2.3	٨	
Monobromoacetic Acid		1.0		ND	ND	ND	٨	
Monochloroacetic Acid		2.0		ND	ND	ND	٨	
Trichloroacetic Acid		1.0		5.6	2.2	14	٨	
Organic Carbon (Dissolved)	mg/L	0.2			1.1	1.3	0.	
Organic Carbon (Total)	mg/L	0.2	6.3		1.1	1.2	0.	
Trihalomethanes (Total)	ug/L	1.0		65	54	92		
Bromodichloromethane	ug/L	0.5		15.0	12.0	25.0	8	
Bromoform	ug/L	0.5		0.6	ND	1.0	٨	
Chloroform	ug/L	1.0		44.0	37.0	57.0	20	
Dibromochloromethane	ug/L	0.5		5.8	4.5	9.6	2	
Field Parameters								
Temperature	°C			18.2	18.5	15.9	16	
Specific Conductance (EC)	uS			563	571	475	5	
pH	Std Units			7.2	7.2	7.4	7.:	
ORP	mV					+ 127	+ 8	
Free Chlorine Residual	mg/L			ND	ND	0.32	0.0	
Dissolved Oxygen	mg/L			1.5	1.8	2.4	1.3	
Silt Density Index	Std Units					ļļ		
Gas Volume	mL	<b>——</b>						
H <sub>2</sub> S	mg/L						1	



Table 13. Summary of WY 2011 Water Quality Data – SM MW-1

		Samping Results								
Parameter	Unit	PQL	10/8/10	11/12/10	2/14/11	2/25/11	4/6/11	5/20/11	7/20/11	8/24/11
Sample Description	• • • • • • • • • • • • • • • • • • • •	. ~=		0 Storage	_,.,	WY 2011		0/20/11		Storage
Elapsed Storage Time	Days		130	165			-		57	92
Volume Purged at Sampling	1,000 gals	ľ								
Major Cations										
Calcium	mg/L	1		48				44	44	
Magnesium	mg/L	1		9				10	11	
Potasium	mg/L	0.5		2.7				2.6	2.8	
Sodium	mg/L	1		44				41	43	
Major Anions										
Bicarbonate (as HCO3-)	mg/L	10		168				162	160	
Chloride Sulfate	mg/L	1	30	29 74	29	29	26	26 65	28	29
General Physical	mg/L	1		74				00	68	
pH	Std Units	0.1		7.6				7.9	7.6	
Specific Conductance (EC)	uS	10		524				483	491	
Total Dissolved Solids	mg/L	10		290				310	431	
Metals	mg/L	70		200				010		
Arsenic (Total)	ug/L	1		2						
Barium (Total)	ug/L	10		21						
Iron (Dissolved)	ug/L	10		ND				ND	ND	
Iron (Total)	ug/L	10		ND				ND ND	114	
Lithium	ug/L	1		7				.110		
Manganese (Dissolved)	ug/L	20		ND				ND	ND	
Manganese (Total)	ug/L ug/L	20		ND				ND ND	ND ND	
Molybdenum	ug/L	1		6				110	110	
Nickel	ug/L	1		ND.						
Selenium	ug/L	2		ND						
Strontium (Total)	ug/L	5		249						
Uranium (by ICP/MS)	ug/L	1		ND						
Vanadium (Total)	ug/L	1		ND						
Zinc (Total)	ug/L	10		ND						
Miscellaneous	- C									
Alkalinity, Total (as CaCO3)	mg/L	10		138				133	131	
Ammonia-N	mg/L	0.05		ND				ND	ND	
Boron	mg/L	0.05		ND				ND	ND	
Chloramines	mg/L	0.05	ND	ND	ND	ND	0.08	0.05	ND	ND
Fluoride	mg/L	0.1		0.19						
Gross Alpha	pCi/L			2.69 +/- 1.81					2.06 +/- 1.39	
Kjehldahl Nitrogen (Total)	mg/L	0.5		ND				ND	0.5	
Methane	ug/L	0.4		ND					ND	
Nitrate (as NO3)	mg/L	1		ND				ND	ND	
Nitrite (as Nitrogen)	mg/L	0.1		ND				ND	ND	
Nitrogen (Total)	mg/L	0.2		ND				ND	0.6	
o-Phosphate-P	mg/L	0.05		0.05				ND	ND	
Phosphorous (Total)	mg/L	0.03		0.05				0.08	0.11	
Radium 226	pCi/L			0.038 +/- 0.269				(	0.154 +/- 0.266	
Organic Analyses										
Haloacetic Acids (Total)	ug/L	1.0	ND	ND	7.1	20	18	19	5.6	ND
Dibromoacetic Ac		1.0	ND	ND	ND	2.2	1.6		ND	ND
Dichloroacetic Ac		1.0	ND	ND	1.5	9.8	8.7		ND	ND
Monobromoacetic Ac		1.0	ND	ND	ND	ND	ND		ND	ND
Monochloroacetic Ac		2.0	ND	ND	ND	ND	ND		ND	ND
Trichloroacetic Ac	_	1.0	ND	ND	5.6	8.4	7.5		5.6	ND
Organic Carbon (Dissolved)	mg/L	0.2		1.1				1.1	1.1	
Organic Carbon (Total)	mg/L	0.2		1.1				1.2	1.1	
Trihalomethanes (Total)	ug/L	1.0	49	53	38	77	69	60	67	67
Bromodichloromethan		0.5	12.0	13.0	12.0	21.0	22.0	18.0	18.0	17.0
Bromofor		0.5	ND 24.0	ND 25.0	0.9	1.2	0.8	1.1	0.9	ND 45.0
Chlorofor Dibromochloromethan		1.0 0.5	34.0 4.0	35.0 4.5	19.0 6.4	44.0 10.0	38.0 7.6	33.0 8.2	40.0 8.2	45.0 5.4
Field Parameters	io uy/L	0.5	4.0	4.3	0.4	10.0	7.0	0.2	0.2	5.4
	°C	-	24.2	24.5			10.0			17 0
Temperature	uS		21.3 530	21.5 535			19.8 500		477	17.9 472
Specific Conductance (EC)	Std Units			7.5			7.4		7.2	7.3
pH ORP	mV		7.6	7.5			7.4		+ 174	+ 126
Free Chlorine Residual	mg/L		ND	ND			ND		÷ 1/4	+ 120 ND
Dissolved Oxygen	mg/L		0.2	0.8			3.5		2.15	2.92
Silt Density Index	Std Units									
Coo Volumo	mL									
Gas Volume H <sub>2</sub> S	mg/L	<del></del>								ND



Table 14. Summary of WY 2011 Water Quality Data – Off-Site MWs

			Sampling Results				
			SMS	Par			
Parameter	Unit	PQL	10/22/10	11/9/10	7/27/11		
Volume Pumped at Sampling	1,000 gals		4495	1110110	.,,		
Major Cations	, ,						
Calcium	mg/L	1	76		62		
Magnesium	mg/L	1	18		15		
Potasium	mg/L	0.5	4.5		ND		
Sodium	mg/L	1	102		81		
Major Anions							
Bicarbonate (as HCO3-)	mg/L	10	304				
Chloride	mg/L	1	107		86		
Sulfate	mg/L	1	56		68		
General Physical	I						
pH (50)	Std Units	0.1	7.7		710		
Specific Conductance (EC) Total Dissolved Solids	uS ma/l	10 10	954 575		710 460		
Metals	mg/L	10	5/5		460		
Arsenic (Total)	ug/L	1	4	2	2		
Barium (Total)	ug/L ug/L	10	50	53	ND		
Iron (Dissolved)	ug/L ug/L	10	21	33	ND ND		
Iron (Total)	ug/L ug/L	10	21	ND	ND ND		
Lithium	ug/L	10	36	21	24		
Manganese (Dissolved)	ug/L	20	27		21		
Manganese (Total)	ug/L	20	27	26	22		
Molybdenum	ug/L	1		6	ND		
Nickel	ug/L	1	ND		ND		
Selenium	ug/L	2	ND	3	3		
Strontium (Total)	ug/L	5	403	313	300		
Uranium (by ICP/MS)	ug/L	1		ND	ND		
Vanadium (Total)	ug/L	1		ND	ND		
Zinc (Total)	ug/L	10		ND	ND		
Miscellaneous							
Alkalinity, Total (as CaCO3)	mg/L	10	249		192		
Ammonia-N	mg/L	0.05	ND 0.00		ND 0.00		
Boron	mg/L	0.05	0.08	ND	0.08		
Chloramines Fluoride	mg/L	0.05 0.1	0.14	ND	ND		
Gross Alpha	mg/L pCi/L	0.1	0.14	5.96 +/- 0.35	ND		
Kjehldahl Nitrogen (Total)	mg/L	0.5	ND	3.30 +/- 0.33	0.31		
Methane	ug/L	0.4	ND.	1.4	1.2		
Nitrate (as NO3)	mg/L	1	1		0.2		
Nitrite (as Nitrogen)	mg/L	0.1	ND		ND		
Nitrogen (Total)	mg/L	0.2	ND				
o-Phosphate-P	mg/L	0.05	ND		ND		
Phosphorous (Total)	mg/L	0.03	0.03		ND		
Radium 226	pCi/L			1.12 +/- 0.639	1.31 +/- 0.662		
Organic Analyses							
Haloacetic Acids (Total)	ug/L	1.0	ND	1.2	ND		
Dibromoacetic Acid		1.0	ND	ND	ND		
Dichloroacetic Acid		1.0	ND	ND	ND		
Monobromoacetic Acid	- U	1.0	ND	ND	ND		
Monochloroacetic Acid		2.0	ND	1.2	ND		
Trichloroacetic Acid		1.0	ND 0.74	ND	ND 0.77		
Organic Carbon (Dissolved)	mg/L	0.2	0.71		0.77		
Organic Carbon (Total)	mg/L	0.2	0.7	F 0	0.80		
Trihalomethanes (Total)  Bromodichloromethane	ug/L ug/L	1.0 0.5	ND ND	<b>5.2</b> 1.1	9.8 2.0		
Bromodichiorometriane		0.5	ND ND	ND	ND		
Chloroform		1.0	ND ND	4.1	7.8		
Dibromochloromethane		0.5	ND ND	ND	ND		
Field Parameters							
Temperature	° C		26.2	22.3	22.7		
Specific Conductance (EC)	uS		991	760	751		
pH	Std Units		7.0	7.16	7.1		
ORP	mV		-82		-94.9		
Free Chlorine Residual	mg/L		ND	ND	0.05		
Dissolved Oxygen	mg/L Std Units				0.69		
Silt Density Index Gas Volume	Std Units mL						
H <sub>2</sub> S	mg/L		0.60		0.02		
۷-	19, ⊏	I	0.00		0.02		



Although in past years the calculation of a "normalized concentration" of water-quality parameters based on injected and NGW Cl<sup>-</sup> concentrations has been used to "back out" the dilution effects of this intermixing of waters, the substantial and repeated dilution/intermixing that has occurred now is more error prone due to the high dilutions and the spatial variations of Cl<sup>-</sup> concentrations around the ASR project sites now extant. Normalized data are therefore not included in the current data presentations.

# **Injection Water Quality**

Injection water quality from the CAW system during WY 2011 is presented in **Table 11** above. The data in **Table 11** show injection water quality was typical of recent years. Levels of Trihalomethane (THM) and Haloacetic Acid (HAA) compounds, as well as bionutrients (oxygen, nitrogen, phosphorous, and organic carbon), were all present at levels similar to previous years.

# **Water Quality During Aquifer Storage**

**Table 12** presents a summary of water-quality data collected at SM ASR-1, **Table 13** presents similar data collected at MW-1, and **Table 14** presents the limited water-quality data collected at the off-site monitoring wells (SMS and Paralta). Data for SM ASR-1 includes original 2001 native groundwater results obtained when the well was first constructed (3/21/01 sample), "baseline" water quality taken immediately prior to WY 2011 injection (11/15/10 sample), and "stored" water quality (WY 2011 Storage) collected periodically from the aquifer after injection operations were terminated.

Review of water-quality parameters gathered at SM ASR-1, including major anions and cations, redox potential (ORP), and conductivity all showed similar geochemical stability and a lack of dilution / intermixing with native groundwaters during aquifer storage. This is unremarkable when compared to years prior to WY 2010 due to the larger volume of water injected; although drift / gradient-induced migration was surely occurring, the injection bubble was sufficiently large to still encompass SM ASR-1 and SM MW-1<sup>12</sup>.

As found in previous ASR operations at the site, the only significant water-quality changes observed during aquifer storage were redox-related (and likely biologically mediated) reactions; these were primarily evidenced by the degradation of HAA and THM compounds. Disinfection Byproducts (DBPs) parameters at SM ASR-1 and SM MW-1 during WY 2011 are graphically presented on **Figures 16 and 17**, respectively. The results showed the following:

• THMs showed their typical initial and significant ingrowth at SM ASR-1 resulting from the presence of free chlorine in the injected water and peaked in concentration at 92 micrograms per liter (ug/L) approximately 60 days after the cessation of injection, followed by a gradual decline during the storage period. After approximately 90 days of storage, THMs had degraded to below the

-

<sup>&</sup>lt;sup>12</sup> SM ASR-2 was not sampled during WY 2011 storage period due to a lack of permanent power supply. Permanent power has since been established and is in place for WY 2012.



Maximum Contaminant Level (MCL) of 80 ug/L. THMs at SM MW-1 showed similar ingrowth, but a much lower rate of degradation.

 HAAs showed the typical limited amount of ingrowth after the cessation of injection and they degraded completely during storage within a period of approximately 170 days at SM MW-1.

Decline in THMs at SM ASR-1 followed the characteristic process: rapid degradation of Bromoform and the highly brominated species with much slower decline in Chloroform. The slower than historically-observed degradation of THM's at SM MW-1 may be a result of the large volume of water injected and the more thorough displacement of native groundwaters; this phenomena will need to be observed closely in subsequent operations to further assess the change in degradation rates.

# Water Quality at Far-Field Monitor Wells

Samples from the closest CAW SGB production well (Paralta) were collected in November 2010 prior to the WY 2011 injection season and July 2011 following the injection season. The samples were analyzed for DBP's and trace minerals which might indicate influence from the operation of the ASR wells. In addition, a sample was collected from SMS ASR-3 in October 2010.

As discussed previously and as shown in **Table 10**, evaluation of chloride ion (Cl<sup>-</sup>), concentrations indicate that some previously injected water had reached the far-field wells prior to the WY 2011 injection season. The presence of low levels of THM compounds at the Paralta well further confirms the presence of CAW Injectate at the site, with THM levels of approximately 5 to 10 micrograms per liter (ug/L); however, the Paralta well penetrates both the QTp and Tsm formations; therefore, the precise quantification of injectate capture is not possible due to the significant and variable contribution of QTp water in the Paralta production. As related to potable water-quality standards, the THM levels detected at the Paralta Well are less than 13 percent of the MCL of 80 ug/L.

The next closest well is SMS ASR-3, which was constructed and test pumped in 2010. SMS ASR-3 is perforated solely in the Tsm formation and is, therefore, a good data source for water quality and mixing. Calculations based on chloride ion concentrations at SMS ASR-3 show a mixture of approximately 14 percent CAW Injectate and 86 percent native Tsm groundwater. No THM's were observed at SMS ASR-3 prior to the WY 2011 injection season. Unfortunately, due to the previously noted power supply issues, SMS ASR-3 could not be sampled during the WY 2011 storage period to monitor the presence / influence of WY 2011 injectate at this well.

Overall, water-quality data from WY 2011 showed no significant deviations from previous years; however, the determination of precisely where the injected waters travel will likely be more challenging as multiple wells become operational and injection quantities increase. The most important factors are that: (a) no adverse geochemical reactions are occurring during aquifer storage, and; (b) that injection is showing direct and measurable benefit to the extant basin water quality vis-à-vis reductions in salinity and dissolved solids, hardness, and aesthetic



parameters such as manganese and sulfide ions, which impart color and odor to the consumers' drinking water. These improvements are likely to continue as ASR operations continue and expand in the future.

#### CONCLUSIONS

Based on the findings from operation of Water Project 1 (Phase 1 ASR Project) during WY 2011, we conclude the following:

## WY 2011 Recharge Operations

WY 2011 was an "Above Normal" hydrologic year, and was the second year that Carmel River system water was simultaneously injected at both SM ASR-1 and SM ASR-2. These factors resulted in a total of approximately 1,117 af of water recharged into the Seaside Groundwater Basin at the Santa Margarita ASR Facility. The volume injected during WY 2011 was slightly greater than that injected during WY 2010 (1,111 af) and was the highest single-year injection volume and is also greater than the operational average annual yield for the project of 920 afy. For comparison, the volume injected during WY 2007 was only 8.2 af, and during WY 2006 was 408 af, which were "Critically Dry" and "Wet" hydrologic years, respectively. The total volumes injected each year reflect the relative availability of excess Carmel River flows, as well as the number of ASR wells in operation and conveyance capacity of the CAW system. A graphical presentation showing a summary of annual injection and recovery volumes since operations began at the Santa Margarita ASR Facility site is shown on Figure 2.

#### **Well Performance**

SM ASR-1. During WY 2011, SM ASR-1 was operated at injection rates ranging between approximately 400 to 1,950 gpm (1.8 to 8.6 afd), averaging approximately 1,190 gpm (5.3 afd). The 24-hour specific injectivity at SM ASR-1 at the beginning of WY 2011 was approximately 26 gpm/ft and at the end it was 23 gpm/ft, a decline of approximately 10 percent, indicating that a small amount residual plugging occurred at the well over the course of the WY 2011 injection season. These values are comparable to the specific injectivity at the end of WY 2010 of approximately 25 gpm/ft. The pumping specific capacity was relatively stable over the course of WY 2011, at approximately 31 to 30 gpm/ft prior to and following the injection season, respectively. The maintenance of specific capacity following the injection season suggests that backflushing operations were successful at removing residual plugging that had accumulated during the injection season at SM ASR-1.

SM ASR-2. Prior to injection in WY 2011, SM ASR-2 underwent rigorous downhole rehabilitation to restore lost hydraulic performance. During WY 2011, SM ASR-2 was operated at average injection rates ranging between approximately 1,290 to 1,890 gpm (5.7 to 8.4 afd), averaging approximately 1,580 gpm (7.0 afd). The 24-hour specific injectivity at ASR-2 the beginning and ending of WY 2011 was stable at approximately 38 gpm/ft, indicating that no discernible residual plugging occurred at this well over the course of the WY 2011 injection season. These values are significantly greater than the specific injectivity at the end of WY



2010 of approximately 3 gpm/ft The pumping specific capacity declined slightly over the course of WY 2011, from approximately 37 gpm/ft prior to injection to 33 gpm/ft at the end of the injection season, suggesting that backflushing did not completely remove the accumulated residual plugging during WY 2011.

# **Water Quality**

Significant conclusions regarding the water-quality investigation during WY 2011 include the following:

- Consistent with previous observations, no significant ion exchange, acid-base, or precipitation reactions were observed at the site.
- THMs at SM ASR-1 showed characteristic and significant initial "ingrowth" that peaked at approximately 60 days of storage, followed by a gradual decline over the next 90 to 120 days of storage.
- THM data from the on-site SM MW-1 monitor well also supports the finding that THM adsorption is not occurring during aquifer storage and transport; therefore, observed THM reductions during storage are likely being controlled by bioactivity.
- HAAs showed little "ingrowth" following the cessation of injection and degraded completely during aquifer storage.

#### **RECOMMENDATIONS**

Based on the WY 2011 ASR program results and our experience with similar ASR projects, we offer the following recommendations for continued and future operations of Water Project 1:

#### **SM ASR-1 Well Operational Parameters**

- Water-Level Drawup: Under the present local water-level conditions, the amount of water-level drawup should be limited to approximately 100 feet. This amount of water-level drawup during injection equals the typical available drawdown in the well for backflushing. This helps to avoid over-pressurization and compression of plugging materials, thereby maximizing the efficiency of backflushing and limiting the amount of residual plugging.
- <u>Injection Rate</u>: Based on the lack of overall residual plugging during WY 2011, SM ASR-1 can be operated at an injection rate up to approximately 1,500 gpm (6.6 afd) to avoid excessive plugging during injection. This represents a 50 percent increase in the design injection rate of 1,000 gpm.
- <u>Backflushing Frequency</u>: During the recharge season, routine backflushing should continue to be performed on an approximate weekly basis, or when the amount of water-level drawup in the casing reaches approximately 100 feet, whichever occurs first.



# **SM ASR-2 Well Operational Parameters**

- Water-Level Drawup: Under the present local water-level conditions, the amount of water-level drawup should be limited to approximately 140 feet, which is equal to the typical amount of available drawdown in the well for backflushing. Again, this helps to avoid over-pressurization and compression of plugging materials and limiting the amount of residual plugging.
- <u>Injection Rate</u>: Based on the success of well rehabilitation and the lack of significant residual plugging during WY 2011, SM ASR-2 can be operated at an injection rate up to approximately 2,000 gpm (8.8 afd) to avoid excessive plugging during injection. This represents a 33 percent increase in the design injection rate of 1,500 gpm.
- <u>Backflushing Frequency</u>: During the recharge season, routine backflushing should continue to be performed on an approximate weekly basis, or when the amount of water-level drawup in the casing reaches approximately 140 feet, whichever occurs first.

It is important to note that water-level drawup during injection is a function of several factors, including specific injectivity, injection rate, plugging rates, and duration of continuous injection. Therefore, establishing a maximum drawup level is a useful guide for triggering backflushing of the ASR wells under variable conditions. For example, injecting at lower injection rates and / or with an injection source water with lower plugging potential (as measured by SDI), the amount of water level drawup per unit time will be lower and the duration of continuous injection between backflushing may be extended before the drawup limitation is reached. Conversely, injecting at a higher rate and / or with injection source water having a higher plugging potential, the rate of drawup will increase and the duration between backflushing would need to be shortened.

#### CLOSURE

This report has been prepared exclusively for the Monterey Peninsula Water Management District for the specific application to the ASR Project on the Monterey Peninsula. The findings and conclusions presented herein were prepared in accordance with generally accepted hydrogeologic and engineering practices. No other warranty, express or implied, is made.



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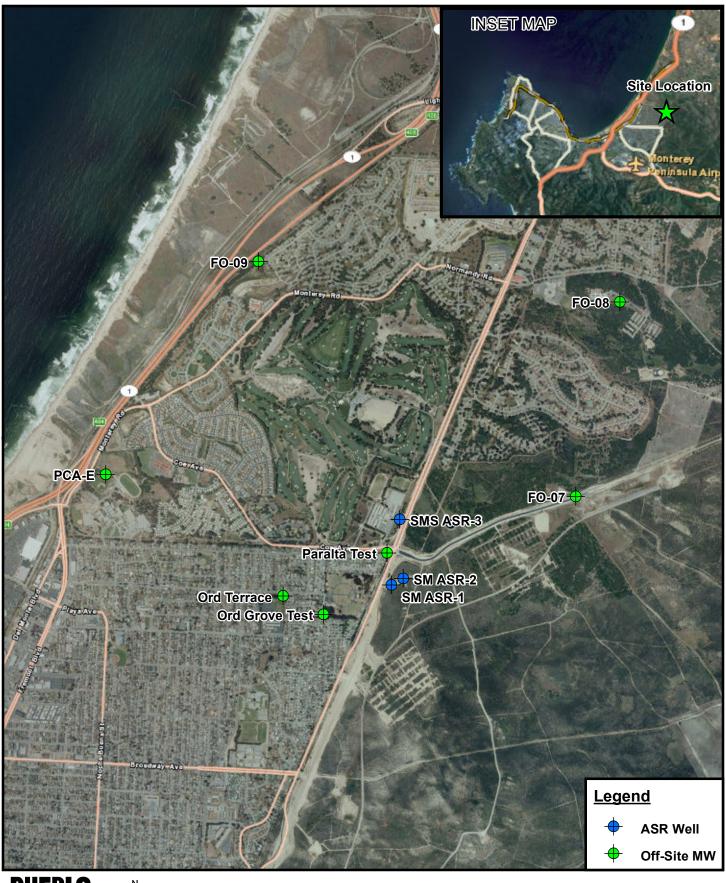
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# **FIGURES**



PUEBLO N Feet Section 2,000

FIGURE 1. SITE LOCATION MAP WY 2011 ASR Program Water Project 1 (Phase 1 ASR)

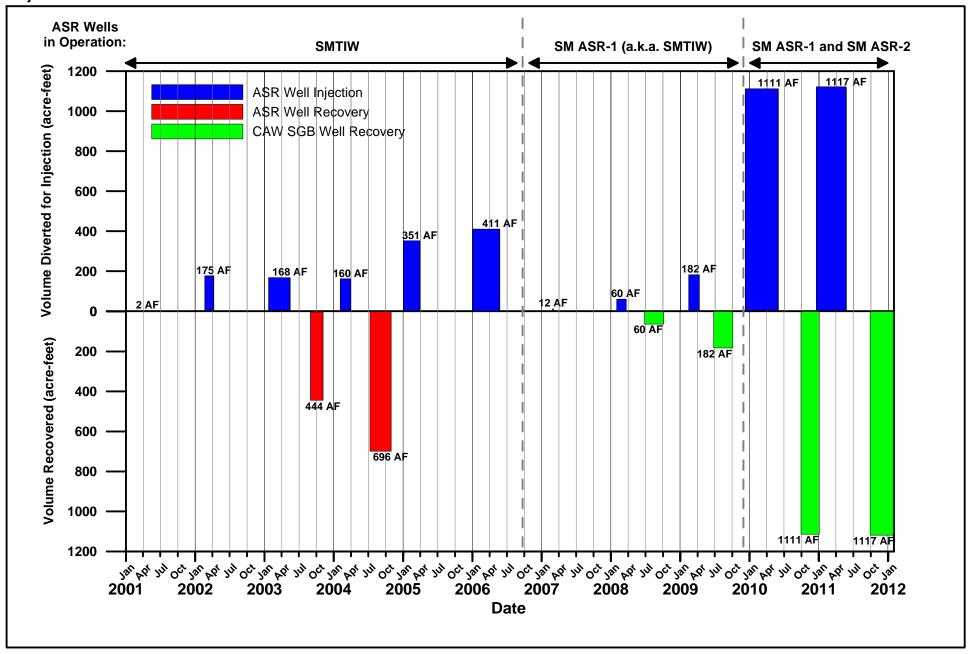
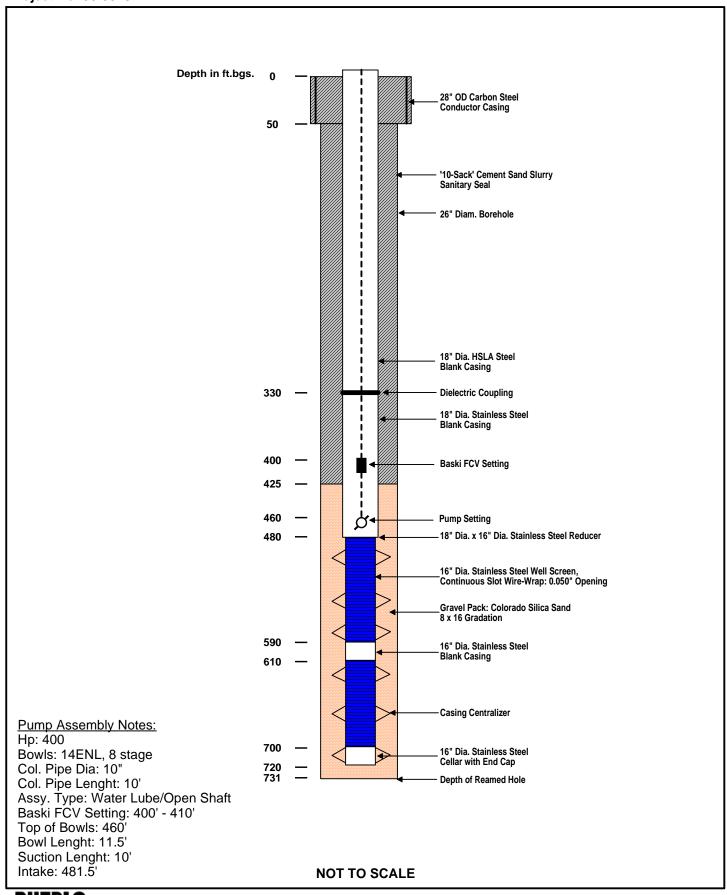




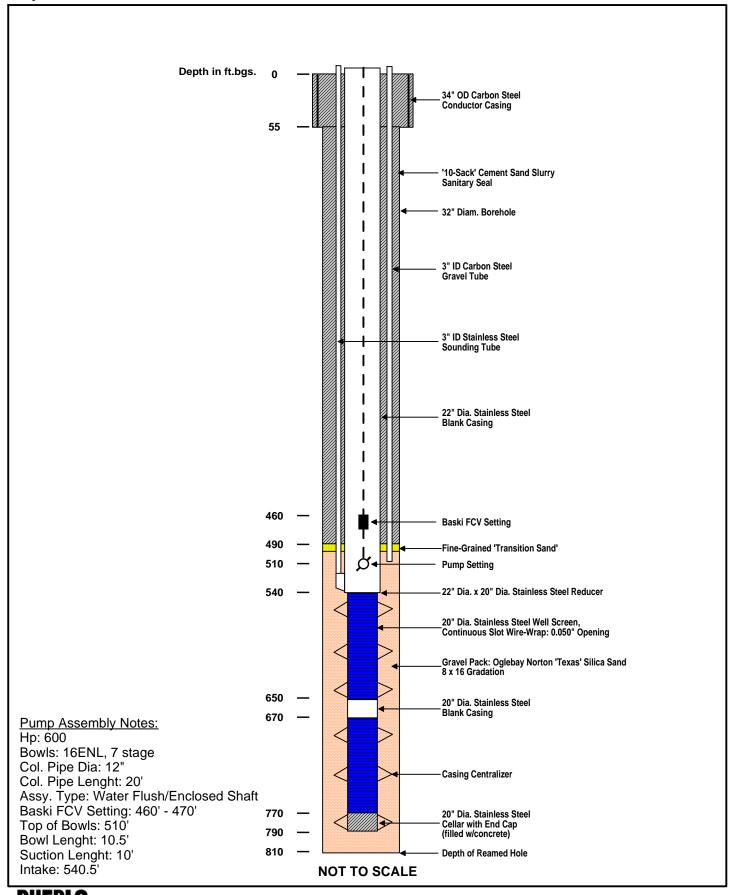
FIGURE 2. SUMMARY OF ASR OPERATIONS (WY 2001 - 2011)

WY 2011 ASR Program

Water Project 1 (Phase 1 ASR)









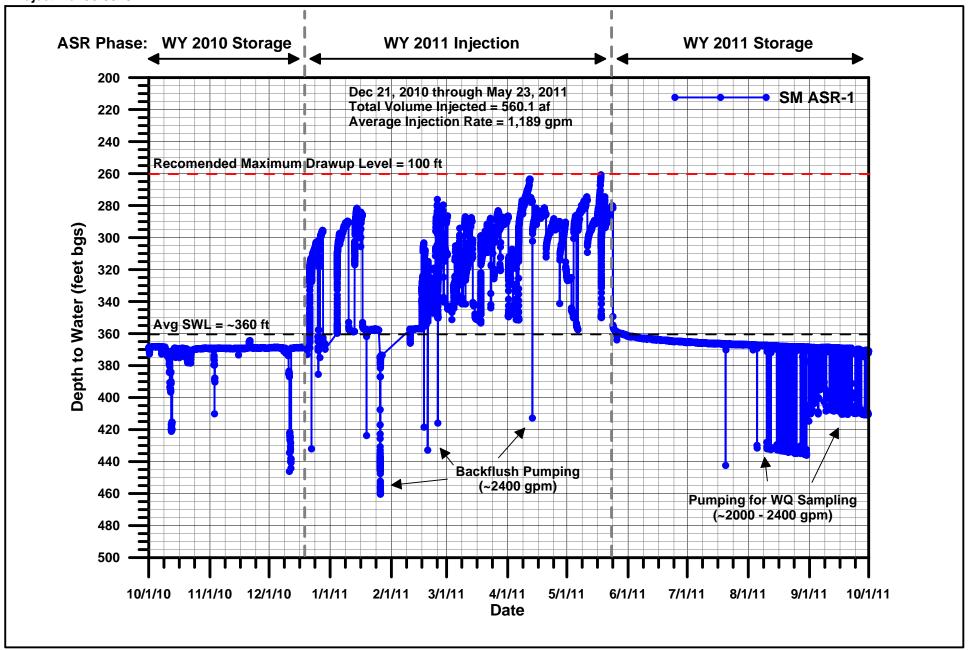




FIGURE 5. SM ASR-1 WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)

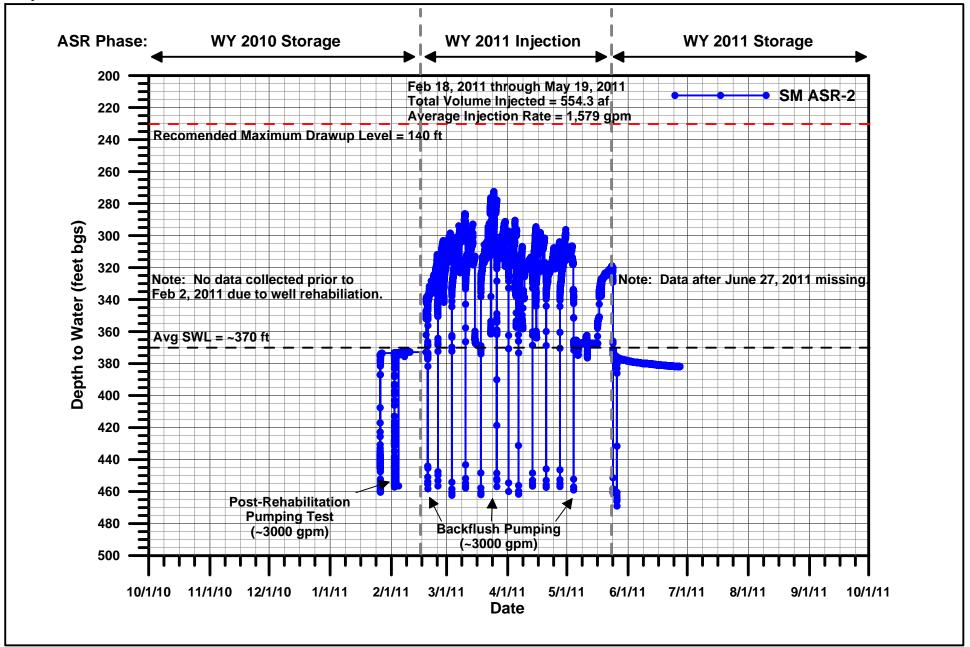




FIGURE 6. SM ASR-2 WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)

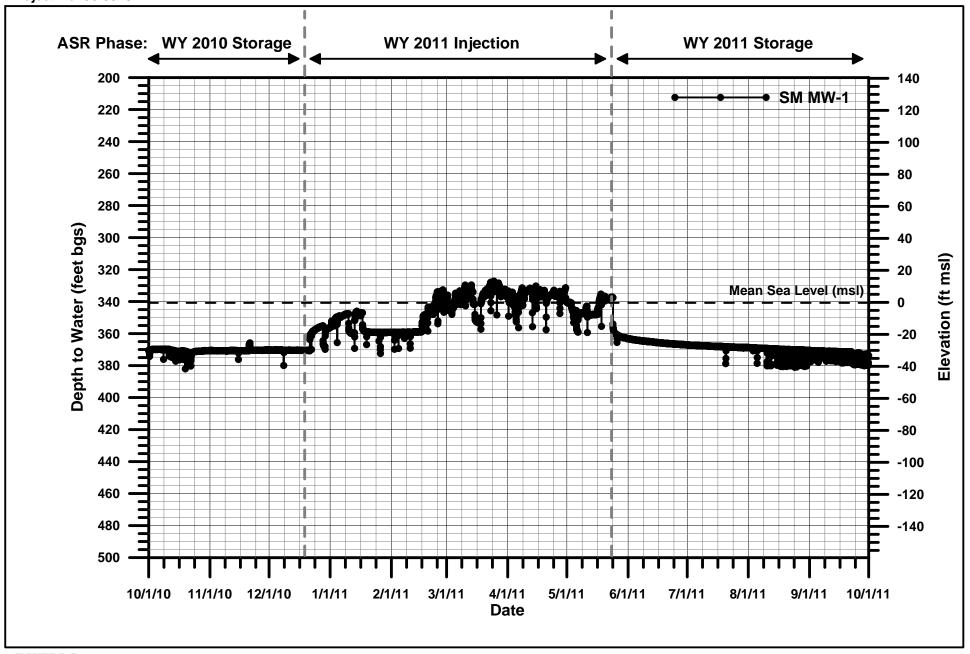
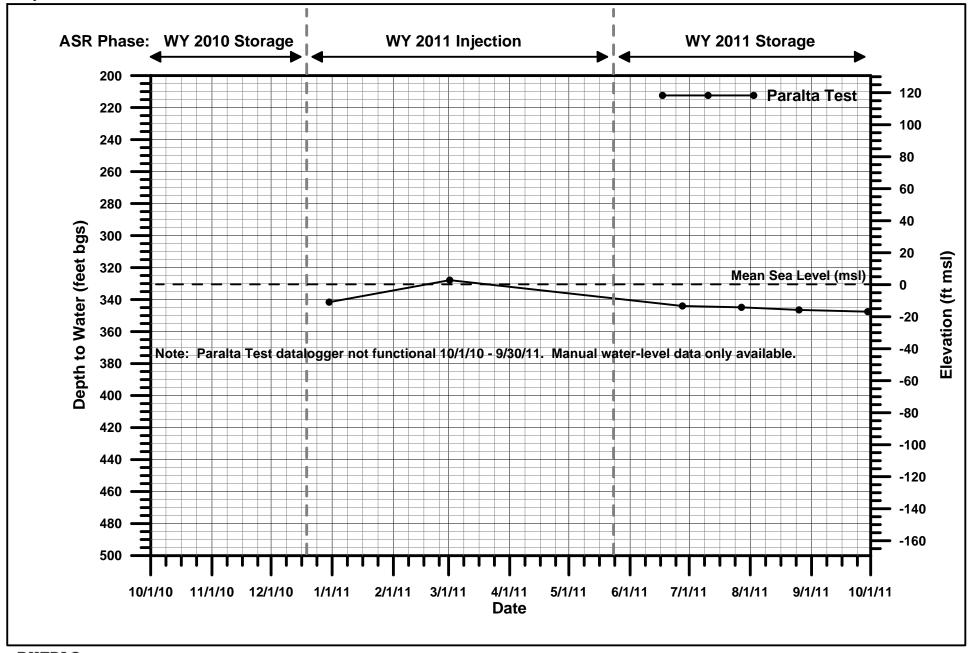




FIGURE 7. SM MW-1 WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)





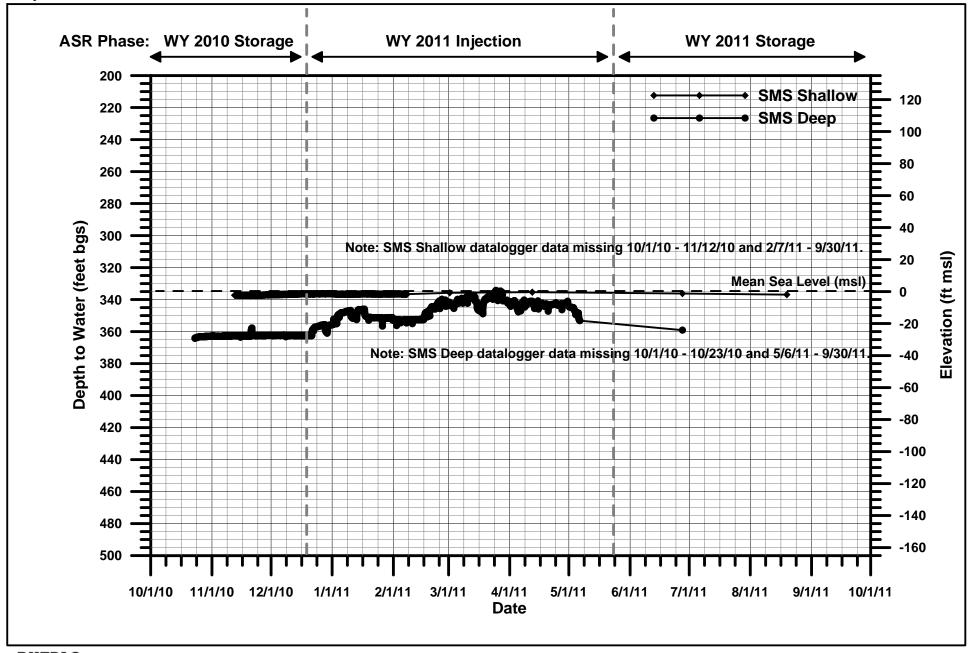
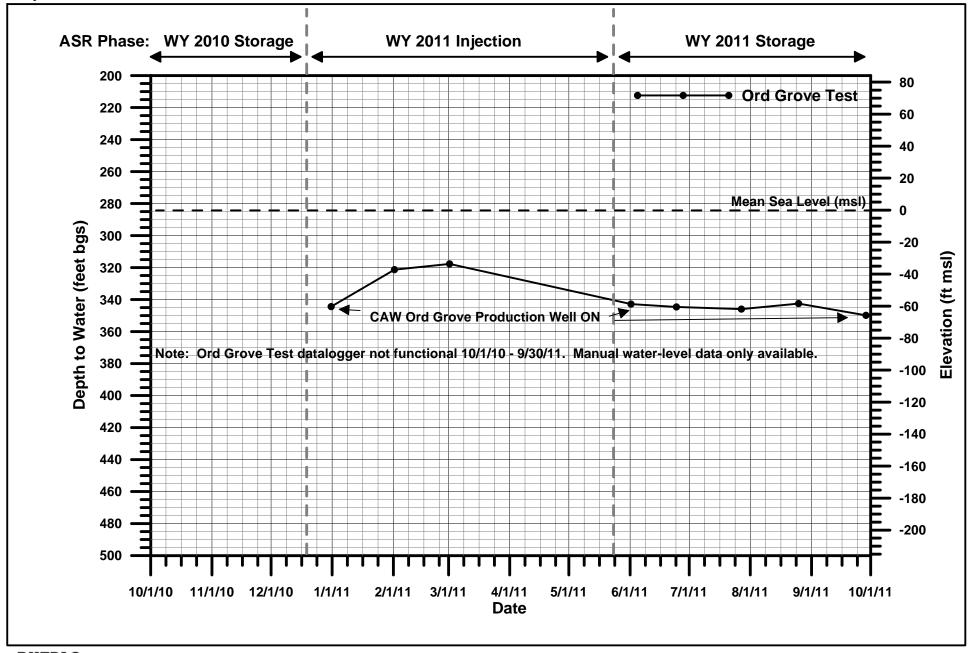




FIGURE 9. SEASIDE MIDDLE SCHOOL WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)





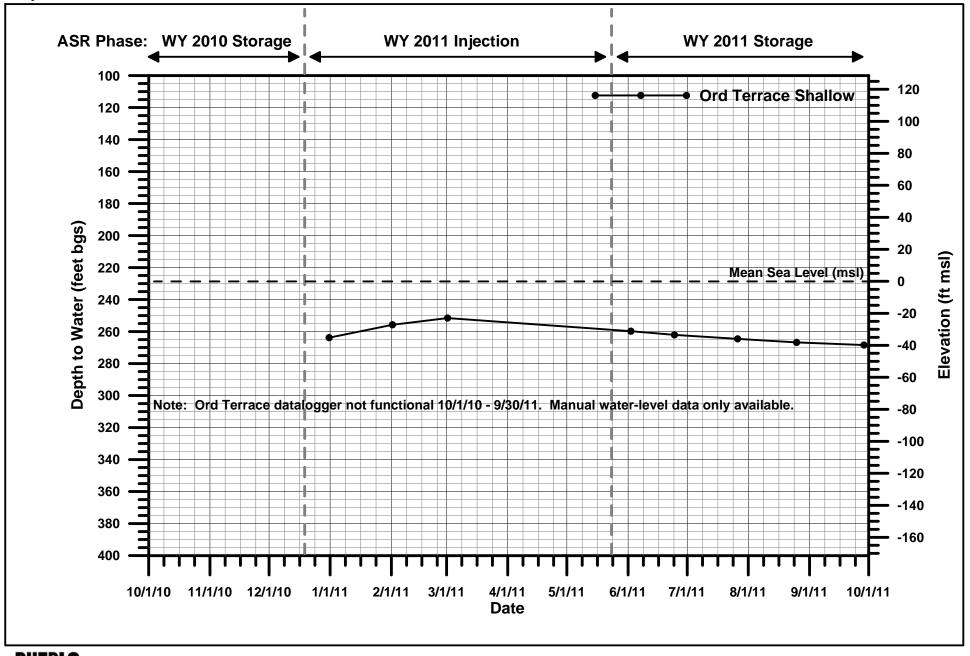




FIGURE 11. ORD TERRACE WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)

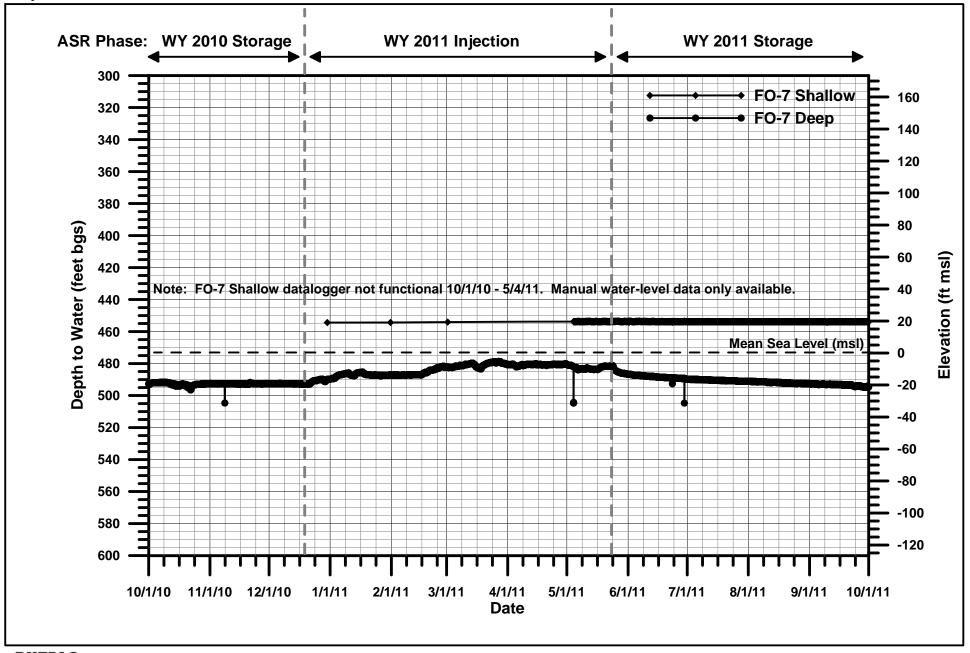




FIGURE 12. FO-7 WATER-LEVEL DATA WY 2011 ASR Program Water Project 1 (Phase 1 ASR)

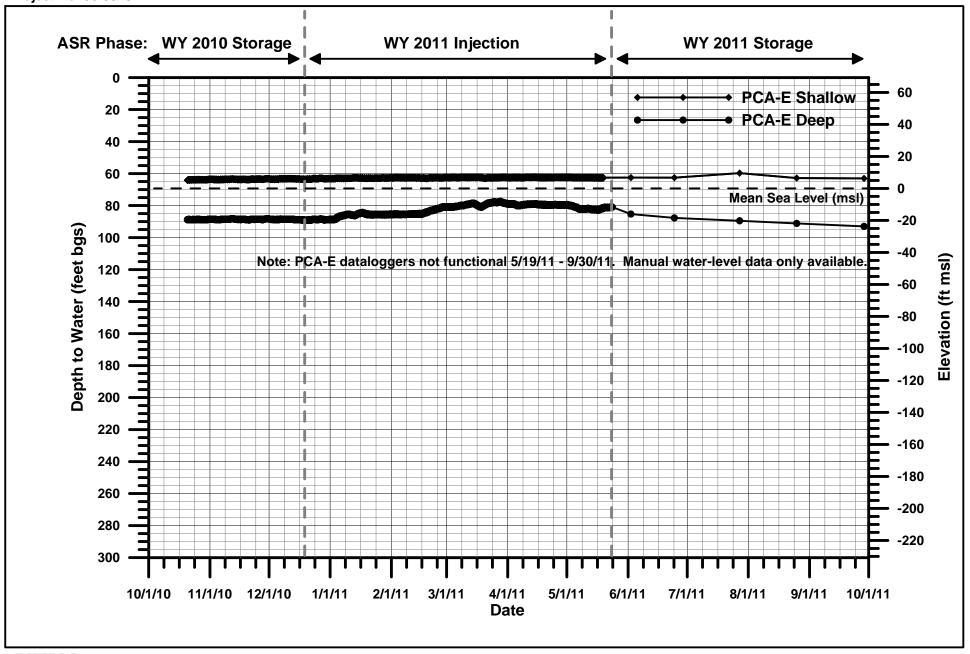




FIGURE 13. PCA-EAST WATER-LEVEL DATA
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)

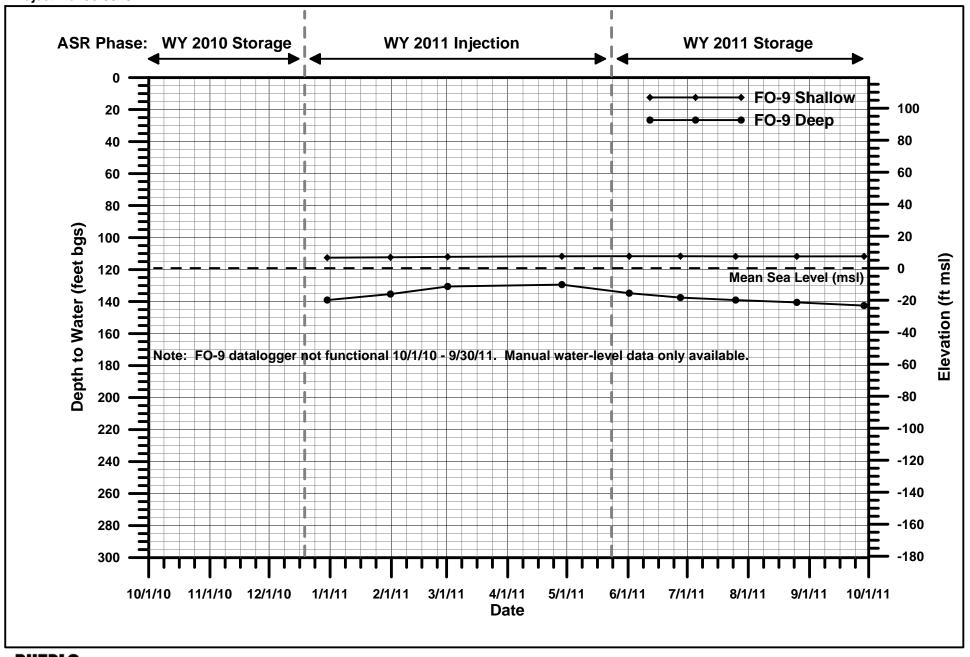




FIGURE 14. FO-9 WATER-LEVEL DATA WY 2011 ASR Program Water Project 1 (Phase 1 ASR)

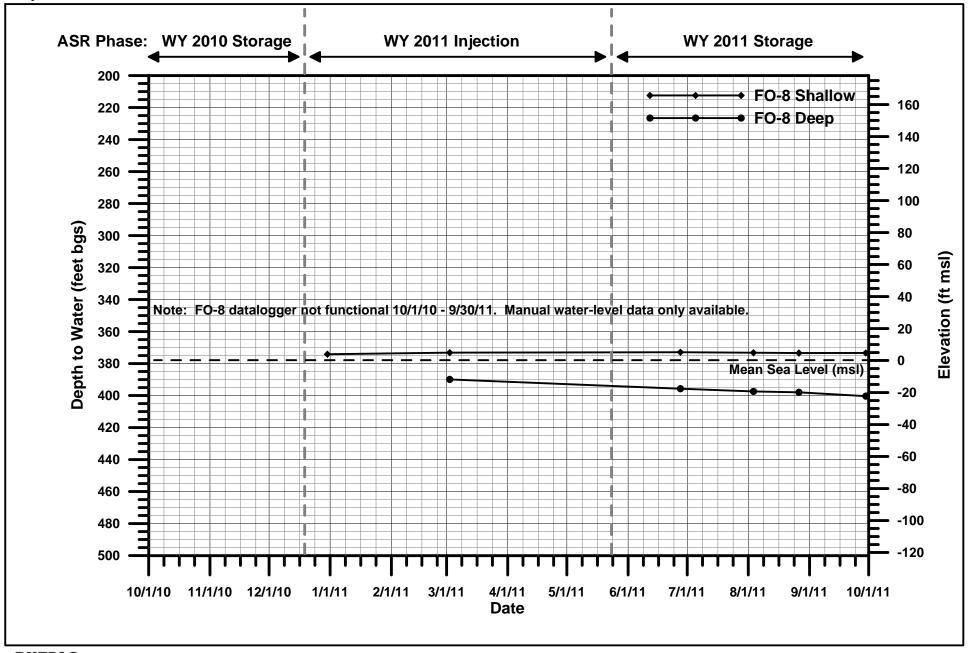
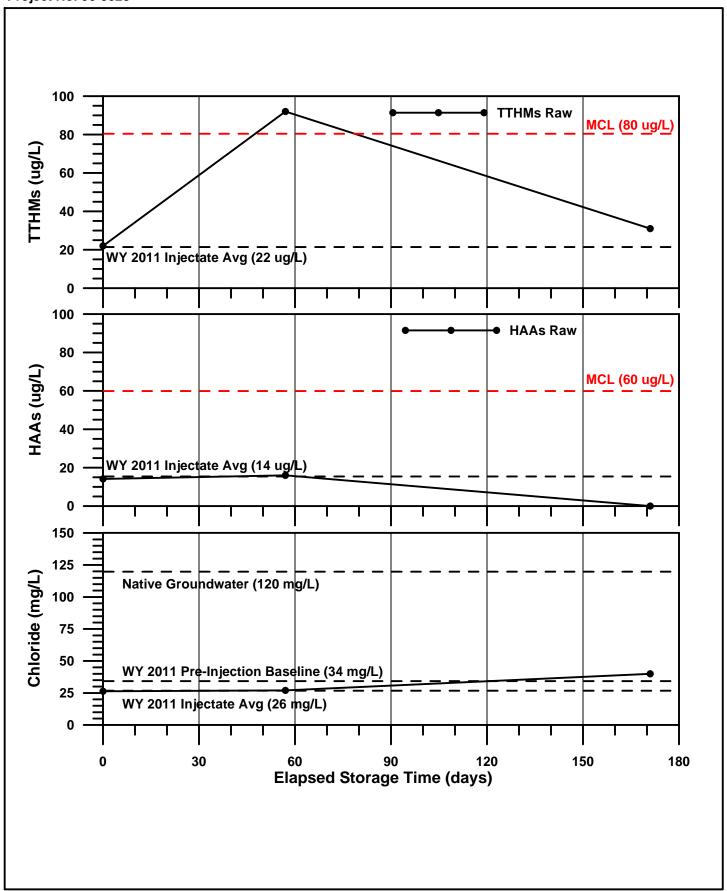




FIGURE 15. FO-8 WATER-LEVEL DATA WY 2011 ASR Program Water Project 1 (Phase 1 ASR)





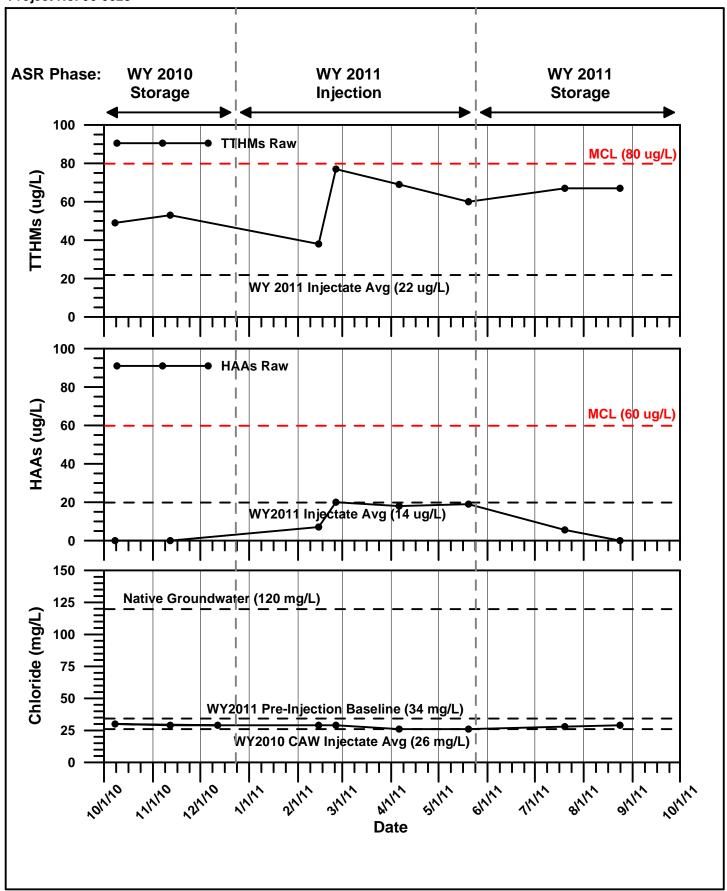




FIGURE 17. SM MW- 1 DISINFECTION BYPRODUCTS PARAMETERS
WY 2011 ASR Program
Water Project 1 (Phase 1 ASR)



### **APPENDIX A - FIELD DATA**

Well: ASR 1

Test:

WY 2011 Test #1

Sheet No. 1 of \_\_\_

	Б	Rate	Totalizer	Pressu		٥	
Date/Time	(min)	(dbm)	(gallons)	Line   Head	ad   FCV	$(ft \; btst) \mid (ft)$	
12/21/10 16:13 1 min	0	0271	37 (21.40 bea	92	122	££'598	TAUK=2,200 psi
		200				332.93	
12/21/10 16:15	2					320.15	wjector
12/21/10 16:16	3					320.29	3
12/21/10 16:17	4					324.20	BF with ~ 04596160 @ 0830) drawny
12/21/10 16:18	5					327.85	residual chalon = 0,4
12/21/10 16:19	9					327.67	CD1 = 0.8 prop to injection a 500 p. p.
12/21/10 16:20	7		-			72713	
12/21/10 16:21	8					326.84	TOTAL CONTRACTOR OF THE PARTY O
12/21/10 16:22	6					326.66	
12/21/10 16:23	10					326,24	
12/21/10 16:25	12					20.925	
12/21/10 16:28 5 min						325.27	
	20						
12/21/10 16:38	25						
12/21/10 16:43	30						
12/21/10 16:48	35						
12/21/10 16:53	40					322.4	
12/21/10 16:58	45						
12/21/10 17:03	50		,				
12/21/10 17:08	52						
12/21/10 17:13	09						
12/21/10 17:23 10 min							
12/21/10 17:33	80						
12/21/10 17:43	06						
12/21/10 17:53	100						
12/21/10 18:13 20 min	120					318.90	
12/21/10 18:33	140		THE PARTY OF THE P				The state of the s
12/21/10 18:53	160		THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF TH				
12/21/10 19:13	180	•					
12/21/10 19:33 30 min	210	٠				,	
12/21/10 20:03	240						
12/21/10 20:33	270						
12/21/10 21:03	300						
12/21/10 21:33	330						The state of the s
12/21/10 22:03	360				-		
12/21/10 22:33	390						The state of the s
12/21/10 23:03	420						
12/21/10 23:33	450						
12/22/10 0:03	480	-	•		,		

Well: ASR 1

Starting Water Level

Sheet No. 2 of\_

Date/Time         (min)           12/22/10 0:33         54           12/22/10 0:33         54           12/22/10 1:03         54           12/22/10 1:03         60           12/22/10 2:03         60           12/22/10 2:03         60           12/22/10 2:03         60           12/22/10 3:03         60           12/22/10 4:03         72           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         84           12/22/10 6:03         1hr           12/22/10 6:03         94           12/22/10 9:53         1hr           12/22/10 9:53         1hr           12/22/10 10:53         112           12/22/10 10:53         112	0000000	Rate (gpm)	Totalizer	Pres	Dreceire (nei)	WIG	ŀ	
<b>ne (Mi</b>	0000000	(mdb)			ランショラ			
40 min			(gallons)	Line	Head F(	FCV (ft.	$(\mathfrak{f}\mathfrak{t}$ btst $)$ $(\mathfrak{f}\mathfrak{t})$	Comments/Other
40 min	540 600 630 680 690 720		,					
40 min	600 630 660 690 720					26218	26	
40 min	630 630 680 690							
40 min	630							
40 min	099							
40 min	0690							
40 min	720							
40 min	71.							
40 min	750							
40 min	780		-					
40 min	810							
40 min	840							
40 min 1 hr	870					313	713.24	
14 14	006							
1 hr	940							
	10001	1350	377997	45	17	222,02	03	0853 Hermit time, 0808 call about time
	1060					マト ス・ス・キャ	+ ٨_	
	1120					3 (3.53	53	501 = 1.13
	1180					312.06	, F &	
		9 FF	278334600			312.81		CLUIS FCV 1223
	1300							546540 boer OF
	1360							
	1420							10 ming 54 HZ
	1480							
12/22/10 18:53 2hr	1600		•					135,0 0465
								XD10 78.37 BFG 046 56 21000
								TC 10
								000 11 >> 1:82
								11.57
A CONTRACTOR OF THE CONTRACTOR	7	N75	378334 [000]	25	612	7		
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			L	)				
								SDE 28 B 29 SPC
				1				
						***************************************		



### SILT DENSITY INDEX (SDI) TESTING DATA SHEET

Sheet	of	

$$SDI = 100 * (1 - \frac{Ti}{Tf}) \div Tt$$

 Date:	12/24/10	Sampler: Two			
Time	Rate (gpm)	Elapsed time (min)	Fill Vol. (ml)	Fill Time (sec)	Comments
		0	500	Z.7- (Ti)	
		5	500	30	
		10	500	30	
1		15(Tt)	500	30 (Tf)	SDI= 0.67

Sampler: Date: Time Rate Elapsed time Fill Vol. (ml) Fill Time (sec) Comments (min) (gpm) 500 (Ti) 0 5 500 10 500 15(Tt) 500 (Tf) SDI=

Date:		Sampler:			
Time	Rate (gpm)	Elapsed time (min)	Fill Vol. (ml)	Fill Time (sec)	Comments
		0	500	(Ti)	
		5	500		
		10	500		
		15 <i>(Tt)</i>	500	(Tf)	SDI=

Date: Sampler:

Date.		Campier.			and the second s
Time	Rate	Elapsed time	Fill Vol. (ml)	Fill Time (sec)	Comments
	(gpm)	(min)	<u> </u>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		0	500	(Ti)	
		5	500		
		10	500		
	The San	15 <i>(Tt)</i>	500	(Tf)	SDI=

Well: ASR 1
Test:

WY 2011 Test #2

Sheet No. 1 of\_

Date/Time	(min)	(mdb)	(gallons)	Line Head	ead FCV	(ft btst)	<b>(ft</b> )	Comments/Other
12/22/10 13:11 1 min		1475	378334000	92	219	327.02		DTW before Test = 365.77
			A Principal de A Constitution de La Constitution de					SDI = 0.27
12/22/10 13:13	2							
12/22/10 13:14	ဗ							Prior to test we backflushed at 60 Hz for 10 mins and 54.4 Hz
12/22/10 13:15	4							for a 10 min specific capacity of 28.9 g/m/ft
12/22/10 13:16	2	-						
12/22/10 13:17	9							THE PROPERTY OF THE PROPERTY O
12/22/10 13:18	7							
12/22/10 13:19	∞	-						
12/22/10 13:20	6	-				323.98		
12/22/10 13:21	10							
12/22/10 13:23	12							
12/22/10 13:26 5 min	-							
12/22/10 13:31	20							
12/22/10 13:36	25							
12/22/10 13:41	30							
12/22/10 13:46	35							
12/22/10 13:51	40					-		
12/22/10 13:56	45							AMARAMATA TOTAL TO
12/22/10 14:01	50							
12/22/10 14:06	52							
12/22/10 14:11	09							
12/22/10 14:21 10 min	70							
12/22/10 14:31	80							
12/22/10 14:41	06							THE PROPERTY OF THE PROPERTY O
12/22/10 14:51	100		,			317.54		
12/22/10 15:11 20 min	120							
12/22/10 15:31	140							ALL ALL AND AL
12/22/10 15:51	160							
12/22/10 16:11.	180							Application of the second seco
12/22/10 16:31 30 min	210							
12/22/10 17:01	240							The second secon
12/22/10 17:31	270							and the second of the second o
12/22/10 18:01	300					315.28		The second of the second description of the second
12/22/10 18:31	330							The state of the s
12/22/10 19:01	360							
12/22/10 19:31	390							ega a menor y menor en menor en "da fero o sepor a la de Menor, a la meno kana seka ja bilan en de y depositor
12/22/10 20:01	420							Ampails (An amounts for the terror for the terror and terror and the terror and t
12/22/10 20:31	450							t managara og ald anna a sten dan en skrive delgen i til sær en der reserven i planta den en en en en en en en
10,000,000	•							

Well: ASR 1

Test:\_

WY 2011 Test #2

Starting Water Level

Sheet No. 2 of \_\_ 365.77

Control 2013   Cont		۵	Rate	Totalizer	Pres			Δ	
String 2019   String 2019   String 2019   String 2010	Date/Time	(min)	(mdb)	(gallons)			<b>(E</b>		
2200 2231 550 2200 220	12/22/10 21:31	510					313		
22010 2231   650	12/22/10 22:01	540					-	-	
Part   2541   2560   2560	12/22/10 22:31	570							
22310 231 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 251 25210 2521 25210	12/22/10 23:01	900					4000000		
1228/10 0.014   660	12/22/10 23:31	630							
100   100	12/23/10 0:01	099							
12.20  1.01   1.750    1.750	12/23/10 0:31	069							
123/10 29/12   1750	12/23/10 1:01	720							
12210 201 788   122   122   123	12/23/10 1:31	750				4			
100   100	12/23/10 2:01	780							
100   100   140	12/23/10 2:31	810			,	Y			
2210 2331	12/23/10 3:01	840							
12210 6.10   1500   1	12/23/10 3:31	870					310		The second secon
22310 4551   940   1000									
223/10 5.51 1 1									,
128/10 651   1060   1450   380086000   89   221   311.20   54.67   311.20   54.67   311.20   54.67   311.20   54.67   311.20   54.67   311.20   54.68   320086000   89   221   311.20   54.68   311.20   54.68   311.20   54.68   320086000   89   221   311.20   54.68   311.20   54.68   311.20   54.68   32.70		1000		West of the second seco			309		
22310 1551 1120 1450 380086000 89 221 31120 5457 1180 1180 1180 1180 1180 1180 1180 118		1060					310		
1180   1180	12/23/10 7:51	1120	1450						
23/10/10:51 1240 23/10/10:51 1300 23/10/10:51 1300 23/10/10:51 1420 23/10/	12/23/10 8:51	1180				Walter Street	311		
23/10/10:51 1360 23/10/11:51 1360 23/10/11:51 1360 23/10/11:51 2hr 1600	12/23/10 9:51	1240		ALL					
23/10 11:51 1360  23/10 12:51 1420  23/10 13:51 21n 1420  23/10 13:51 2n 1480  23/10 13:51 2n 1600  23/10 13:51 2n	12/23/10 10:51	1300							
23/10 12:51 1420 23/10 12:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 1480 23/10 13:51 23/10 13:	12/23/10 11:51	1360							
23/10 13:51 2hr 1480  23/10 13:51 2hr 1600  23/10 13:51 2hr 1600  23/10 13:51 2hr 1600  23/10 13:51 2hr 1600  23/10 13:52 2 38 7 20 1603  23/10 13:50 2 38 7 20 1603  23/10 13:50 2 5 7 5 1 10 2 7 1 10 2	12/23/10 12:51	1420							
23/10 15:51 2m 1600  123/10 15:51 2m 1600  124/10 0857  125 0800 (prijects) - 384485 post   228 30.435 (8.44 10.12 post   20.12 post	12/23/10 13:51	1480							
24/10 0851 (475 382336pos 92 218 30435 9244 1242 501 0324 523 520 0925 15 1 1475 382336pos 92 218 305.65 60.12 Raining lightly very windy Offerwise 12/10 1300 5751 1525 387201003 90 218 314.35 51.47 7L 10.06 1121 7030 1520 5751 10024 15									
24/10 0951									-
25 0800 (projected)	0//12		5471	38732600	$\downarrow$	2			1aml = 2120 ps; 501 02 24 8 250 10 20 19
1500 (1900) 1500 384845 600 92 218 35.65 60.12 Raining lightly very windly Office 1320 5751 1525 387201600 90 218 314.35 51.41 The Solid S	75	040	4	I.					1.00
(26/10 130) (Angested) (326/201603) 90 218 314.35 51.41 The Solid Grave! Merry Xun 120 1320 5755 387201603) 90 218 244.15 61.41 The Solid Grave! Merry Xun 121/10 1300 1200 2889 441/2017 300 218 244.13 61.41 The Nechanier 2190 301 501 501 501 501 501 501 501 501 501 5	12/10 17:00	Jamah.	1500	210		7	-		lightly ven windy Otherwise.
126/10 1320 575 1525 3872010001 90 218 314.35 51.42 The SOI of 26 527 56/10 1320 575 1500 3872010001 90 218 246.13 66.34 The Tauk = 2190 212 6144 10 1121 7030 1500 3812446001 90 218 245.14 66.34 The Tauk = 2190 212 6144 10 1121 7030 1500 3413010000 9132 10 2032 2032 2032 2032 2032 2032 203		7	1	3408					eing agon " Merry Xungs "
126/10 1320 5751 1525 387201003 90 218 314.36 51.42 50 501 = 1.1  osno projected —— > 28894410000 90 218 299.15 66.34 71 72 mile = 2190  128/10 0926 1500 341301000 90 218 295.76 71 NRCARMEL 2176 68 444 mos revision of 9932  128/10 0926 80 391305000 9932	COEC 91, 721	भाग्रहरूच्या सम्बद्धान्त्या	1	#				V	
10 0926   1500   3898 947   6031   218 299.13   160.34 TL.     10 0926   1500   34130   1508   90   218 295.74   1608   1	126/10	5元 (	1525	707		67		ES	2010526 524
10 0926   1500   241301600   90   218 299.13   16. 16. 16. 17. 16. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 15. 16. 16. 16. 16. 16. 16. 16. 16. 16. 16				end-month little			AAAAAAAA		á
10 0926 1500 381249600 10 213 24915 415 11 12 110 0926 20 341301000 90 215 300 245,74 12 12 12 12 12 12 12 12 12 12 12 12 12	,	12:010ctch		388047003	8		T		
28/10 09/26 1500 34/30/1000 90 2/8 245/4 TL	0)	404	1500	0 9 447 185	2/	ī		+	١
0932 × 3913056001 97 300 + tem	70/10		1500	2413616000	90	7			
	207		B	391205000	45	7	_	THE PROPERTY OF THE PROPERTY O	اما
									Temk=2125

BF 1 OHLOBY COM

三十

BF 2 CHC TO BE WILL 100.73

WE 2 38.11 MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT BF3 OHLEGTE WL 2 35.91

SET TO SYLYTHE FOR 10 MIN TEST RAN FOR 20 MINGS 60HZ

1950 GPM

Starting Water Level

Sheet No. 2 of

(369.81)

( why 2011 Test #3 )

= \$6.2

17001

Well: ASR 1

Test:

		Rate	Totalizer	Pressu	Pressure (psi)	MTQ	Drawup	
Date/Time	(min)	(md6)	(gallons)	Line H	Head FCV	(ft btst)	(ft)	Comments/Other
12/29/10 19:38	510							
12/29/10 20:08	540							
12/29/10 20:38	570					,		
12/29/10.21:08	009							
12/29/10 21:38	930				-			
12/29/10 22:08	099							
12/29/10 22:38	069						,	
12/29/10 23:08	720							
12/29/10 23:38	750							
12/30/10 0:08	780							
12/30/10 0:38	810							
12/30/10 1:08	840							
12/30/10 1:38	870							
12/30/10 2:18 40 min	006							
12/30/10 2:58	940							
12/30/10 3:58 1 hr	1000							AND ADDRESS OF THE PROPERTY OF
12/30/10 4:58	1060		•					
12/30/10 5:58	1120							
12/30/10 6:58	1180							
12/30/10 7:58	1240	1450	393190000	06	219	312.56		57.25 tried to adjust to 1500, 218 on FCV
12/30/10 8:58	1300							
12/30/10 9:58	1360			·				
12/30/10 10:58	1420							
12/30/10 11:58	1480							
12/30/10 13:58 zhr	1600							
12/3//10 08/0		14.63	295345000	200	219	30919	54,40	77
2 .				•				
0011 11m/1/1		1500	397804600	3	£12	303.64	41.99	no adj
				Ç				
1/2/2/1 1/00		1525	400332 000	84	917	500.56	69.25	no adj
2189 11-2-1		1500	UK) 012 500	849	412	300,45	72.89	77 17
					•		27 0 3	7
1-4-11 0830		1500	MUY 264 [00]	da	172	213.58	73,33	No Act 35-37 SDI 0.72 IL
2021 11.13.1		2	المراز عورات	99	7			7 00 P. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
			101011		200			1

1000.

### PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT MPWMD

Well: ASR 1

Test:

WY 2011 Test #3

Sheet No. 1 of

Test #

₩ V

Comments/Other 44.43 Drawup **(E)** 325.38 (ft btst) 369.81 **DTW** 218 217 218 FCV Pressure (psi) Line Head 90 90 391316000 391323000 391305000 Totalizer (gallons) 1450 1500 1450 (mdb) Rate (min) ᆸ 20 min 1 min 5 min 10 min 30 min Date/Time 12/29/10 14:38 12/29/10 15:08 12/29/10 11:43 12/29/10 11:48 12/29/10 11:53 12/29/10 11:58 12/29/10 13:18 12/29/10 13:38 12/29/10 13:58 12/29/10 17:08 12/29/10 17:38 12/29/10 18:08 12/29/10 18:38 12/29/10 19:08 12/29/10 11:33 12/29/10 11:38 72/29/10 12:38 12/29/10 12:48 12/29/10 12:28 12/29/10 11:18 12/29/10 11:24 12/29/10 11:25 12/29/10 11:26 12/29/10 11:28 12/29/10 12:03 12/29/10 12:08 12/29/10 12:13 12/29/10 12:18 12/29/10 12:58 12/29/10 14:18 12/29/10 15:38 12/29/10 16:08 12/29/10 16:38 12/29/10 11:19 12/29/10 11:20 12/29/10 11:21 12/29/10 11:22 12/29/10 11:23 12/29/10 11:30 12/29/10 11:27

\* Test #24 (Hown, Test Au) is out of squerre in the "stack"

### MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: ASR 1

Test: Hernet tot #5 (Test #23) \*

WY 2011 Test # 2 3

Starting Water Level

Sheet No. 3 of

0 pm SF value = 046583/000] KD: 91.67 Sex value for SOI purar to weat test Comments/Other = 28.5 g/m/H pour toingeclay XD. 20-105 365.77 369.81 046 626000 - 5400 046 608 0000 - BE Then 10 min @ 54445 Offer Hood OF 369,81 To = 27 Tus = 29 Drawup (ft) 267.73 (ft btst) 31.56 35.32 MTG Pressure (psi) Line | Head | FCV 2/8 513 44 90 20 20 391305 pag 391316000 393190000 39(305/100) उन। ३२३७वर **Totalizer** (gallons) Rate (gpm) 1450 1850 500 1450 (min) L 0 115 (52) OBOS 454 Date/Time 2/29/10 01/02/10

Well: ASR 1

WY 2011 Test #20

T# 1 233

**Starting Water Level** 

RCM SCA, SYS SHEET NO. 3 of ŝ Note: Adjusted FCU Regulator to 219
\* Opened value to tank,
Tank PS: MACTO Comments/Other 3 Š 7 3900 Begon news tast. STOPPED IN JECTION O Tank ~ 2000 25, Tank ~ down psi ta-W~1975 ps TOUR ~ 2000 05! STATES FOR Drawup (ft) 293.58 65,97 58.56 (ft btst) 297.43 296.44 300.99 DTW 35- 555 2002 292.00 298.48 301,44 812 216 Pressure (psi) Line | Head | FCV 219 716 (A) 219 3 612 71K 0 BRUKEN \$ g/ <u>2</u> l 88 ۱ 9 8 S 9 B 00 888 8 50 4085 50 1000 406 388 000 407254000 4107814007 111610 000 415469(cm) 4131610001 404687 Lea Totalizer (gallons) 41772 165 (gpm) 1550 Rate 1525 529 1500 450 1500 009 1500 1525 (min) ᆸ 2080 2180 5060 5060 5×21 1630 0830 11 2117 Date/Time 0900 52: 11 11/11/17 Test: 1 11-4-1 11/5/11 11/8/11 11/6/1 1 00 1 1/6/

100,04 DNU 33.18 BACKFLUSH 8F3 04/659 (...) 26.56 PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT 1800 2ec 28 28 31 MON57 1036 1.15.11 SDI

Sheet No.  $\frac{1}{2}$  of ) II \ HERMIT #8 Well: SM#7 Test: TEST 6

up Comments/Other	BEGAN NEW TEST	initial flow settings		lest setting invers pressure	Projections to tun down to	Check FCV. reginator was at 200 051.	hieve 15	0	Flow Stores a FCV = 270001 Set to 200 psi.	ME	04676060 B GOHZ (2450com) TLL	, ten 10 min @ 51	/ = ?QX	63.78	=29.8 spm/Ft TL	Capt 15t while walky for say Jaco y Sec (1.1.)	X) = 20 1	Olfforthand of F Call SI when 13R2 is really		
Drawup (ft)			76.			63.28		21.75												
DTW (ft btst)	328		282.6	55'55		24.45Z		286.30			357.58									
ssure (psi) Head   FCV	300	200	209	7/2		275	717	222	300		305									
16											85							-		
Pro Line	901	90	8	90		1 80	78	31	06/	And the second s	08			-						
Totalizer (gallons)	या मे ने रथ ब्ब		प्रिक्टरा हिन्तु	ত্ৰ ৪৮৭২১৮		425.013/003			426795 1000		126795 500									
Rate (gpm)	Ø	1700	1800	1300		1350	1500	7 م	0		Ö									
(min)						5														
Date/Time	0101  1·E1·1		०१४० ।।।।।।	1.15.11 1230		1-16-11 1400	<i>बद्धा</i>	5260 11-21-1	0420		1-19-11 1005									

### PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT MPWMD

Sheet No.  $\triangle$  of  $\mathcal{L}$ 

S M 1 Well:

TEST 7

Test:

Stopped to lockflush for Comments/Other 500 = 19S Drawup 3S6.84 DTW (ft btst) FCV Pressure (psi) Line Head FC g و 426877500 Totalizer (gallons) Rate (gpm) ~100p (min) 日 Date/Time 2-14-11 1245

### PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT MPWMD

of

Sheet No.

Well: SM#1

Test: TEST#8

an FCV in case system pressura shot up >100 lets. 269 to 257 na Revoces. 77 AR! ASP-2 from 1500 to 1400, were not this After thinking about this, decrated to conturps, up after 18min 18th 60 Hz (27009/h) 1550 different- 40/40 TAR BITTER CON GOOK FOT NIT . Was アパブ 15) of rand to 233 (understant 2800 town due to Ly Di mele color ~ 5 mms - sightly ellowid after stopping of ASR. 2 (NO ADS then Begin Usavin = 750 gpm FCV ~ 30x Comments/Other Resent 20' jump @ 1555 rending 800 Test #4. Why 15 FCU so hold 1300 GPM windched FCU draw from 232 pst. (0) 80 Live Notsure, why FCU RF=047039 set faut to 233 ps POOK Tank 2 1800 PS! set tank to 239 Set tres + Fev 概 Go sout ナインナ Sot 10 3 2575 Drawup 2731 (ft.) 1 326.52 (ft btst) 39175 349.55 352.72 321.53 37697 355,31 35244 <u>ት</u>2፡%ት « 327.97 359/2 8519h E MTO 323.14 325.64 324185 344119 217 260 308 305 240 452 239 ₽0. 240 233 233 220 325 Pressure (psi Line | Head ١ l 7 % 0 2 3 42 83 9 80 70 M % 20 80 ₽0 K 43007/020 43002/020 4300/1000 43050-1000 130674 POOLY 430420600 430769600 1100GPM 43/075 [300] Totalizer (gallons) on 2/18 M Tost 1881 t 1 vendes (dbm) Rate 250 550 000/ 725 525 700 ~10C 550 Ĺ ~100 8 575 to 540 @1257 = frvs (min) 0081 25C 1560 E 201138 0 075 0 1335 INS STOPPE 1010 5101 \$ 1256 1435 5/800 11/20/21 2/20/110941 252 1255 2/2(/11/325 1658 ≈ % 18 X Date/Time 1345 2-17-11 1600 2 23/4/0 080 11-66-2 11/61/8 2 X 

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Sheet No. 🔼 of

Well: SM #7

TesT8 Test:

158 m	Б	Rate	Totalizer	Press	Pressure (psi)	MTO	Drawup	
Date/Time	(min)	(gpm)	(gallons)	Line	Head FCV	(ft btst)	(ft)	Comments/Other
2,23.11 (236		JSL141	80-	F	203			and nature to 203 per Comme appropriately
7.2cl-11 28/83		C)Shire	127/12/	/ 6	<u>a</u>	tt 121	Apply a service of the service of th	752
		PALE (ROY (ROY)) (CAN THE TAX AND THE TAX		<b>Q</b>		3		213
470-11 120			1000000				Manufacture of Manufacture (Manufacture and 14 mins of 15 mins of 17 mins of	
2-64-11 1550		Ø	12502800567	Q.				FC + V-1, open V- C for 131
					and the state of t			
			8					75
								15. 1 01100 CO
								- 28, 3 spm/Ft
			(					
Anna de la companya d	ALTERNATION OF THE PARTY OF THE		NAMES AND ADDRESS ASSESSMENT ASSE					_
	MICHANIA MANAGAMAN PROPERTY AND ARRANGE AN			THE RESERVE AND THE PROPERTY OF THE PROPERTY O				TDS SUD MS/CM @ 14/60
					1			ORP MISOMV
0241 1/22		Q,	433058p	ا ا ا	305			
5 124 111 1545		750	T. THE CO.	40	197			3 Left for
NATIONAL DESCRIPTION OF STREET, STREET								
								Action of the second of the se
1 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2			4,000,000					
3		7000 V	1,54040,030	79	702			
								Carried Start Start Start
,								L.E 170
		, ()	1, 2 5 00000	6	707	-	20 07	0RP 450
2/26/11/013		200	125125C		77	506.85	14.78	
27:78						28342		& Sample of Horant olecto to document
2/27 01:18						383.19		
81:20					-	283006		,
21,150						302.48		
07:18						301,87	,	- 1
81,80				1	-	12797	+0,0+	15T ready on test 12 544,83

CBM4-646-3250

Sheet No. 🗵 of

### MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

5 N # 1 Well:

Test #8 Test:

sow pursue dep from 80-60 Comments/Other Drawup 302039 302,30 324,74 357,99 357,99 359,14 310,18 307,96 (ft btst) 314A2 DTW 207 8 FCV Pressure (psi) 1 37 ٥ 60915695H 437609 000 (gallons) प्डिष्ट्रहरडड क्व्य Totalizer Rate (gpm) 051~ 000 (min) 딥 2080 11/80/2 3/2/11 0830 Date/Time

Well: SM#1

Sheet Noof	Totalizer (gallons)         Pressure (psi)         DTW Drawup         Drawup           (gallons)         Line   Head   FCV   (ft bitst)         (ft)         (ft)           4388.33 [ccc]   48     26   344.30           26   344.30           26   344.30		9476500 70 - 216 309.10 34.90 Bet and opened taule value for FCV)	439985(000) 78 234 31795 Backed of FCV to 227 ps./	145 (2007) 800 323.5 Sen FCU @ 2200	586 East	£22 08	40 47 230 340.50 - Ady FCV - Free Bounce	877 Jose 38 191 308.97 SEROPLES for Liver Mark Jush.  SF mt. = 0471335000 10 min 0 60 Hz  S671 [m] 71 Rf. 047 Hz xs. 19.4 Then 10 min s 64.4 Hz	1470
	Rate Totalii (galloi Lases 3		1 9 1	656 43948S	SH1 0H17 002	3850HH SET ~	000	NShihh 091 ~	700 442874 Joseph Josep	
Well: STY A	ET  Date/Time (min)  S⊶\\\ \square\\ \square\\ \	2220 2430 2430 2430 2520	1318 J	5,501 11-9-	3.7.11 0800	58-11 1865	183	3	3-10-11 (280) 11-11-8	

TOTAL COMBINE @

MPWMD
PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

\* Current test on thermit 12 #6 "Trest #6" slurted 3/4/11

27sec

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Sheet No.  $\perp$  of

	JANHWAY 1	WUSLA MISLAN	" > ta A + ts	"start tot" but fix wat	ع ک	He wout	a fale,	thank av 3	-	
	Date/Time	E1 (min)	Kate (gpm)	i otalizer (gallons)	Line	Sure ( Head	psi) FCV	(ft btst)	Drawup (ft)	
								345.3-	*	
* 38	3-11-11 0830		1050	H43671 [000]	F		203			Left, setting for 25004PM conbused
.4	Ň		S	ला हर0h	757		199		-	Co that pleasure
	2530 11/2		059	144 7521000	0h		149	316,23		Tank ~ 1650
	3/13 6935		725	0609Kh	139		961	311.61		Tenk~1600
	- <del> </del>							-		
	2/14 0830		0.9/1	2000 547 544	y 0	09	407			tooghun at 0
1			Ā	447248 (ca)						J. Lear, Will we this oppositually to retail T.
										by MDE ENEW,
										A TOTAL STATE OF THE PARTY OF T
- 1										* MARKE WIGHER LINE RUN THEOUGH WIGHR
										V C. C.
				, , ,				1.5.46	44	Siller find notes us
							Last	vend	First	mid soundsheet
		-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						十十 /	
	118/11	-D(T	10 NO MET	Tark	2		7	83.48		0470 (1000)
<u>'</u>	1025		7 6600	7	1			1/2 6/12		1 4000 N = 13(X100)
<u> </u>	Firstwadul							9,,,		0-1250 Ludol # (+0 1,000) # 20 (600)
1:1	3/4 1000	+24	360	1340C 601	82	13	1159	3 Of 152	7 6.8 h	Fairly noisy - turbulance at claust t turns in will c
'	2(0) 1725	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	6.50		_			27 72	7	10 ADS Live to Low
1 1		~	810	100 ht 50/2	46		+	(パイン)	5500	ourse ~ 120 - talkly vi > 1
t1	7/21 0815		018	3731900	78	0/	164	2,48,45		X 1005(40
	1235		880	39557100	36	_	17	7627		3804B00=2580
	057		1,005	1 0 1 10	\$ ;	1	£5,			refer act FCV
	1655	Martin Company of the Control of the	1900	41967日	75	- ب ن	7.7. 7.4.		Ų	4 pc. ADJ after Pas @ \$2 ) vas was avolged to ~850
					Ī		-			

\$ ...

TOP OF GOULS

Well: ASK FL Test: WY 2011

MPWMD

PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

(3150 × 60 ×24) (31535/ (3150 × 60 ×24) (31555/ \* 4,536,000 (31555/ \* 4,536,000 (31555/ \* 4,536,000 (3155/ \* 4,536,000 (3155/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 4,536,000 (315/ \* 5,536,000 (3

353748

	Rate	Totalizer	Pressi	l) ear		DTW	Drawup	
Date/Time (min)	(gpm)	(gallons)	υ	D	FCV (	(ft btst)	(ft)	Comments/Other
0815	805	<u> </u>	17	1.0	157	29433	29,85	premous hour rooks wes 305,92
		A. A. A. Maria de La						
0230	49の	100 30 P1 10	89		164	288.86		
2500	X	, ,						FCV so me con southory
2 /	Z Z	100 0 h 50 m	-		7	479812		JOSTU Ran Cast
143 (2000)	<u></u>	回×bたっ)			1	3		77
		Σ 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						<u>}</u>
								4300074 Janak
								see note the low regulary 3+ on adme
1345	1,300	63989 BB	25		174			2
5/6	1,240	-	L.	36	1.79		,	-Adj FCV to reduct Q
1071	1,160		73	45	187			
K27/	(7.0)			/2	130			Went up to cleak #2, suddle drop n. p 1420
	07.9	THE REAL PROPERTY OF THE PROPE	,	-	ナガ			
010	915	団なていとろり	9£	288	402			2815 total
0850	895	7,382,9655	75	2 +5	5 405	300,90	43.07	12920 10295
1		(1)1 1)1 100 to	, ,	+	ľ			ı
	×+C	41847, 100	50	2 2	5 8	500:17		5+810=5,020 rare (
	850			10	102			SIGNALLY ADD FOUND AT #1 TO CUT WORK TO THE IN A CORPUS OF
	Ì	1	,		-			
08/5	405	8,2+9,600	77,	. \	67.7			Bled 044 FCV proving to moreon flow
1235	000	859525101	72.5	† × ×	402			Japa - 1810 - 1810
	200		72.5	1	70%			Adl FCV
1550	938		22		192			I decreas Few for 204 to 201 051: rate goes
		-						up to 938 gpm.
1050	200	9.871,5BD	32,5	56	7007	79277		
				,	<u> </u>			THE PROPERTY OF THE PROPERTY O
1345	1200	4- GOAL	73	44	183		)	PCV after 138 of ASR-2, 2t is likely
71	\(\alpha\)	11/12/07/16		5	7	7000		FCV press will rise aventight and will need to
-2/X	950		72	\_		1.70		Star S
			÷					

CLOSE INLET VALUE TO GET HIGHER SF RATE YO BAKKAUSH-

Well: #/ Test: WG 20 []

Henry Test #7

Sheet No.

S value #1 . disergras schown TO BX

& value # 2 engine shown

MPWMD
PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT HERMIT TEST #10

> SM#1 16518

> > Test:

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Sheet No.

#( #2-(250/1750

							351.4 INTAL	199	
111111111111111111111111111111111111111	. <u>13</u>	Rate	Totalizer	Pre	Pressure (psi)	psi)	MLQ	Drawup	
Date/IIMe	(mm)	(mdg)	(gallons)	LING	пеаа	۱۲ ۱	(asid ai)	(HD)	Comments/Other
1. Ch Chi		9	711 1 1 1 1 1 1 7 1			000			Sugar 125 +
		920				85			
	2.			1					Jan
11-9-1 <sub>2</sub>		11465	7/28628 tale	<b>1</b>	٢	و			4730% [mg] Br /
4.7.11 (XX)		2003/	国からたる	7	27	727			
4.8-11 0830		ISSD	画 624.892	10	о Т	NG			
-	-	,				Í			
47:11		15 to	29298	Q	70	ر ا	ZH.8	72_	left Settings
1 1									
thotal has		1600	215234 00	75	46	911	274.13	77.3	0
4									inected 2223700 get = 6.82 AF
								-	100 adjuddingate mode.
1									
4.11.11 0830		[635	330818	72	2	94.		79.2	TON AU
4.11.11 PBC		1635	344882 [m]	72	9/>	176	768	28	
4-12 0955		1720	362284 000	88	Le Le	176	563,54	84	shyndy tundyp FCV 1470 + 1400-2870gou
538		1470	367315 100	22	Şh	134			B
11-2-11 0820		1280	20149710151	7	2	141	278,04	720	242212. 12.1800) RE-200 CATA
		Ø	Da 1025 W				>	,	. 8
		,			10				
573		0	38.272.80	275		Jesus -	کر 'پیکل ع		
(44)		1.250		7+15	48	181			48.12 04733 Slove
									041555 200
					***************************************				-
0180 11-17		1275	399401600	to	dr	182			
								,	
1 1 100		1,806	448174 623	2.3	45	7251			
CRO 11-51-1									
				-					

well: SM<sup>±</sup> 1. Test:

WATERCEVEL

351.4

Sheet No. \_\_\_ of \_\_\_

Comments/Other	ly settiles.	1230+1700=2930glu+12(			1700+1220 = 2920 5/m total, NOTES	Left sother	(and bighth	1.8F 47358 lose) 1130	CAL-ANN SAMPLES ASK 1 @ 1145	2400 GPM G 600 HZ	FMAG 620							
Drawup (ft)		(8.1	649		1,69													
DTW (ft btst)		283,27	286.5		3823													
psi) FCV	F	187	£81	4 2		187		(	270	7%1	7.9.1							
ressure (psi) e Head FC	3	9,5	9))	5/1	45	2				40	2			-				
Pres Line	76	75	ولم	08	72.5	28				76	200							
Totalizer (gallons)		139676 [00]	45769810	172259190	184249 Jal	207934 [00]		130164	3	624937 60	B 12% 7%			To a series of the series of t			-	
Rate (gpm)	(330)	1355	1175	1200	6221	0021			2	1280	1780							
(min)					***************************************								***************************************					
Date/Time	009/ 11-51-/ <sub>7</sub>	op11 91-h	012 1 -1-2	049/ X1-h	1-14-11 080+	4-20-11 630		11-20-11 1121		4,21,11 0830	0582 N-227	-						

# MPWMD SANTA MARGARITA AQUIFER STORAGE AND RECOVERY PROJECT

Well: SW#1

Test:

INTAL WL

351.4

ð Sheet No.

# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

well: Sw tr 1 Test:

MUMAL WIL 351.4

1.4

Sheet No. \_\_\_ of \_\_

	(min)	Rate	Totalizer	Pres	Pressure (psi)	J   1	DTW (ff biest)	Drawup (ff)	Ollect No. Ol.
				9	+24		(acara and		
4.30.11 09W	U	900	ক্রিত 2120% থ	3	4	200	730.4	19	recurred a call from your going Co730
5-1-W 1500		067	00) 59££B\$ (00)	83	ьħ	211	326.6	24.8	HERMIT = 87% batt; FCV tank = 1210 psi.
5.2.110830		(305)	न्त २५८१ जिल		+	ZW			request to reduce rate.
5.3.11 0830						300			Just down per resign request
			707991 GE						
5-4-11 1053		\$851		77	77	7-41			!     <del></del>
8.S.W	7 17	1600 2030	130 SOU 1901 VE	NO	D	370			Q 2030 sturt drop injection at requestal CE-TL
-7-11 1130		1350	75723120	47.5	95	183			ADS 76
5-8-11 10:00		1500	回せかもりとも	25	5	180			405-7L
-9-11 1130 1655		1430	714004BB	80	sth Sith	181	2823	76	105 17
S-(0-11-0850)		08.51 1430 22.61	1901) ht h28	7	<i>8</i> 7	183			485,72
5-11-11 08 DE		200	838935 BBT	90 go-(10	258	081	7.96.7	45	Before Bf water = 047574(0100)
1, 1620	un barronur ici predisipati delegisharanjena opera	1530	859032 BD	47 41	841 S.FV 841 2.44		reaune recent	£ + .	154 OCB H3 2 UM, W O 47 626 HOD COTON 137 MATEST, NO ARDS.

NO A CARD

# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: SM ASP-1

Test:

mitide WC 351.4

Sheet No. \_\_\_ of \_\_

5/3/11   570   1	(mdg)	(gallons) ४६।इन् <u>कि</u>	Line	Head	FCV 17.9	(ft btst)		Comments/Other
1230 (330 (320 (320 (320 (320 (320 (320 (	27	_			94.0		Charles Control (Section)	
1270 1320 1320 0830	772				0	292.7	F. 85	- TRANSCEIBED FROM THE FIELD NOTES
1320 1320 1320 0830	27.2						A SANA A ROBANIA A COMPANIA A CANADA	
1320 1320 1320	22	30 tistob	1/6	th	tt/	291.4	60.0	FOU tank = 1010 psi. HERMIT = 84% but
1320 1320 0830								running; no adj.
0530 1320 1320	1550	43,132,3 000	26	#	821	291.2	7,09	no adji
17.50	T.	[4] \$1. 41.	6	9	4	790.4	Q.15+	
1320						3		1
17.80		45273160						
1320		9171SS 100	47	Į,	Ĭ.	797		1.5.4 X.4.5.1.
1320						-		7
(320	0381	न्त्र म्पट्ड प्रत	75	25	17			11 017 C RISE TO 8 2 1 2 1 2 1 2 1
(320)	×	999 751 KTT				2.40.4.2	*	
0830	005		49	47	178		The state of the s	e startof tes
0830				-			Annual Control of the	00 50 70 c
	00g	M SCO) F   O	75	2	4			
5.20.11.08.30	1860	जिस्हा भग	08	8 7	ナな			unt to 182
5-2(-11 1020	075	1063704 व्य	2	22	187			N 1 A D.T.
522-11 1140	1380	१०८३५३४ विक	44	25	187	11.582	64.59	No ADS.
	0001	_	द्र	5.25	48			
				<del>     </del>		The state of the s		
S-24-11 C8850 11-145-8	9	खि हुडा। रा			310			Shurt show heraused flower
								निर्ध लिख न्रें
	-							17699 10cm

Lovo Gran Representations to the to customer.

WCZ 112.30 WCA 97.7

## PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT MPWMD

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Sheet No.

15.92× Well:

# Test: wy 201(

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# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: 45,8-3

Test: 45,8-3 #1 ( flamit sma\_Test4

Sheet No. / of

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MPWMD
PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: 45,2-3

Test: Wy 2011 #2 (No hamit, Level Troll Running continuously) 5 mm internal.

Sheet No. / of \_

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MPWMD
PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

DIMER STORAGE AND RECOVERY PR

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Test: Wy 2011

Sheet No. \_\_\_ of \_\_

Drawup Comments/Other	left sellwap line pursue mas 700 "1		50 300 (V, 400 ASR-)	700 C, U.	At 0836 shut dewn ASK-1 per C- Evans After		shut down for worm down yeared,	DAY TYPE			estincted in 14. 2. P The	Color (h. )011'S USAS (€)		21640 row board was 12	2570 conductor of Ads @ 158. 1 + 504, le 10, 10 10. 10. 10. 10. 10. 10. 10. 10. 10.	00 = 2600-1450 00 - 2800 - 4450
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Rate (gpm)	1705	1700	0591	009/	2820	0587	1500					N) 7 ES	0571	0341	1650	1700
(min)												N + 1:21 ~ > 15				
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# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

(36)

2.24-W Sheet No. 2 of 2

Well: ASR.2

Test: WY 2011 #2

/up Comments/Other	TURNED ON LUBE 8555 137	HMM TURNO FL TO 38 226	Set for (IF, Ist wien open 10mm	108779 (600) COM: 367.40 Pumping	108750 10000 100 91,32 240000 10000 26,68 x	A FC U was only clusted be 305 ps.	(2/1/2/1/2/ /2/1/2/ /2/2/2/2/2/2/2/2/2/2/	C.LA. UAL = 29 1500-21-60 = 630,000		こしょうなこれな	son person doop auchbled.	Left settlings		86385 CF Later Co. 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	short down for beckflush			
psi) DTW Drawup FCV (ft btst) (ft)	2/2	3, 318, 5eee			306 367.		220	206 321,57	705	227 323,93	11.2 315.5	21C 3CK.(C	2005 200	330				
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ET Rate (min) (gpm)		02(1			Q\$H		0081	1500	056	1175	Q5h1	Soc						
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Sheet No. 1 of

PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT (64.2-) 12363 7600

Well: SMZ

Test: WY 2011 #3

Comments/Other	CLA-VAL 52 PS, down flor-	2	LEFT SETINGS,	LEFT SE HAVING	CLAWAZ = 37 d.S. Tankto FCV was closes	Ad (40208.	6V = 37 Ad: +, 210		C.V. 537 NO NUST have The	NO ADJ CONBINE RATE C. 2000 G. PW	= 3.4	- May FCV 5 WASA 1	CU:37 (2002)	PCV here +1, 206	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			BEGAN NEW CYCLE INTIAL W. 365.2	Left setting S	
Drawup							32 602				£111 E				+ ~64·					
DTW (ft btst)	364.5		26.5				5-8		311.90	309.47	322,37		30280		300.44				-	
psi) FCV	330	OR	209	902	402		702		2(0	£92	222	t 2	2/7.	707	204					
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## PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT MPWMD

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Sheet No.

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Smy Well:

Test #5 **Test:** Wy 20((

034 9 22505: 10 Cc 2025 4/37 as we have buildely need adjustment of mistre 31.63 17 2350 600 7/1000 72274 6005 It is likel, that FCV press will climb overnight S F807 5 if or sor tube lives 1 51-2/2501 Alow Bloof dwy C VS OF Volume Restant Injate BFe - 1300 hr. Comments/Other 0251 (680 EMIL 13 ソニニ 35-46 COCVAC - GALLACE & increase FCV from 224 7777 1507 11 11 11 11 12800 ~1975の日かるようの林 75tw ۲ h Stand . America Car LA. O ASR-1=76 a. 7. Nan 17230505 69 52 1:00 0 41 finished 037 75 on 100 (A) (A) BF Drawup 53.40 74.2  $\mathbf{\Xi}$ 5,70) 50/1/2 78-282 (ft btst) 2:51 75182 29815 280.6 9.022 262-40 MTQ 707 204 202 FCV 211 225 707 769 206 208 222 Ŕ <u>Pressure (psi)</u> Line | Head 4 **®** 85 25 60 C ٥ ح 7 56 56 1 ر م 000 5 27 رم ص Š 53 8 163455600 166156000 1000 117 Eg 54011600 164 330 bad 25.5 Elli 1750256001 94 b 3/5 7 (gallons) Totalizer 1 KO 0 + bt22t1 164185 089 591 1 Rate (gpm) 2350 1950 7020 (350 2150 1975 0021 1900 0 60 5 2025 2,005 2007Z 0 (min) 固 050 1530 255 1409 [.] [.] 00.71 1210 5751 3-23-11 0825 0.825 1320 ر ال Date/Time 57/5 7-26-11 12/5 324

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3-18-11 0820

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# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: #2

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essure (psi)	ш	82	7	36	2.6	25	35	25	R			33		35	1-1	36		88 A	
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ohn 11-9-h 05.80 11-21h

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## MPWMD SANTA MARGARITA AQUIFER STORAGE AND RECOVERY PROJECT

Well: SM<sup>#</sup>∂

INIME WC 366.8

Sheet No. \_\_\_\_ of \_\_\_\_

			at 1		(452-2) (452-2)	\. <b>6</b>						<b>T</b>
Seriming of men And	aft atmiss.	CHANGLP FLY TO 235 (3 14505) (MA	dat of 2500 CDM for 24 Mores - 101 May 24 Mores - 101 May 24 Mores - 101 May 24 Mores - 100 Ham 6830 4/8/11 TO 1100 HAM 5 COME.			No adjustment mobbe, as flow 12.6 AF	Left rathous	1920-1400-3170-56130ths	ADJ. FCU to ~213 to incorne youth	88997 cronluse lova		TURNED TO MUC SPUT
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( <b>mdb</b> )	1506	Moc	0	1500CRM	1300		1400	1400	95K  08E	02 +1	5.72	2200
(min)												
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# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: SM#2

Well:

INITIAL WATER LEVEL 365.4

neet No. \_\_\_ of \_\_\_

Date/Time	ET (min)	Rate (gpm)	Totalizer (gallons)	Pressure (	2000	osi) DTW FCV (ft btst)	Drawup (ft)	Comments/Other
97) 01·S1·H		R				265		well were shot down for I hours To get hoch inde down for waged is OF TO Run ( 3000 year (aline)
<b>&gt;</b>		0051			V R	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
S111 91-h		1400	220047600	23 25	912 55	9		/ < / / A & j. V C V
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		(350	224402 Jee	38	36 700			author Allette
010/ 1-5		1300	70094		1	X		7005
4.4 0215		0061	7/608803	27 27	35	~ •		
4/20 11 1230		1300	1-7			373.59		t down for la
4.20.11 1300		Q0S1	228973	77	37 218	269.9		ואוחאר שול
4.21.11 0830	Action	99-	237882	5 85	28 28 29 28			
				- Constant				

MPWMD SANTA MARGARITA AQUIFER STORAGE AND RECOVERY PROJECT

Well: Sw #2

Test:\_

INTAL WL 365.4

Sheet No. \_\_\_ of \_\_\_

Comments/Other   1600+1315 = こくハワール・ルップ	ADS 50 th w. (115	2 gt 10 checkour 20 le dodals.	Stopped for backfluck	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LA sethings				
<b>Drawup</b> (ft) 46.5	9'95	Sth							
DTW (ft btst) 31€.⊄	308,8	5.4							
PSI)	212	21/3	212	(2)	512	572			
Pressure (psi)	2	M	3		36	90	-		
Pre.	7,h	8	8		38	38			
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(min)								4	
Date/Time	0011 11-57-1	0121 52.7	4.26-11.0830	4 26-11 [150	0550 11.52.4	4.29.11.0830			

# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

Well: SW#D

Test:

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		Date	Totalizat	Brook			MEG		
Date/Time	(min)	(apm)		Line Head		FCV	(ft btst)	Drawup (ft)	Comments/Other
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		3			,   2	236			rate a visso to sex the weeter
									with the state of the charter
5-1-11 1515		(875)	255048600	40 (	2 +9	622	310.50	6.43	FCV touch = 1000 ps, Combined rate: ASR-1 490
									Sper 236 Evans to reduce
5.2.11 6830		0031	[256965 [wc]						
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		<u>Q</u>	261796 (sou)	28		769			CHAUPL NOT WOSCICIA 67
			2019851en						puon to BE
5/16/11 1245		0	26/913600	98	0	342	24.72		Read while prior to beginning unjection will
S.17.11 (900)		700		t t	33	333	<u>4</u> 2		Let @ 700 1 tylkn 15 up To
5.18.11.0100		150C 1350	267687 000	2 K L L	33	217	8		clay not recoken q.
	1830	1380	Red 556 492	11	· 1	, £1:	333.9	1	#1.02850 - 058/074 N2808161#

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# MPWMD PHASE 1 AQUIFER STORAGE AND RECOVERY PROJECT

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Sheet No.

Well: <u>ASR-2</u> Test:

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Drawup (ft)						FINDS.					
(ft btst)	37278		3.6								
psi) FCV	215	215	r S								
Ssure (psi)	K	34									
Pre Line 37	3.4	34									
Totalizer (gallons) 270€20 <u>b@</u> J	272729 000	C098hhh42	376510 (40)								
(gpm)	0011	1375	585								
(min)											
Date/Time	522-11 1145	8.13.11 08.28	S-24-11 92								



## APPENDIX B – SUMMARY OF OPERATIONS SM ASR-2 REHABILITAION



## **SM ASR-2 REHABILITATION**

Well rehabilitation activities at SM ASR-2 occurred during the period December 13, 2012 through January 26, 2011 and were performed by Zim Industries, Inc. of Fresno, California. Development of the technical specifications and contractor oversight were provided by Pueblo Water Resources, Inc. (PWR). Rehabilitation consisted of both mechanical and chemical techniques. A summary of the rehabilitation of SM ASR-2 is presented below:

## **Pump Assembly Removal and FCV Testing**

The contractor mobilized to the site on December 13, 2010 and began removal of the existing pump/motor and FCV assembly. While the FCV was above ground, leak testing was performed by pressurizing the FCV, then inspecting all pressurized connections for leaks with a leak-detector solution<sup>1</sup>. The leak testing identified a leak at the control hose fitting connection on the FCV body. The fitting was removed, cleaned, and replaced utilizing manufacturer recommended thread sealant<sup>2</sup>. Subsequent testing performed at 400 psi pressurization of the FCV showed no leaks or pressure losses over 27.5 hours of testing.

## **Pre-Rehabilitation Video Survey**

A pre-rehabilitation video survey was performed on December 16, 2010. The video survey revealed that the perforations were uniformly approximately 40 percent plugged throughout the entire length with orange-brown colored biomass (a copy of the video survey was provided to the District under separate cover).

## **Nylon Brushing and Bailing**

Following the video survey and mobilization of additional equipment and supplies, mechanical rehabilitation was initiated on December 20, 2010 with brushing of the well screen. A 20-inch diameter nylon brush assembly was utilized, and each 20-foot section of screen was brushed for approximately 30 minutes. Total brushing time was approximately 5 hours.

Following brushing, bailing of the well was performed with approximately 4 vertical feet of fill material removed from the well. The bailed material consisted predominantly of an approximate 50/50 mixture of dark orange brown pipe scale/rust and fine grained gravel pack material, with minor amounts of very fine formation sand.

## **Pre-Chemical Dual-Swab Airlifting**

Dual-swab isolation zone airlift pumping of the screen was performed to remove as much material from the screen/gravel pack/near bore aquifer materials as possible prior to

<sup>&</sup>lt;sup>1</sup> "RectorSeek Better Bubble" manufactured by Rector.

<sup>&</sup>lt;sup>2</sup> V2 Thread Sealant, manufactured by Jet Lube.



injection of the chemicals. The dual-swab assembly consisted of two 20-inch outside diameter rubber swabs separated by approximately 9 feet on a perforated spindle. The tool was placed on the end of 5-inch diameter eductor pipe with a 1.25-inch diameter air-line.

Dual-swab airlifting operations were initiated on December 21, 2010 from the top of the screen and worked progressively to bottom. Each 20-foot interval of screen was generally worked for periods of approximately 30 to 120 minutes until the discharge from each interval was relatively clear. Initial discharge from each interval was typically extremely turbid and of a dark orange-brown color. Upon reaching bottom, a second pass was performed to the top until each section was clear. Of note is that the lower most section of the screen required relatively greater time to become clean. This is consistent with the pre-injection production downhole velocity survey performed on the well following construction, which showed that approximately 75 percent of the total contribution to the well derives from the lowermost 50 feet of perforations (refer to the Water Year 2009 Summary of Operations Report for a discussion of SM ASR-2 plugging).

## **Chemical Treatment**

Chemical injection was initiated on January 4, 2011. 220 gallons of glycolic acid and 1,320 gallons of hydrochloric acid (with inhibitor) were mixed into solution in an approximate 1,500 gallon tank. The solution was proportionally injected into each 20-foot interval of screen via the dual-swab assembly and then chased with clear water to displace the solution from the assembly into the screen. Each 20-foot section was then "dry" swabbed for a period of 30 minutes to work the solution into the gravel pack and formation. Following introduction of the chemicals and the initial overnight idle period, each 20-foot section of screen was line-swabbed for 20 minutes. This procedure was repeated once. The well was then allowed to stand idle overnight, and the line swabbing procedure was repeated.

## **Post-Chemical Dual-Swab Airlifting**

Following chemical swabbing operations, approximately 30 feet of fill material had accumulated in the bottom of the well. The fill material was removed via open-ended airlifting. Following removal of fill, dual-swab airlifting was initiated on January 8, 2011 from the top of the screen and working progressively to bottom. Each section was worked for a period of approximately 30 minutes until reaching a depth of approximately 745 feet. The discharge from each interval was generally initially very turbid, of a deep orange brown color and containing minor amounts of fine gray formation sand, becoming relatively clear to cloudy within 15 to 30 minutes. From a depth of approximately 745 to 770 feet (i.e., the bottom 25 feet of screen), the initial discharge was extremely turbid and sandy. After approximately 4.5 hours of dual-swab airlifting, the lower 25 feet of screen the discharge became clear.

## Chlorination

Chlorination of the well was performed on January 10, 2011. An approximate 1,200 gallon solution of 5,000 parts per million (ppm) available chlorine was prepared and incrementally introduced into the screen section with the dual-swab assembly from the bottom



of the screen working to top. Each interval was "dry" swabbed for a period of approximately 30 minutes following introduction of the chlorine solution prior to moving up to the next interval. Following introduction of the chlorine solution to the entire screen, the assembly was raised to the top of the screen and the solution allowed to remain in the well overnight. A final dual-swab airlifting pass of the screen was made from the top of the screen to bottom to remove the chlorine solution.

## Post-Rehabilitation Video Survey

A post-rehabilitation video survey was performed on January 13, 2011. The video survey revealed that the stainless steel screen was clean and all of the perforations were open with gravel pack visible behind the well screen slots from the top to bottom (a copy of the video survey was provided to the District under separate cover).

## **Performance Testing Results**

As discussed in the main body of this report, ASR well performance is measured by specific capacity (pumping) and / or specific injectivity (injection). Pumping performance has been tracked by measurement and comparison of 10-minute specific capacity, whereas injection performance has been tracked by measurement and comparison of 24-hour injection specific injectivities (a.k.a. injection specific capacity). At the end of WY 2010 and prior to rehabilitation, SM ASR-2 displayed a 10-minute specific capacity of 16.8 gpm/ft and a 24-hour specific injectivity of 2.8 gpm/ft. Following rehabilitation in WY 2011, the well displayed a specific capacity of 36.9 gpm/ft and a specific injectivity of 37.9 gpm/ft, representing approximate 2 to 14 times improvements in the specific capacity and injectivity, respectively, as a result of rehabilitation.



## **APPENDIX C – WATER-QUALITY DATA**



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 2 Thursday, December 22, 2011

Lab Number: AA82568

Collection Date/Time: 11/18/2011 15:15 Sample Collector: LINDBERG T

Submittal Date/Time: 11/18/2011 15:25 Sample ID

	Samp	le Descrip	tion: ASR 1				
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Alkalinity, Total (as CaCO3)	2320B	mg/L	142		2		11/22/2011
Ammonia-N	4500NH3 D	mg/L	Not Detected		0.05		11/23/2011
Arsenic, Total	EPA200.8	ug/L	Not Detected		1	10	12/2/2011
Barium, Total	EPA200.8	ug/L	64		10	1000	12/2/2011
Boron	EPA200.7	mg/L	Not Detected		0.05		11/18/2011
Calcium	EPA200.7	mg/L	43		0.5		11/18/2011
Chloramines	SM4500-CI G	mg/L	Not Detected		0.05		11/18/2011
Chloride	EPA300.0	mg/L	40		1	250	11/18/2011
Copper, Total	EPA200.8	ug/L	5		4	1300	12/2/2011
Dissolved Organic Carbon	SM5310-C	mg/L	0.98	E	0.2		11/28/2011
Gross Alpha	EPA900.0	pCi/L	2.17 ± 1.81	Е		15	12/16/2011
Haloacetic Acids	EPA552	ug/L	Not Detected	E		60	11/30/2011
ron	EPA200.7	ug/L	Not Detected		10	300	11/18/2011
ron, Dissolved	EPA 200.7	ug/L	Not Detected		10	300	11/18/2011
Kjehldahl Nitrogen	4500-NH3 B,C.E	mg/L	Not Detected		0.2		11/23/2011
Lithium	EPA200.8	ug/L	6		1		12/2/2011
Magnesium	EPA200.7	mg/L	14		0.5		11/18/2011
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected		10	50	11/18/2011
Manganese, Total	EPA 200.7	ug/L	Not Detected		10	50	11/18/2011
Methane	EPA174/175	ug/L	Not Detected	E	5		11/28/2011
Molybdenum, Total	EPA200.8	ug/L	7		1	1000	12/2/2011
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	45	11/18/2011
o-Phosphate-P	EPA300.0	mg/L	0.16		0.05		11/18/2011
oH (Laboratory)	4500-H+B	STD. Units	7.4				11/18/2011
Phosphorus, Total	HACH 8190	mg/L	0.20		0.03		11/21/2011
Potassium	EPA200.7	mg/L	3.0		0.1		11/18/2011
QC Anion Sum x 100	Calculattion	%	103%				11/23/2011
QC Anion-Cation Balance	Calculattion	%	-1				11/23/2011
QC Cation Sum x 100	Calculattion	%	100%				11/23/2011

mg/L: Milligrams per liter ug/L: Micrograms per liter PQL: Practical Quantitation Limit MCL: Maximum Contamination Level H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

Lab Number: AA82568

Collection Date/Time: 11/18/2011 15:15 Sample Collector: LINDBERG T

Submittal Date/Time: 11/18/2011 15:25 Sample ID

Sample Description: ASR 1									
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed		
Selenium, Total	EPA200.8	ug/L	2		2	50	12/2/2011		
Sodium	EPA200.7	mg/L	46		0.5		11/18/2011		
Specific Conductance (E.C)	2510B	umhos/cm	537		1	900	11/21/2011		
Strontium, Total	EPA200.8	ug/L	254		5		12/2/2011		
Sulfate	EPA300.0	mg/L	74		1	250	11/18/2011		
Total Nitrogen	Calculation	mg/L	Not Detected		0.2		11/23/2011		
Total Organic Carbon	SM5310C	mg/L	0.95	Е	0.20		11/28/2011		
Total Radium 226	EPA903.0	pCi/L	0.000 ± 0.193	Е		3	12/7/2011		
Trihalomethanes	EPA524.2	ug/L	31	Е		80	11/30/2011		
Uranium by ICP/MS	EPA200.8	ug/L	1		1	30	12/2/2011		
Vanadium, Total	EPA200.8	ug/L	Not Detected		1	1000	12/2/2011		
Zinc, Total	EPA200.8	ug/L	205		10	5000	12/2/2011		

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A1K1711

12/02/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 11/23/2011 07:40.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



## 12/02/2011

## **Case Narrative**

## **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1K1711 COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 2

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Other

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager Report Format

David Holland Final.rpt

A1K1711 FINAL 12022011 1044



## **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 Report Issue Date: 12/02/2011 10:44
Received Date: 11/23/2011
Received Time: 07:40

**Lab Sample ID:** A1K1711-01 **Sample Date:** 11/18/2011 15:15

Sample Type: Grab

Sampled by: T Lindberg
Matrix: Drinking Water

Sample Description: ASR-1 // 82568

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	0.98	0.20	mg/L	1	A114001	11/28/11	11/28/11	
Total Organic Carbon	SM 5310 C	0.95	0.20	mg/L	1	A114002	11/28/11	11/28/11	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	8.2	0.50	ug/L	1	A114043	11/29/11	11/30/11	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A114043	11/29/11	11/30/11	
Chloroform	EPA 524.2	20	0.50	ug/L	1	A114043	11/29/11	11/30/11	
Dibromochloromethane	EPA 524.2	2.8	0.50	ug/L	1	A114043	11/29/11	11/30/11	
Surrogate: Bromofluorobenzene	EPA 524.2	93 %		Acceptable ra	nge: 70-130 9	%			
Total Trihalomethanes, EPA 524.2		31	0.50	ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A114067	11/29/11	11/30/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A114067	11/29/11	11/30/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A114067	11/29/11	11/30/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A114067	11/29/11	11/30/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	ND	1.0	ug/L	1	A114067	11/29/11	11/30/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	95 %		Acceptable ra	nge: 70-130 9	%			
*Total Haloacetic Acids, EPA 552.2		ND	2.0	ug/L					



## **General Chemistry Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A114001				Analyst:	SMP	Prepare	d: 11/28/2	011			
Blank (A114001-BLK1) SM 5310	C - Quality Contro	ol									
Dissolved Organic Carbon	ND	0.20	mg/L							11/28/11	
Blank Spike (A114001-BS1) SM	5310 C - Quality C	ontrol									
Dissolved Organic Carbon	10	0.20	mg/L	10		100	80-120			11/28/11	
Blank Spike Dup (A114001-BSD1)	SM 5310 C - Qu	ality Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		100	80-120	0	20	11/28/11	
Matrix Spike (A114001-MS1) SN	1 5310 C - Quality (	Control				Source	e: A1K171	1-01			
Dissolved Organic Carbon	11	0.20	mg/L	10	0.98	100	80-120			11/28/11	
Matrix Spike Dup (A114001-MSD1	) SM 5310 C - Q	uality Control				Source	e: A1K171	1-01			
Dissolved Organic Carbon	11	0.20	mg/L	10	0.98	100	80-120	0	20	11/28/11	
Batch: A114002				Analyst:	SMP	Prepare	d: 11/28/2	011			
Blank (A114002-BLK1) SM 5310	C - Quality Contro	ol									
Fotal Organic Carbon	ND	0.20	mg/L							11/28/11	
Blank Spike (A114002-BS1) SM	5310 C - Quality C	ontrol									
Fotal Organic Carbon	10	0.20	mg/L	10		101	80-120			11/28/11	
Blank Spike Dup (A114002-BSD1)	SM 5310 C - Qu	ality Control									
Fotal Organic Carbon	10	0.20	mg/L	10		101	80-120	0	20	11/28/11	
Matrix Spike (A114002-MS1) SN	1 5310 C - Quality (	Control				Source	e: A1K171	1-01			
Total Organic Carbon	11	0.20	mg/L	10	0.95	101	80-120			11/28/11	
Matrix Spike Dup (A114002-MSD1	) SM 5310 C - Q	uality Control				Source	e: A1K171	1-01			
Total Organic Carbon	11	0.20	mg/L	10	0.95	102	80-120	1	20	11/28/11	



## **Organics Quality Control Report**

				0. "	Source					Det-	
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A114043				Analyst: .	JGB	Prepared	: 11/29/2	011			
Blank (A114043-BLK1) EPA 524.	.2 - Quality Control										
Bromodichloromethane	ND	0.50	ug/L							11/29/11	
Bromoform	ND	0.50	ug/L							11/29/11	
Chloroform	ND	0.50	ug/L							11/29/11	
Dibromochloromethane	ND	0.50	ug/L							11/29/11	
Surrogate: Bromofluorobenzene	4.5			5.0		90	70-130			11/29/11	
Blank Spike (A114043-BS1) EPA	524.2 - Quality Con	trol									
romodichloromethane	9.8	0.50	ug/L	10		98	70-130			11/29/11	
Bromoform	10	0.50	ug/L	10		103	70-130			11/29/11	
Chloroform	11	0.50	ug/L	10		105	70-130			11/29/11	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130			11/29/11	
Surrogate: Bromofluorobenzene	5.2			5.0		104	70-130			11/29/11	
Blank Spike Dup (A114043-BSD1)	EPA 524.2 - Qualit	ty Control									
romodichloromethane	9.1	0.50	ug/L	10		91	70-130	7	30	11/29/11	
Bromoform	8.8	0.50	ug/L	10		88	70-130	15	30	11/29/11	
chloroform	9.9	0.50	ug/L	10		99	70-130	6	30	11/29/11	
ibromochloromethane	8.8	0.50	ug/L	10		88	70-130	12	30	11/29/11	
Surrogate: Bromofluorobenzene	4.6			5.0		91	70-130			11/29/11	
Batch: A114067				Analyst: F	RJB	Prepared	: 11/29/2	011			
	.2 - Quality Control			Analyst: F	RJB	Prepared	: 11/29/2	011			
Blank (A114067-BLK1) EPA 552.	2 - Quality Control	1.0	ug/L	Analyst: F	RJB	Prepared	: 11/29/2	011		11/30/11	
Blank (A114067-BLK1) EPA 552.	<u> </u>	1.0 1.0	ug/L ug/L	Analyst: F	RJB	Prepared	: 11/29/2	011		11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	ND		_	Analyst: F	RJB	Prepared	: 11/29/2	011			
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)	ND ND	1.0	ug/L	Analyst: F	RJB	Prepared	: 11/29/2	011		11/30/11	
Blank (A114067-BLK1) EPA 552.  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloromoacetic Acid (MBAA)  Dichloroacetic Acid (MCAA)	ND ND ND	1.0 1.0	ug/L ug/L	Analyst: F	RJB	Prepared	: 11/29/2	011		11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Bibromoacetic Acid (DBAA)  Bichloroacetic Acid (DCAA)  Bionobromoacetic Acid (MBAA)  Bionochloroacetic Acid (MCAA)  Birichloroacetic Acid (TCAA)	ND ND ND ND	1.0 1.0 2.0	ug/L ug/L ug/L	Analyst: F	RJB	Prepared	70-130	011		11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND ND ND ND ND	1.0 1.0 2.0 1.0	ug/L ug/L ug/L		RJB	· ·		011		11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Donobromoacetic Acid (MBAA)  Donochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Durrogate: 2,3-Dibromopropionic Acid  Blank Spike (A114067-BS1) EPA	ND ND ND ND ND	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L		RJB	94		011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monochloroacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A114067-BS1) EPA Dibromoacetic Acid (DBAA)	ND ND ND ND ND 23 A 552.2 - Quality Con	1.0 1.0 2.0 1.0 trol	ug/L ug/L ug/L ug/L	25	RJB	94	70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A114067-BS1) EPA Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND 23	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	25 10 10	RJB	94	70-130 70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Bibromoacetic Acid (DBAA)  Bichloroacetic Acid (DCAA)  Bionobromoacetic Acid (MBAA)  Bionochloroacetic Acid (MCAA)  Bichloroacetic Acid (TCAA)  Biank Spike (A114067-BS1) EPA  Bibromoacetic Acid (DBAA)  Bichloroacetic Acid (DCAA)  Bionobromoacetic Acid (MBAA)	ND ND ND ND 23 <b>A 552.2 - Quality Con</b> 10 10	1.0 1.0 2.0 1.0 <b>trol</b> 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10	RJB	94 100 103 101	70-130 70-130 70-130 70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Bibromoacetic Acid (DBAA)  Bibromoacetic Acid (DCAA)  Bibromoacetic Acid (DCAA)  Bibromoacetic Acid (MBAA)  Bibromoacetic Acid (TCAA)  Blank Spike (A114067-BS1) EPA  Bibromoacetic Acid (DBAA)  Bibromoacetic Acid (DCAA)  Bibromoacetic Acid (DCAA)  Bibromoacetic Acid (MBAA)  Bibromoacetic Acid (MBAA)  Bibromoacetic Acid (MBAA)  Bibromoacetic Acid (MBAA)  Bibromoacetic Acid (MCAA)	ND ND ND ND 23 <b>552.2 - Quality Con</b> 10 10 10	1.0 1.0 2.0 1.0 <b>trol</b> 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20	RJB	94 100 103 101 100	70-130 70-130 70-130 70-130 70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DBAA) ichloroacetic Acid (DCAA) ionochloroacetic Acid (MCAA) ichloroacetic Acid (MCAA) richloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid ibromoacetic Acid (DBAA) ichloroacetic Acid (DBAA) ichloroacetic Acid (DCAA) ionochloroacetic Acid (MBAA) ionochloroacetic Acid (MBAA) ionochloroacetic Acid (MCAA) richloroacetic Acid (MCAA)	ND ND ND ND 23 A 552.2 - Quality Con 10 10	1.0 1.0 2.0 1.0 <b>trol</b> 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10	RJB	94 100 103 101	70-130 70-130 70-130 70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Blank (A114067-BLK1) EPA 552.  Blank (DEAA)  Blooroncetic Acid (DEAA)  Blooroncoloroncetic Acid (MEAA)  Blooroncoloroncetic Acid (MCAA)  Blank Spike (A114067-BS1) EPA  Blooroncoloroncetic Acid (DEAA)  Blooroncoloroncetic Acid (DEAA)  Blooroncoloroncetic Acid (MEAA)  Blooroncoloroncetic Acid (MEAA)  Blooroncoloroncetic Acid (MEAA)  Blooroncoloroncetic Acid (MCAA)  Blooroncoloroncetic Acid (MCAA)  Blooroncoloroncetic Acid (TCAA)  Blooroncoloroncetic Acid (TCAA)  Blooroncoloroncetic Acid (TCAA)	ND ND ND ND 23 A 552.2 - Quality Con 10 10 10 20 9.8	1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10	RJB	94 100 103 101 100 98	70-130 70-130 70-130 70-130 70-130	011		11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A114067-BS1) Ionobromoacetic Acid (DBAA) Ionobromoacetic Acid (DCAA) Ionobromoacetic Acid (MCAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike Dup (A114067-BSD1)	ND ND ND ND 23 A 552.2 - Quality Con 10 10 10 20 9.8 23 EPA 552.2 - Quality	1.0 1.0 2.0 1.0 trol  1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10 25	RJB	94 100 103 101 100 98 91	70-130 70-130 70-130 70-130 70-130 70-130		30	11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Bibromoacetic Acid (DBAA)  Bibromoacetic Acid (DCAA)  Blonobromoacetic Acid (MBAA)  Blonochloroacetic Acid (MCAA)  Blank Spike (A114067-BS1) EPA  Bibromoacetic Acid (DBAA)  Blonochloroacetic Acid (MBAA)  Blonobromoacetic Acid (DBAA)  Blonochloroacetic Acid (MBAA)  Blonochloroacetic Acid (MBAA)  Blonochloroacetic Acid (MCAA)  Blonochloroacetic Acid (MCAA)  Blonochloroacetic Acid (TCAA)	ND ND ND ND 23 A 552.2 - Quality Con 10 10 10 20 9.8 23 EPA 552.2 - Quality	1.0 1.0 2.0 1.0 1.0 1.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10 25	RJB	94 100 103 101 100 98 91	70-130 70-130 70-130 70-130 70-130 70-130	2	30	11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Bibromoacetic Acid (DBAA)  Bichloroacetic Acid (DCAA)  Blonobromoacetic Acid (MBAA)  Blonochloroacetic Acid (MCAA)  Blonochloroacetic Acid (MCAA)  Blank Spike (A114067-BS1) EPA  Bibromoacetic Acid (DBAA)  Blonochloroacetic Acid (MBAA)  Blonochloroacetic Acid (MBAA)  Blonochloroacetic Acid (MBAA)  Blonochloroacetic Acid (MCAA)  Blonochloroacetic Acid (MCAA)  Blonochloroacetic Acid (BBAA)	ND ND ND ND 23 A 552.2 - Quality Con 10 10 10 20 9.8 23 EPA 552.2 - Quality 9.8 9.8	1.0 1.0 2.0 1.0 1.0 1.0 2.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10 25 10 10	RJB	94 100 103 101 100 98 91 98 94	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2 9	30	11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552.  Blank (A114067-BLK1) EPA 552.  Blank (A114067-BLK1) EPA 552.  Blank (Blank (Blank) Blank)  Blank (Blank Spike (A114067-BS1) EPA  Blank Spike (A114067-BS1) EPA  Blank Spike (A114067-BS1) EPA  Blank Spike (A114067-BS1)  Blank Spike (Blank)  Blank Spike Dup (A114067-BSD1)  Blank Spike Dup (A114067-BSD1)  Blank Spike Dup (Blank)  Blank Spike Dup (Blank)	ND ND ND ND 23 <b>552.2 - Quality Con</b> 10 10 20 9.8 23 <b>EPA 552.2 - Quality</b> 9.8 9.4	1.0 1.0 2.0 1.0  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10 25 10 10	RJB	94 100 103 101 100 98 91 98 94 94	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2 9 7	30 30	11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	
Blank (A114067-BLK1) EPA 552. Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND ND ND ND 23 A 552.2 - Quality Con 10 10 10 20 9.8 23 EPA 552.2 - Quality 9.8 9.8	1.0 1.0 2.0 1.0 1.0 1.0 2.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 10 10 10 20 10 25 10 10	RJB	94 100 103 101 100 98 91 98 94	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2 9 7 5	30	11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11 11/30/11	

A1K1711 FINAL 12022011 1044

1414 Stanislaus Street



## **Organics Quality Control Report**

		•		•	•						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A114067				Analyst:	RJB	Prepare	d: 11/29/2	011			
Matrix Spike (A114067-MS1) E	PA 552.2 - Quality Co	ntrol				Source	e: A1K182	25-01			
Dibromoacetic Acid (DBAA)	17	1.0	ug/L	10	6.9	97	70-130			11/30/11	
Dichloroacetic Acid (DCAA)	11	1.0	ug/L	10	ND	109	70-130			11/30/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	101	70-130			11/30/11	
Monochloroacetic Acid (MCAA)	20	2.0	ug/L	20	ND	98	70-130			11/30/11	
Trichloroacetic Acid (TCAA)	9.9	1.0	ug/L	10	ND	92	70-130			11/30/11	
Surrogate: 2,3-Dibromopropionic Acid	d 24			25		96	70-130			11/30/11	
Matrix Spike Dup (A114067-MSD	1) EPA 552.2 - Qua	ity Contro	l			Source	e: A1K182	25-01			
Dibromoacetic Acid (DBAA)	16	1.0	ug/L	10	6.9	95	70-130	1	30	11/30/11	
Dichloroacetic Acid (DCAA)	11	1.0	ug/L	10	ND	107	70-130	2	30	11/30/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	101	70-130	1	30	11/30/11	
Monochloroacetic Acid (MCAA)	20	2.0	ug/L	20	ND	101	70-130	3	30	11/30/11	
Trichloroacetic Acid (TCAA)	9.9	1.0	ug/L	10	ND	92	70-130	0	30	11/30/11	
Surrogate: 2,3-Dibromopropionic Acid	d 25			25		98	70-130			11/30/11	



## Certificate of Analysis

12/02/2011

## 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- · All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

## Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

## **Definitions and Flags for Data Qualifiers**

MDA: mg/L: Milligrams/Liter (ppm) M: Method Detection Limit Min. Detected Activity mg/Kg: MPN: Milligrams/Kilogram (ppm) RL: Reporting Limit Most Probable Number Micrograms/Liter (ppb) ·DI x Dilution CFU: μg/L: Colony Forming Unit ND: None Detected at RL μg/Kg: Micrograms/Kilogram (ppb) Absent: Less than 1 CFU/100mLs 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

A1K1711 FINAL 12022011 1044

## A1K1711

## **Monterey Bay Analytical**

Monte6227

11232011

Turnaround:

Standard

Due Date:

12/09/2011

Printed: 11/23/2011 13:02:17

Page 1 of 1

Page 8 of 11

## BSK ANALYTICAL LABORATORIES

\* Required Fields

Client/Company Name \*:

Report Attention \*:

Phone \* #: (831)-357-6227

FAX \* #(831)-641-0734

TEMP:

1414 Stanislaus Street, Fresno. CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

Monte6227 A1K1711

11/23/201 Page 9 of 11

		. í		1		_		~†	 	 <del></del>	 _	-	-									
	Shipping Method:		Received for Lab by: (Signature and Printed Name)	Relinquished by: (Signature and Printed Name)	David Holland	Palmonichad burge					-		1	Sample # Bottles	Matrix Types:	Lindberg, T	Sampler Name Printed / Signature	How would you like your completed results sent? Fe-Mail Fax	MPWMD	Project Information:	Address * 4 Justin Ct.	Monterey Bay Analytical
Z CAS		, J	(Signature	nature and	and		J. Erick					11/18		Sam	RSW = Ra RGW = Ra	<u>'</u>	nted / Signa	e your com		2		y Bay
Was Gse			and Prints	Printed Nar	Primited Na							1515		Sampled Ite Time	RSW = Raw Surface Water RGW = Raw Ground Water		dure	pleted resu				Ana
CAO AS GSO WALK-IN SIVE FED EX OTHER		1	Name)	ne)	WARR (	•						ASR-1		Sample Description / Location *				ls sent? 🖊 E-N			City * Monterey	lytical
JVC FED			<b>)</b>	Company	MBAS	}								ption / Loca	ใจrinated Fr บริหอป Water	√s⊤b	QC Request	fail Fa			егеу	David
ЕХ ОТН				iny	AS AS									tion *	nished Wate	STD Level II	luest	X DEDD			State *	David Holland
贸															CFW - Clorinated Finished Water CWW = C FW = Finished Water WW = Waste Water		Result R	Mail Only	Quote # 464	PO#	➤	but
	-	11/8/11	Date ,	Date	11/23										CWW = Chorinated Waste Water te Water SW = Storm Water	5 Day** □2 D	Result Request ** Surcharge	ly	464		Zip * 93940	
	Cooling Method:	7.40	Time	Time	Time 16:30							DW		Matrix *	Water BW = ater DW = D	✓STD	arge				Q.	E-mail 4ME
WET	hod:	Date:	Payment Received at	Received by (Signature and	Received by (Signature and							82568		Comments / Station Code	r BW = Bottled Water DW = Drinking Water So	,	System No. *	Regulatory Compliance Electronic Data Transfer	Other	Merced Co	Carbon Copies:	4MBAS@Sbcglobal.net
BLUE NONE		Amount:	ived at Delivery:	nature and Print Name)	nature and Print Name)			***************************************						tion Code	SO = Solid					Tulare Co [		bal net
É		C	ery:	vame)	Vame)													Y		<b>-</b>	EPA 🔲	
	Packing Material:	Check/Cash/Card										\			DO	C/ T	OC	>				
	Material:	ard PIA#		Company	Company				 			`			TTH	IM/F	IA/	45				ANALY
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A1K1711 Monte6227

11/23/2011 10



Date Received [1] 23[1]	BH ABAR NUADH TOU NOOT ABABA HADA HAA HADAN TOOLA KU
Section 1- Receiving Information	
Sample Transport: ONTRAC UPS PMS Walk-In BSK-Courier GS	
Samples arrived at lab on same day sampled: Yes No Has Chilling	ng Process Begun: YesNo
Coolers/Ice Chests Description/Temperature(s): (If more than 5 received, list informat	
1) 2 2) 3) 5)	
Was Temperature In Range: (Y) N N/A Received On Ice: (Wet	Blue Received Ambient: Y N
Describe type of packing materials: Bubble Wrap Foam Packing Pea	nuts Paper Other:
Initial Receipt: BSK-Visalia BSK-Bakersfield BSK-SAC	(BSK-FA)L
Were ice chest custody seals present? Y(N) Intact: Y(N)	
Section 2- COC Info. Completed Info From	Completed Info From
Yes No Container	Yes No Container
Was COC Received Analysis Requestrated Hold times less	
	s than 72hr —
Time Sampled Client Name	
Sample ID Address	
Special Storage/Handling Ins. Telephone #	
Section 3- Bottles / Analysis	Yes No N/A Comment
Did all bottles arrive unbroken and intact?	Yes No N/A Comment
Were bottle custody seals present?	
Were bottle custody seals intact?	
Did all bottle labels agree with COC?	
Were correct containers used for the tests requested?	
Were correct preservations used for the tests requested?	
Was a sufficient amount of sample sent for tests indicated?	
Were bubbles present in VOA Vials? (Volatile Methods Only)	
Were Ascorbic Acid Bottles received with the VOAs?	<u> </u>
Section 4- Comments / Discrepancies	
Sample(s) Split/Preserve: Yes No Container: Preservation	on: Dt/Time/Init
Container: Preservation	on: Dt/Time/Init
Was Client Service Rep. notified of discrepancies: Yes No NA CSR:	Notified By/Time:
Explanations / Comments	
Report Comment Entered:	
Labeled by: KZ @ II 20 Labels checked by:	RUSH Paged by:@

11/23/2011 10

Sample Integrity Pg 2 of 2

BSK Bottles (Yes



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer HNO<sub>3</sub> (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap EDA (p) Brown Cap/Label Other: Dissolved Oxygen 300ml (g) 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>,COD Yellow Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label inden. 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> <sup>Yellow Label</sup> 1 Liter (AG) None 1 Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G / TPH-Diesel <sup>Vellow Label</sup> 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 1 Liter (P) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide 40ml VOA Vial Clear - HCL 40ml VOA Vial Clear – Buffer pH 4 40ml VOA Vial Clear - None 40ml VOA Vial Amber - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear – H<sub>3</sub>PO<sub>4</sub> TO THE PERSON AND THE A Min YOM VOR ANDER W/ 1/2 Gallon (p) Asbestos 1Liter Plastic/Foil quae: Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug Ampulé .... **建筑线设置** PT Sample Bottle 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



## CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT

	Jab Number:	TEST DESCRIPTION AND ANALYSES REQ	UESTED
Client: Monterey Bay Analytical Services Customer Number: Address: 4 Justin Court, Suite D. Monterey CA 93940	24177		
Phone: 831-375-6227 Fax: 831-641-0734 Email Address: 4mbas@sbcglobal.net Contact Person: David Holland Project Name: MPWMD Purchase Order Number Quote Number:	fie (C) Grab (G) Plastic (P) VOA (V) Metal Tube (MT) Ag Water (AgW) 9 Well (MW) Ground Water (GW) r (WW) Drinking Water (DW) SLD) Oil (O)	er (OTH) Replace (RPL) roduce (PRD) 1 (3) HCl A 226	
Sampler(s): Lindberg, T.  Sampling Fee: Pickup Fee: Compositor Setup Date: Time:	Composite (C) ( less (G) Plastic ( less (G) Plastic ( Monitoring Well (A Solid (SLD) O)	Nurce (SRC) Repeat (RPT) a Tissue (PET + ZnAc, (2) N S) Na2S203, (	
Samp   Location Description   Date   Time   Sampled   Sampled	Method of Sampling: Number of Containers Type of Containers: GI Potable (P) Non-Pola Surface Water (SW) I Travel Blank (TB) Wa Sofi (S) Studge (SLG)	Bact: System (Sys) So Bact: Routine (ROUT) F Special (SPL) Leaf Tissue (LT) Petiol Preservative: (1) NaOH (4) H2SO4, (5) HNO3, (1	
72568 ASR-1 11/18/11 1515	G 2L, p P DW	X	
The second secon			
· · · · · · · · · · · · · · · · · · ·			
Remarks	Relinquished Date:	Time: Relinquished Diue: Time: Relinquished	Date: Time:
72073 Re	Holland, D. 11/29/11 Received By: Date:	Time: Received By:	Date: Time:
Corporate Offices & Laboratory 853 Corporation Street . Santa Paula, CA 93080 TEL: 805/392-2000 X: 805/525-4172 CA Nei AP Certification No. 01110CA	Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: 209/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563	Office & Laboratory  563 E. Lindo Avenue Chico. CA 95926 TEL: 530/343-5818 FAX: 530/343-3807 CA ELAP Certification No. 2670	Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

FGL Environmental Revision Date: 05/02/11  $\mathbf{Doc\:ID:\:2D0900157\_SOP\_13.DOC}$ 

Page: 1 of 1

## Santa Paula - Condition Upon Receipt (Attach to COC)

Sam	ple Receipt:					
1.	Number of ice chests/packages received:	2D=	7.		•	•
2.	Were samples received in a chilled condition? Temps:		<u>'</u> /	_,'_	/	<del></del>
	Acceptable is above freezing to 6° C. Also acceptable is received or received at room temperature (RRT) if sampled within one hour of r	nice (RO	(1) for the san	ne day o	ot sampling nerature fa	g OI ilures
	must be documented below. If many packages are received at one ti	me check	for tests/H.	Γ.'s/rush	nes/Bacti's	to
	prioritize further review. Please notify Microbiology personnel imm	nediately	of bacti samp	les rece	ived	
	Acceptable is above freezing to 6.					
3.	Do the number of bottles received agree with the COC?		Yes	) No	N/A	
4.	Were samples received intact? (i.e. no broken bottles, lea	ks etc.)	Yes	No		
5:	Were sample custody seals intact?		Yes	No	N/A	
Sign	and date the COC, obtain LIMS sample numbers, select r	nethods	tests and p	orint la	bels.	
Sam	ple Verification, Labeling and Distribution:					
1.	Were all requested analyses understood and acceptable?		Yes	) No		•
2.	Did bottle labels correspond with the client's ID's?		(Tes	) No		
3.	Were all bottles requiring sample preservation properly p	reserve	d? Yes	No	(N/A	) FGL
4.	VOAs checked for Headspace?		· Yes	No	N/A	
5.	Were all analyses within holding times at time of receipt	?	Yes	) No	•	-
6.	Have rush or project due dates been checked and accepte	d?	AN/A)	Yes	No	
Attac	ch labels to the containers and include a copy of the COC	for lab	delivery.			
Samj	ole Receipt, Login and Verification completed by (initials	):		'A)		
	repancy Documentation:		•			
	items above which are "No" or do not meet specifications			be reso	olved.	•
1	Person Contacted:		Number:			_
	Initiated By:	Date:_		—		
	Problem:			•		
	Resolution:	:				
2.	Person Contacted:	Phone	Number:			
	Initiated By:	_ Date	):		-	
•	Problem:					
	Resolution:		(2-19144	'		
		rey Bay	y Analyti	cal S	ervices	
		SP	1112	407	7	

IV-12/02/2011-11:19:03





December 20, 2011

Monterey Bay Analytical ServicesLab ID: SP 11124074 Justin CourtCustomer: 2-19144

Monterey, CA 93940

## **Laboratory Report**

**Introduction:** This report package contains total of 3 pages divided into 3 sections:

Case Narrative (1 pages): An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

## Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
ASR-1	11/18/2011	12/02/2011	SP 1112407-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

## Radio QC

900.0	12/16/2011:218628 All analysis quality controls are within established criteria
	12/14/2011:213856 All preparation quality controls are within established criteria
903.0	12/07/2011:218063 All analysis quality controls are within established criteria
	12/06/2011:213504 All preparation quality controls are within established criteria

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.







December 20, 2011 Lab ID : SP 1112407-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On: November 18, 2011-15:15

Monterey, CA 93940 Sampled By: Lindberg, T.

Received On: December 2, 2011-10:30

Matrix : Drinking Water

Description : ASR-1 Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Sampl	le Analysis
Constituent	Result ± Ellor	MDA	Omts WCL/AL N	Method	Date/ID	Method	Date/ID	
Radio Chemistry P:1'5								
Gross Alpha	$2.17 \pm 1.81$	1.72	pCi/L	15/5	900.0	12/14/11:213856	900.0	12/16/11:218628
Total Alpha Radium (226)	$0.000 \pm 0.193$	0.439	pCi/L	3	903.0	12/06/11:213504	903.0	12/07/11:218063

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2 \* PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





December 20, 2011 **Monterey Bay Analytical Services**  Lab ID : SP 1112407 Customer : 2-19144

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	12/16/11:218628fhh	CCV CCB	cpm cpm	9947	40.7 % 0.0400	40 - 48 0.11	
Gross Alpha	900.0	12/14/11:213856jmb (SP 1112423-002)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	150.4 150.4 150.4 150.4	0.16 104 % 89.6 % 103 % 13.5%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	12/07/11:218063FHH	CCV CCB	cpm cpm	9955	40.1 % 0.100	39 - 47 0.15	
Total Alpha Radium (226)	903.0	12/06/11:213504FHH	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	17.85 17.85 17.85 17.85	0.06 59.9 % 42.6 % 53.0 % 21.6%	2 52-89 43-92 43-92 ≤35.5	

-		• .	
I)	etn	nıt	ion

BSD

MSRPD

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that

the preparation process is not affecting analyte recovery. : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation

and analysis. : BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation **BSRPD** 

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

### **Analytical Report**

Monterey Bay Analytical	Client Project ID: MPWMD; Regional	Date Sampled: 11/18/11
4 Justin Court, Suite D		Date Received: 11/22/11
Trustin Court, State B	Client Contact: David Holland	Date Reported: 11/30/11
Monterey, CA 93940	Client P.O.:	Date Completed: 11/30/11

WorkOrder: 1111729

November 30, 2011

Dear David:

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD; Regional,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1111729

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 WILLOW PASS ROAD TURN AROUND TIME PITTSBURG, CA 94565-1701 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com ☐ GeoTracker EDF □ PDF Excel Write On (DW) Telephone: (877) 252-9262 Fax: (925) 252-9269 Report To: David Holland Bill To: **Analysis Request** Other Comments Company: Monterey Bay Analytical Services 4 Justin Ct. Suite D Fotal Petroleum Oil & Grease (1664 / 5520 E/B&F) Filter 8015) Samples E-Mail: 4mbas@sbcglobal.net Monterey, Ca 93940 for Metals CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) Tele: (831) 641 - 0734 Fax: (831) 375 - 6227 (602 / 8021 MTBE / BTEX ONLY (EPA 602 / 8021) EPA 608 / 8082 PCB's ONLY; Aroclors analysis: Total Petroleum Hydrocarbons (418.1) EPA 502.2 / 601 / 8010 / 8021 (HVOCs) EPA 515 / 8151 (Acidic CI Herbicides) Project Name: Regional Project #:MPWMD Yes / No EPA 505/ 608 / 8081 (CI Pesticides) **Project Location:** TPH as Diesel / Motor Oil (8015) Lead (200.7 / 200.8 / 6010 / 6020) EPA 525.2 / 625 / 8270 (SVOCs) EPA 507 / 8141 (NP Pesticides) EPA 524.2 / 624 / 8260 (VOCs) Sampler Signature: Lindberg T METHOD SAMPLING MATRIX PRESERVED Type Containers # Containers LOCATION/ MTBE / BTEX SAMPLE ID **Field Point** Methane Sludge Name Date Time Water HNO3 Other 11/18 ASR-1 1515 X X 82568 REC'D SEALED & INTACTIVIA Relinquished By: ICE/ 9.8 Blue 105 COMMENTS: Time: Received By: Date: GOOD CONDITION David Holland 11/21 16:00 HEAD SPACE ABSENT Relinquished By: Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS 1/22/1 PRESERVED IN LAB Relinquished By: Received By: Date: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

#### McCampbell Analytical, Inc.

### **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1111729 ClientCode: MBAS ✓ Email ☐ ThirdParty □WaterTrax WriteOn □ EDF ☐ Excel ∏Fax HardCopy Report to: Bill to: Requested TAT: 5 days David Holland Email: 4mbas@sbcglobal.net Accounts Payable Monterey Bay Analytical Monterey Bay Analytical cc: Date Received: 11/22/2011 PO: 4 Justin Court, Suite D 4 Justin Court, Suite D ProjectNo: MPWMD; Regional Monterey, CA 93940 Monterey, CA 93940 Date Printed: 11/22/2011 831-375-6227 FAX: 831-641-0734 Requested Tests (See legend below) 2 3 5 8 10 Lab ID Client ID Matrix Collection Date Hold 4 11 12 1111729-001 ASR-1 Water 11/18/2011 15:15 Α **Test Legend:** 2 3 1 **RSK174 W** 4 5 7 8 9 10 6 11 12 Prepared by: Ana 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.

#### **Sample Receipt Checklist**

Client Name:	Monterey Bay Anal	ytical			Date a	and Time Received:	11/22/2011	2:11:55 PM
Project Name:	MPWMD; Regional				Check	klist completed and re	viewed by:	Ana Venegas
WorkOrder N°:	1111729	Matrix: Water			Carrie	er: <u>UPS</u>		
		<u>Cha</u>	in of Cı	ustody (CO	C) Informa	tion		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	signed when relinqui	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample I	abels?	Yes	✓	No $\square$			
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗌			
Date and Time of	f collection noted by (	Client on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌			
			Sample	Receipt In	<u>formation</u>			
Custody seals int	tact on shipping conta	ainer/cooler?	Yes	<b>✓</b>	No 🗌		NA 🗌	
Shipping containe	er/cooler in good con-	dition?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	servatio	n and Hold	Time (HT)	Information		
All samples recei	ived within holding tin	ne?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗸	
Water - VOA vial	s have zero headspa	ce / no bubbles?	Yes	<b>✓</b>	No 🗌	No VOA vials submi	tted	
Sample labels ch	necked for correct pre	servation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pl	H<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ісе Тур	oe: BLI	JE ICE )				
* NOTE: If the "N	lo" box is checked, se	ee comments below.						
=====	======	======						======
Client contacted:		Date contac	ted:			Contacted	by:	
Comments:								

Monterey Ba	y Analytical	Client Proje	ect ID: MPWMD; Regional	Date Sam	npled:	11/18/11	
4 Justin Cour	t Suite D		Date Rec	eived:	11/22/11		
Toustin Cour	, saite B	Client Cont	Date Extracted 11/28/11				
Monterey, CA	A 93940	Client P.O.:	:	Date Ana	Date Analyzed 11/28/11		
			Gas Hydrocarbons*			***	
Extraction method:		_	alytical methods: RSK174/175			Work Order:	
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments
1111729-001A	ASR-1	W	ND		1	N/A	
Rep ND	orting Limit for DF =1; means not detected at or	W	0.4			μg/L	
ab	ove the reporting limit	S	NA			NA	
	re reported in μg/L.						
%SS = Percent Ro DF = Dilution Fac	ecovery of Surrogate Standard ctor						

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

#### **QC SUMMARY REPORT FOR RSK174/175**

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 62966 WorkOrder: 1111729

EPA Method: RSK174/175	Extraction: RSK 174/175					Spiked Sample ID: N/A						
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	
7 thatyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Methane	N/A	1.17	N/A	N/A	N/A	99.8	102	2.01	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 62966 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1111729-001A	11/18/11 3:15 PM	I 11/28/11	11/28/11 5:30 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer

**DHS ELAP Certification 1644** 



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1

Wednesday, November 03, 2010

Lab Number: AA70142

Collection Date/Time: 10/8/2010 13:15 Sample Collector: LEAR J

Submittal Date/Time: 10/8/2010 13:50 Sample ID

Sample Description: ASR-1								
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed		
Arsenic, Total	EPA200.8	ug/L	Not Detected	1	10	10/18/2010		
Barium, Total	EPA200.8	ug/L	55	10	1000	10/18/2010		
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05		10/8/2010		
Chloride	EPA300.0	mg/L	34	1	250	10/8/2010		
Gross Alpha	EPA900.0	pCi/L	1.09 ± 1.58 E		15	10/18/2010		
Haloacetic Acids	EPA552	ug/L	7.9 E		60	10/16/2010		
Lithium	EPA200.8	ug/L	6	1		10/18/2010		
Methane	EPA174/175	ug/L	Not Detected E	5		10/14/2010		
Molybdenum, Total	EPA200.8	ug/L	5	1	1000	10/18/2010		
Selenium, Total	EPA200.8	ug/L	2	2	50	10/18/2010		
Strontium, Total	EPA200.8	ug/L	226	5		10/18/2010		
Total Radium 226	EPA903.0	pCi/L	0.096 ± 0.165 E		3	10/22/2010		
Trihalomethanes	EPA524.2	ug/L	<b>65</b> E		80	10/15/2010		
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected	1		10/18/2010		
Vanadium, Total	EPA200.8	ug/L	Not Detected	1	1000	10/18/2010		
Zinc, Total	EPA200.8	ug/L	182	10	5000	10/18/2010		

Sample Comments:

Lab Number: AA70143

Collection Date/Time: 10/8/2010 12:50 Sample Collector: LEAR J

Submittal Date/Time: 10/8/2010 13:50 Sample ID

Sample Description: MW-1									
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed			
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05		10/8/2010			
Chloride	EPA300.0	mg/L	30	1	250	10/8/2010			
Haloacetic Acids	EPA552	ug/L	Not Detected E		60	10/17/2010			
Trihalomethanes	EPA524.2	ug/L	<b>49</b> E		80	10/15/2010			

Sample Comments:

Report Approved by:

David Holland, Laboratory Director

McCampbell Analytical,	Inc.
"When Quality Counts"	

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay Analytical	Client Project ID: MPWMD (ASR 1)	Date Sampled: 10/08/10
4 Justin Court, Suite D		Date Received: 10/13/10
Tousin Court, Suite 2	Client Contact: David Holland	Date Reported: 10/15/10
Monterey, CA 93940	Client P.O.:	Date Completed: 10/15/10

WorkOrder: 1010354

October 15, 2010

<b>D</b>	<b>D</b>		-	
Dear	1 10	T 71		۰
Dear	120	. V I	u	L.

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD (ASR 1),
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

		,																											1	010	03	5	4
Web		1534 WI PITTSBU campbell.	RG, CA 9	SS RO 4565-1	AD 701 ain@n	neca	ampl	oell.		269	)				rui 🖵 (			OU	JNI	T	IM	E		RUS	SH	24	DY □ HR Exce		48 F	l IR		O HR	Z 5 DAY (DW)
Report To: David				Bill To	):														A	nal	ysis	Red	ues	t						(	the	r	Comments
	tin Ct. Suite I	)					<u> </u>							8015)			(/B&F)				ngeners												Filter Samples
Tele: (831) 641 -	erey, Ca 9394	10		-Mai			-	-	bal.	net				+			520 F				0/3						020)	(50)					for Metals
Project #:	0734			rojec					4D	AS	D 1	`		180	8021		4/5	8.1)	(8)		clors		des)			(8)	0 / 6	09/0					analysis:
Project Location:	F-1			rojec	LIVAL	ne.	IVII	44.1	יעווי	(Als	KI	)_		602	02 / 1	2	99	s (41	HVC	ides)	Aro	-	rbici		(5)	N.	109	109	6				Yes / No
Sampler Signatur														Gas	PA 6	(80	ease	rbon	121	estic	ILY;	cides	He	8	00/	Hs	8.00	0.8	/ 602				
Sampler Signatur	C. Lear, o.	SAMI	PLING		ers	100	MA	TR	IX			THO		& TPH as Gas (602 / 8021	NLY (E)	lotor Oil	Oil & Gr	lydroca	8/0108	81 (CL P	CB's ON	NP Pesti	Acidic C	8260 (Ve	8270 (SV	8310 (PA	200.7 / 20	00.7 / 20	8 / 6010				
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	ICE	HCL	HNO,	Other	BTEX		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 (CI 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)	Methane			
	ASR 1	10/8/10	13:15	1		Х		T		$^{\dagger}$		T		$\vdash$																Х			70142
				set																													
Relinquished By: David Holland/		Date: 10/12/10  Date:	Time:		ived B	2	Va	Ø	2	16/	3/	100		HI	CE/t°_OOD EAD ECH	CON SPA	CE A	TON ABSE TED	NT_ IN L			_/						CON	IME	NTS	:		
Relinquished By:		Date:	Time:	Rece	ived B	y:		_				_	_	PF	PPRO	RVE	D IN	LA V(		_	kG	ME nH<		s	отн	ER							

#### McCampbell Analytical, Inc.

1534 Willow Pass Rd

### CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 WorkOrder: 1010354 ClientCode: MBAS (925) 252-9262 WaterTrax WriteOn EDF Excel Fax ✓ Email HardCopy ThirdParty J-flag Bill to: Report to: Requested TAT: 5 days **David Holland** Accounts Payable Email: 4mbas@sbcglobal.net Monterey Bay Analytical Monterey Bay Analytical cc: Date Received: 10/13/2010 PO: 4 Justin Court, Suite D 4 Justin Court, Suite D Monterey, CA 93940 Monterey, CA 93940 ProjectNo: MPWMD (ASR 1) Date Printed: 10/13/2010 831-375-6227 FAX 831-641-0734 Requested Tests (See legend below) Lab ID **Client ID** Matrix Collection Date Hold 2 3 5 6 8 9 10 12 1 11 10/8/2010 13:15 1010354-001 ASR 1 Water Test Legend: 5 2 **RSK174 W** 3 7 10 6 8 11 12 Prepared by: Melissa Valles

#### **Comments:**

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

### **Sample Receipt Checklist**

Client Name:	Monterey Bay Analytic	al		Date a	and Time Received:	10/13/2010	) 12:33:21 PM
Project Name:	MPWMD (ASR 1)			Check	dist completed and	reviewed by:	Melissa Valles
WorkOrder N°:	<b>1010354</b> Matrix	<u>Water</u>		Carrie	er: <u>UPS</u>		
		Chain of C	ustody (0	COC) Informa	ation		
Chain of custody	present?	Yes	s <b>V</b>	No 🗆			
Chain of custody	signed when relinquished an	d received? Yes	s <b>V</b>	No 🗆			
Chain of custody	agrees with sample labels?	Yes	<b>V</b>	No 🗌			
Sample IDs noted	by Client on COC?	Yes	s <b>V</b>	No 🗆			
Date and Time of	collection noted by Client on C	COC? Yes	s <b>V</b>	No 🗆			
Sampler's name r	noted on COC?	Yes	s <b>V</b>	No 🗆			
		<u>Sampl</u>	le Receip	t Information	<u>l</u>		
Custody seals int	tact on shipping container/coc	oler? Yes	s 🗆	No $\square$		NA 🗹	
Shipping containe	er/cooler in good condition?	Yes	s <b>V</b>	No 🗆			
Samples in prope	er containers/bottles?	Yes	s <b>V</b>	No 🗆			
Sample containe	rs intact?	Yes	s <b>V</b>	No 🗆			
Sufficient sample	e volume for indicated test?	Yes	s <b>V</b>	No 🗌			
	<u>Sa</u>	ample Preservati	on and H	old Time (HT	) Information		
All samples recei	ived within holding time?	Yes	s <b>V</b>	No 🗆			
Container/Temp B	Blank temperature	Coc	oler Temp:	7.8°C		NA $\square$	
Water - VOA vial	ls have zero headspace / no l	oubbles? Yes	s <b>V</b>	No 🗆	No VOA vials sub	mitted $\square$	
Sample labels ch	necked for correct preservatio	n? Yes	s <b>V</b>	No 🗌			
Metal - pH accep	table upon receipt (pH<2)?	Yes	s 🗆	No 🗆		NA 🗹	
Samples Receive	ed on Ice?	Yes		No 🗆			
		(Ice Type: V	ET ICE	)			
* NOTE: If the "N	No" box is checked, see comm	nents below.					
	=======		===	====		=====	======
Client contacted:		Date contacted:			Contacte	ed by:	
Comments:							

# McCampbell Analytical, Inc. "When Ouality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay	y Analytical	Client Projec	t ID: MPWMD (ASR 1)	Date Sam	pled:	10/08/10	
4 Justin Court	t. Suite D			Date Rece	eived:	10/13/10	
. v usum esum	,, 50110 2	Client Conta	ct: David Holland	Date Extr	acted:	10/14/10	
Monterey, CA	A 93940	Client P.O.:		Date Ana	lyzed	10/14/10	
			Gas Hydrocarbons*				
Extraction method		1	lytical methods RSK174/175		,	Work Order:	1010354
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments
1010354-001A	ASR 1	W	ND		1	N/A	Ţ
	orting Limit for DF =1;	W	0.4			μg/L	
	neans not detected at or ove the reporting limit	S	NA			NA	
* water samples	are reported in μg/L.				-		
%SS = Percent R	Recovery of Surrogate Standard						

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

#### **QC SUMMARY REPORT FOR RSK174/175**

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53773 WorkOrder 1010354

EPA Method RSK174/175	Extra		Spiked Sample ID: N/A									
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	
7 tildiyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Methane	N/A	1.17	N/A	N/A	N/A	103	99.8	2.74	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 53773 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010354-001A	10/08/10 1:15 PM	I 10/14/10	10/14/10 2:06 PM	1010354-001A	10/08/10 1:15 PM	I 10/14/10	10/14/10 2:06 PM

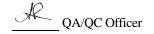
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





### CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT

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Customer Numbe Address:	erey Bay Analytica er: Court, Suite D. M				IU	Dl	0		The same at a district of the same at a dist		The state of the s										
	4mbas@sbcglobal.n David Holland MPWMD	1-641-0734 et	<b>L</b>	Grab (G)	reduction of the particular designation of the particular particul	) VOA (V) Metal Tube (MT)	er (AgW)	W) Ground Water (GW) Drinking Water (DW)	(O) IIO	ste (W)	ter (O in) replace (kr.L.) Produins (PRD)	H, (3) HCl	74 -	9						and the second control of the second control	
	ear, J.  Pickup Fee: p Date: Tim  Location Description		Time Sampled	Method of Sampling: Composite (C) G	Number of Containers	Type of Containers: Glass (G) Plastic (P) VOA (V)	Potable (P) Non-Potable (NP) Ag Water (AgW)	Surface Water (SW) Monitoring Well (MW) Ground Water (GW) Travel Blank (TB) Waste Water (WW) Drinking Water (DW)	Soil (S) Sludge (SLG) Soild (SLD) Oil	Bact: System (Sys) Source (SRC) Waste (W)	bad. Nothine (NOU) repeat (RTT) Outer (OTT) replace (RTT). Special (SPL). Leaf Tissue (LT). Petrole Tissue (PET). Province (PRD).	Preservative: (1) NaOH + ZnAc, (2) NaOH, (3) HCl (4) H2SOA (5) HNO3 (6) Na2S203 (7) Other	Gross Alp	Radium 22							
. granari	ASR-1	10/8/10	7 11 7 7 7 7 7 1 1 1 1 1 1 1 1	G	1I		P	שמ		ш :		7	· 	.v.s. 🗲	* ************************************		*2		<b>.</b>		Sec. 53
	ASR-1	10/8/10		G	2L		P	DW	· / ****** . •	•		7	^	V	• 1 ± 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		· • · · · · · ·		<del>.</del>	•	
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Remarks	Service Commission Com			Reling	uished		D	ate:	Tis	ne:	Relin	quish <b>e</b> d	•	Date:	Time:	V Re	inquien	á	Date	Å	Time:
70	142			Hol	land	, D.	1	.0/12	/10	160		-				$\mathcal{M}$	N			1	
-					ed By:		ı	Date:		ime:		ved By:		Date:	Time:	**	cived in	07	Date	10	Time:

Santa Paula, CA 93060 TEL: 805/392-2000 FAX: 805/525-4172 CA NELAP Certification No. 01110CA

Stockton, CA 95215 TEL: 209/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563

Chico, CA 95926 TEL: 530/343-5818 FAX: 530/343-3807

CA ELAP Certification No. 2670

TEL: 559/734-9473

Mobile: 559/737-2399 FAX: 559/734-8435

Doc ID: F2REC005.011

7 Page: 1 of 1

	Santa Paula - Condition Upon Receip	pt (Attach	tp CC	OC)		
Samı	ple Receipt:  Number of ice chests/packages received:  Note as OTC if received over the counter unpackaged.	M	<u></u>			
2.	Were samples received in a chilled condition? Temps: Acceptable is 2° to 6° C. Also acceptable is received on ice (ROI) for temperature (RRT) if sampled within one hour of receipt. Client condocumented below. If many packages are received at one time check further review. Please notify Microbiology personnel immediately of	tact for temper of for tests/H.T.	rature fa	ilures mu s/Bacti's	ust be	
3.	Do the number of bottles received agree with the COC?		Yes	No	N/A	
4.	Were samples received intact? (i.e. no broken bottles, lea	ks etc.)	Yes	No		
5.	Were sample custody seals intact?	7	N/A	Yes	No	
Sign	and date the COC, obtain LIMS sample numbers, select n	nethods/tests	s and p	rint lab	els.	
Sam 1.	ple Verification, Labeling and Distribution: Were all requested analyses understood and acceptable?		Yes	No		
2.	Did bottle labels correspond with the client's ID's?		Yes	No		
3.	Were all bottles requiring sample preservation properly p	oreserved?	Yes	No (	N/A)	FGL
4.	VOAs checked for Headspace?		Yes	No	(N/A)	
5.	Were all analyses within holding times at time of receipt	?	Yes	) <sub>No</sub>		
6.	Have rush or project due dates been checked and accepte	ed?	N/A	Yes	No	
Atta	ch labels to the containers and include a copy of the COC	for lab deliv	ery.			
Sam	ple Receipt, Login and Verification completed by (initials	s):		حو		
Disc Any 1.	repancy Documentation: vitems above which are "No" or do not meet specifications Person Contacted: Initiated By: Problem:	s (i.e. temps Phone Nur Date:	) must inber:	be reso	lved.	<del>-</del> .
2.	Person Contacted:	Phone Nur Date:				_
	Resolution:	nterey Bay		ytica	l Servi	ces

SRP-10/14/2010-14:40:31



Analytical Chemists October 25, 2010

Monterey Bay Analytical ServicesLab ID: SP 10105824 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 3 pages divided into 3 sections:

Case Narrative (1 pages): An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
ASR-1	10/08/2010	10/14/2010	SP 1010582-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	10/18/2010:213438 All analysis quality controls are within established criteria
	10/15/2010:210778 All preparation quality controls are within established criteria
903.0	10/22/2010:213432 All analysis quality controls are within established criteria
	10/18/2010:210864 All preparation quality controls are within established criteria

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.







Analytical Chemists October 25, 2010 Lab ID : SP 1010582-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

Sampled On : October 8, 2010-13:15 4 Justin Court Monterey, CA 93940

Sampled By : J. Lear

Received On : October 14, 2010-14:15

Matrix : Drinking Water

Description : ASR-1 **Project** : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Sampl	e Analysis
Constituent	Result ± Ellor	MDA	Omts	WICL/AL	Method	Date/ID	Method	Date/ID
Radio Chemistry <sup>P:1</sup>								
Gross Alpha	$1.09 \pm 1.58$	2.01	pCi/L	15/5	900.0	10/15/10:210778	900.0	10/18/10:213438
Total Alpha Radium (226)	$0.096 \pm 0.165$	0.471	pCi/L	3	903.0	10/18/10:210864	903.0	10/22/10:213432

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: N/A

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435





#### **Analytical Chemists**

October 25, 2010 Lab ID : SP 1010582 **Monterey Bay Analytical Services** : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	10/18/2010:213438	CCV CCB	cpm cpm	10310	40.9 % 0.0800	38 - 47 0.11	
Gross Alpha	900.0	10/15/2010:210778 (SP 1010441-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	149.4 149.4 149.4 149.4	-0.15 102 % 120 % 118 % 1.0%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	10/22/2010:213432	CCV CCB	cpm cpm	10310	41.2 % 0.0500	37 - 46 0.15	
Total Alpha Radium (226)	903.0	10/18/2010:210864	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	18.17 18.17 18.17 18.17	0.01 61.3 % 54.5 % 53.0 % 2.7%	2 52-89 43-92 43-92 ≤35.5	

efi		

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that

BSD the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation BSRPD

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435



A0J0916

10/25/2010

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 10/13/2010 08:00.

If additional clarification of any information is required, please contact your Client Services Representative, Paul Erickson at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Paul Erickson

Client Services Representative

Vanl Esh



10/25/2010

#### **Case Narrative**

#### **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A0J0916 COC Number:

Project:General ChemistryTAT: 10Client Project:MPWMDPO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 3

Containers Intact COC/Labels Agree Received On Blue Ice

Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report ManagerReport FormatDavid HollandFAL Final Report.rpt



#### **Certificate of Analysis**

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

Report Issue Date: 10/25/2010 14:30 **Received Date: 10/13/2010** Received Time: 08:00

Lab Sample ID: A0J0916-01 Sample Date: 10/08/2010 13:15

Sample Type: Grab Client Project: MPWMD Sampled by: J Lear

Matrix: Drinking Water

Sample Description: ASR-1 // 70142

#### **Organics**

Organios									
Analyte	Method	Res	ult RL	Units	RL Mult		Prepared	Analyzed	Qualifiers
7 mary to	Wictiod	1100	uit ItE	Onito	Mult	Baton	Troparou	7 that y 20 a	Qualiforo
Total Trihalomethanes by EPA	524.2								
Bromodichloromethane	EPA 524.2	15	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Bromoform	EPA 524.2	0.60	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Chloroform	EPA 524.2	44	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Dibromochloromethane	EPA 524.2	5.8	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Total Trihalomethanes by EPA	524.2								
Total Trihalomethanes	EPA 524.2	65		ug/L					
Haloacetic Acids									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/16/10	
Dichloroacetic Acid (DCAA)	EPA 552.2	2.3	1.0	ug/L	1	A010058	10/14/10	10/16/10	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/16/10	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A010058	10/14/10	10/16/10	
Trichloroacetic Acid (TCAA)	EPA 552.2	5.6	1.0	ug/L	1	A010058	10/14/10	10/16/10	
Haloacetic Acids									
Total Haloacetic Acids (HAA)	EPA 552.2	7.9		ug/L					
			<u>Method</u>	Result					
Surrogate: Bromofluorobenzene			EPA 524.2	105 %	Acceptable re	ange: 70-1	30 %		
Ourse mater 2.2 Dibunamentania d	1 -:-!		EDA 550.0	00.0/	A 4 - 1-1	70 4	00.0/		

Surrogate: 2,3-Dibromopropionic Acid EPA 552.2 Acceptable range: 70-130 %



#### **Certificate of Analysis**

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

Report Issue Date: 10/25/2010 14:30 **Received Date: 10/13/2010** Received Time: 08:00

Lab Sample ID: A0J0916-02 Client Project: MPWMD Sample Date: 10/08/2010 12:50 Sampled by: J Lear

Matrix: Drinking Water Sample Type: Grab

Sample Description: MW-1 // 70143

#### Organics

Organics									
Analyte	Method	Resu	ılt RL	Units	RL Mult	Batch	Prepared	Analyzed	Qualifiers
Total Trihalomethanes by EPA	524.2								
Bromodichloromethane	EPA 524.2	12	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Chloroform	EPA 524.2	34	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Dibromochloromethane	EPA 524.2	4.0	0.50	ug/L	1	A010029	10/14/10	10/15/10	
Total Trihalomethanes by EPA	524.2								
Total Trihalomethanes	EPA 524.2	49		ug/L					
Haloacetic Acids									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/17/10	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/17/10	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/17/10	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A010058	10/14/10	10/17/10	
Trichloroacetic Acid (TCAA)	EPA 552.2	ND	1.0	ug/L	1	A010058	10/14/10	10/17/10	
Haloacetic Acids									
Total Haloacetic Acids (HAA)	EPA 552.2	ND		ug/L					
Surrogate: Bromofluorobenzene			Method EPA 524.2	<u>Result</u> 93 %	Acceptable ra	ange: 70-1	30 %		

Surrogate: 2,3-Dibromopropionic Acid EPA 552.2 91 % Acceptable range: 70-130 %



### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: A010029				An	alyst: JGB		Prepared 6	& Analyze	d: 10/14/2	010
Blank (A010029-BLK1) EPA	524.2 - Qua	lity Control								
Bromodichloromethane	ND	0.50	ug/L							
Bromoform	ND	0.50	ug/L							
Chloroform	ND	0.50	ug/L							
Dibromochloromethane	ND	0.50	ug/L							
Surrogate: Bromofluorobenzene		5.2		5.0		104	70-130			
Blank Spike (A010029-BS1)	EPA 524.2 -	· Quality Con	trol							
Bromodichloromethane	4.6	0.50	ug/L	5.0		92	70-130			
Bromoform	4.7	0.50	ug/L	5.0		93	70-130			
Chloroform	5.8	0.50	ug/L	5.0		116	70-130			
Dibromochloromethane	4.5	0.50	ug/L	5.0		89	70-130			
Surrogate: Bromofluorobenzene		5.5	<u> </u>	5.0		109	70-130			
Blank Spike Dup (A010029-BS	D1) FPA	524.2 - Quali	ty Control							
Bromodichloromethane	4.5	0.50	ug/L	5.0		90	70-130	2	30	
Bromoform	4.2	0.50	ug/L	5.0		83	70-130	12	30	
Chloroform	5.4	0.50	ug/L	5.0		108	70-130	7	30	
Dibromochloromethane	4.2	0.50	ug/L	5.0		84	70-130	6	30	
	7.2		ug/L	5.0		96	70-130			
Surrogate: Bromofluorobenzene		4.8		5.0		90	70-130			
Batch: A010058				An	alyst: KHH		Prepared:	10/14/201	10 Analyze	d: 10/16/2010
Blank (A010058-BLK1) EPA	552.2 - Qua	lity Control								
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L							
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L							
Surrogate: 2,3-Dibromopropionic Acid		24		25		97	70-130			
Surrogate: 2,3-Dibromopropionic Acid		25		25		101	70-130			
Blank Spike (A010058-BS1)	EPA 552.2 -	· Quality Con	trol							
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		104	70-130			
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		103	70-130			
Dichloroacetic Acid (DCAA)	9.8	1.0	ug/L	10		98	70-130			
Dichloroacetic Acid (DCAA)	9.7	1.0	ug/L	10		97	70-130			
Monobromoacetic Acid (MBAA)	9.6	1.0	ug/L	10		96	70-130			
Monobromoacetic Acid (MBAA)	9.4	1.0	ug/L	10		94	70-130			
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		106	70-130			
									A0J	0916 FINAL 10252010 143
4444 Stanialava Straa	4	France CA	00700	(EEQ) 40	7 0000		V (EEO) 401			u haldaha sam

www.bsklabs.com



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: A010058				An	alyst: KHH		Prepared:	10/14/201	0 Analyzed	d: 10/16/2010
Blank Spike (A010058-BS1)	EPA 552.2 -	Quality Cor	ntrol							
Monochloroacetic Acid (MCAA)	9.8	2.0	ug/L	10		98	70-130			
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		100	70-130			
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		100	70-130			
Surrogate: 2,3-Dibromopropionic		25		25		101	70-130			
Acid Surrogate: 2,3-Dibromopropionic Acid		25		25		102	70-130			
Blank Spike Dup (A010058-BS	SD1) EPA 5	52.2 - Quali	ty Control							
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		106	70-130	3	30	
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		106	70-130	3	30	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		101	70-130	3	30	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		102	70-130	5	30	
Monobromoacetic Acid (MBAA)	9.8	1.0	ug/L	10		98	70-130	3	30	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		101	70-130	6	30	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		109	70-130	3	30	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10		104	70-130	6	30	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		102	70-130	3	30	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		104	70-130	4	30	
Surrogate: 2,3-Dibromopropionic		25	-	25		100	70-130			
Acid Surrogate: 2,3-Dibromopropionic Acid		26		25		102	70-130			
Duplicate (A010058-DUP1)	EPA 552.2 - G	Quality Cont	trol				Source:	A0J0950-	05	
Dibromoacetic Acid (DBAA)	7.9	1.0	ug/L		8.6			8	30	
Dichloroacetic Acid (DCAA)	2.8	1.0	ug/L		2.8			1	30	
		4.0	ug/L		ND				30	
, ,	ND	1.0			ואט					
Monobromoacetic Acid (MBAA)	ND ND	1.0 2.0	ug/L		ND				30	
Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)			ug/L ug/L					4	30 30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic	ND	2.0	_	25	ND	92	70-130	4		
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Frichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND	2.0 1.0 23	ug/L	25	ND	92		4 <b>A0J0916</b> -	30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1)	ND 1.2	2.0 1.0 23	ug/L	25	ND	92			30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA)	ND 1.2 EPA 552.2 -	2.0 1.0 23	ug/L		ND 1.2		Source:		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	ND 1.2 <b>EPA 552.2</b> -	2.0 1.0 23 Quality Co	ug/L  ntrol  ug/L	10	ND 1.2	99	<b>Source:</b> 70-130		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)	ND 1.2 <b>EPA 552.2</b> - 10 12	2.0 1.0 23 <b>Quality Co</b> 1.0	ntrol ug/L ug/L ug/L	10 10	ND 1.2 0.35 2.3	99 93	<b>Source:</b> 70-130 70-130		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA)	ND 1.2 EPA 552.2 - 10 12 9.6	2.0 1.0 23 Quality Co 1.0 1.0	ug/L  ntrol  ug/L  ug/L  ug/L	10 10 10	ND 1.2 0.35 2.3 ND	99 93 96	<b>Source:</b> 70-130 70-130 70-130		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid	ND 1.2 EPA 552.2 - 10 12 9.6 10	2.0 1.0 23 • Quality Co 1.0 1.0 2.0	ug/L  ntrol  ug/L  ug/L  ug/L  ug/L  ug/L	10 10 10 10	0.35 2.3 ND ND	99 93 96 100	Source: 70-130 70-130 70-130 70-130		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid	ND 1.2 EPA 552.2 - 10 12 9.6 10 14	2.0 1.0 23 • Quality Co 1.0 1.0 2.0 1.0	ug/L  ntrol  ug/L  ug/L  ug/L  ug/L  ug/L	10 10 10 10	0.35 2.3 ND ND	99 93 96 100 86	Source: 70-130 70-130 70-130 70-130 70-130		30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic	ND 1.2 EPA 552.2 - 10 12 9.6 10 14	2.0 1.0 23 • Quality Co 1.0 1.0 2.0 1.0	ug/L  ntrol  ug/L  ug/L  ug/L  ug/L  ug/L  ug/L  ug/L	10 10 10 10 10 25	0.35 2.3 ND ND	99 93 96 100 86	Source: 70-130 70-130 70-130 70-130 70-130	A0J0916-	30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike Dup (A010058-M	ND 1.2 EPA 552.2 - 10 12 9.6 10 14	2.0 1.0 23 Quality Co 1.0 1.0 2.0 1.0 24	ug/L  ug/L  ug/L  ug/L  ug/L  ug/L  ug/L  ug/L  ug/L	10 10 10 10 10 25	0.35 2.3 ND ND 5.6	99 93 96 100 86 94	Source:  70-130 70-130 70-130 70-130 70-130 70-130  Source:	A0J0916- A0J0916- 0.6	30	
Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010058-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike Dup (A010058-M Dibromoacetic Acid (DBAA)	ND 1.2 EPA 552.2 - 10 12 9.6 10 14	2.0 1.0 23 Quality Co 1.0 1.0 2.0 1.0 24 552.2 - Qual	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10 25	0.35 2.3 ND ND 5.6	99 93 96 100 86 94	70-130 70-130 70-130 70-130 70-130 70-130 Source:	A0J0916-	30	



Acid

#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers

Batch: A010058				Α	ınalyst: Kl	HH	Prepared:	10/14/2010 Analyzed: 10/16/2010	
Matrix Spike Dup (A010058-MS	D1) EPA	552.2 - Qual	ity Control				Source:	A0J0916-01	
Trichloroacetic Acid (TCAA)	14	1.0	ug/L	10	5.6	87	70-130	0.5	
Surrogate: 2,3-Dibromopropionic		23		25		92	70-130		

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FAX (559) 485-6935



#### **Certificate of Analysis**

10/25/2010

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · 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.

#### **Certifications:**

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Milligrams/Liter (ppm) Method Detection Limit MDA: Min. Detected Activity mg/L: Reporting Limit Milligrams/Kilogram (ppm) RL: MPN: Most Probable Number mg/Kg: Micrograms/Liter (ppb) :DL x Dilution CFU: Colony Forming Unit μg/L: ND: None Detected at RL Less than 1 CFU/100mLs Micrograms/Kilogram (ppb) Absent: μg/Kg: Percent Recovered (surrogates) pCi/L: Picocuries per Liter 1 or more CFU/100mLs Present: RL Mult: RL Multiplier

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## A0J0916

# **Monterey Bay Analytical**

Monte6227 10132010

Monterey Bay Analytical

No Project

Turnaround:

Standard

Due Date:

10/27/2010

Sample ID Sample Description	Date Sampled Lab Notes	
A0J0916-01 . ASR-1	10/08/2010	
A0J0916-02 MW-1	10/08/2010	; <b>**</b> **** .

Printed: 10/13/2010 19:10:13

BSK ANALYTICAL LABORATORIES

\* Required Fields

Chent/Company Name \*:

Report Attention \*:

(559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com 1414 Stanislaus Street, Fresno. CA 93706-1623

TEMP:

	Report Attention *:	Phone * #:831-375-6227	1-375-6227 FAX*#(831)-641-0734		
Monterey Bay Analytical	David Holland	E-mail: 4M	4MBAS@Sbcglobal.net	ANA	ANALYSIS KEQUESTED
Address * City *  4 Justin Court Suite D Monterey	State * Zip * State * Zip * 93940	)40 	Carbon Copies:		
tion:	PO#		$\overline{}$		
MPWMD	Quote # 464		Other		
How would you like your completed results sent?  E-Ma	E-Mail Fax EDD Mail Only		   בֿ		
Sampler Name Printed / Signature	QC Request Result Request ** Surcharge	rcharge	System No. *		
Lear, J.	SID   Level	2 Day**			
Matrix Types: RSW = Raw Surface Water CFW = Clo RGW = Raw Ground Water FW = Fini	CFW = Clorinated Finished Water CWW = Chorinated Waste Water FW = Finished Water WW = Waste Water SW = Storm Water		BW = Bottled Water DW = Drinking Water SO =: Soiled	HAA	
Sample # Sampled Sample Description / Location *	tion / Location *	Matrix *	Comments / Station Code		
10/8/10		WG	70142	` ` `	
10/8/10 12:50 MW-1		DW	70143	\	
	,				
Relinquished by: (Signature and Printed Name) Holland, D	Company Date M.B.A.S. 10/12/10	Time 14:37	Received by (Signature and Print Name)	00	Company
Relinquished by: (Signature and Printert Name)	Company Date	Time	Received by (Signature and Print Name)	Co	Company
Received for Lab by: (Signature and Pointed Name)	Missioner Dan Julish	Σ 2 2 3 1 1 1 1	Payment Received at Delivery:		
Shipping Method:		Cooling Method:	Amount: Ch	Check/Cash/Card PlA Packing Material:	PIA# Init.
(CAR UPS GSO WALK-IN SIVE FED EX OTHER	VC FED EX OTHER		WET (BLUE) NONE		

Notice Payment for services rendered as noted betterin are due in full within 30 days from when invoiced. If not so paid, account balances are defundent. Defundent balances are subject to monthly service/resoluting changes and interest calculated at 1.12% per month, 18% per month, 18% per month. 18% per month, 18% per month. 18% per month, 18% per m

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10/13/201

A0J0916 Monte6227

10/13/2010 10

Sample Integrity Pg. 1 of 2 WOI



اء ال					NR IBIBI IIBIB BIIY HEBAY BEARA HE	
Date Received 10/136-						
Section 1- Receiving Information						
Sample Transport: ØNTRAC						
Samples arrived at lab on same d	ay sampled: Yes	s N	lo 🔀 (If Yes-Tei	mperature is	not needed)	
Coolers/Ice Chests Description/T	emperature(s): (If	more than 4 rec	ceived, list information in cor	nment section)		
1) 3' 2)		3)		4)		
Was Temperature In Range: Y	) <sub>N N/A</sub> Re	eceived On	Ice: Wet Blue	Received A		C <sub>N</sub>
Describe type of packing materia	als: Kubble Wra	⊋ Foam	Packing Peanuts	Paper	Other:	
Initial Receipt: BSK-Visalia	BSK-Bakersfi	eld BSI	K-SAC BSK-F	DL Œ	SK-FAR	
Were ice chest custody seals pre	sent? Y	Intact: Y	€			
Section 2- COC Info.	Completed Van No	Info From			Completed Yes No	Info From Container
Was COC Received	Yes No	Container	Analysis Requeste	ed		Committee
Date Sampled	_	-	Any hold times less			
Time Sampled		- mmr	Client Name			
Sample ID			Address			
Special Storage/Handling Ins.			Telephone #			
Section 3- Bottles / Analysis	No. cru			Yes 1	vo N/A	Comment
Did all bottles arrive unbroken an	d intact?	·				
Were bottle custody seals present	?					
Were bottle custody seals intact?						
Did all bottle labels agree with Co						
Were correct containers used for						
Were correct preservations used f						
Was a sufficient amount of sample			1 \			
Were bubbles present in VOA Vi			nly)			
Were Ascorbic Acid Bottles recei	ived with the VC	JAs?				
Section 4- Comments / Discrepance	ies					
Sample(s) Split/Preserve: Yes (No	Container:		_ Preservation:		_ Dt/Time/Init	
	Container:		Preservation:		_ Dt/Time/Init _	
Was Client Service Rep. notified of	discrepancies:	Yes No	$_{\rm O}$ $\left( N/A \right)$ _ CSR:		Notified By:	
Explanations / Comments						
						· · ———

Labeled by: \_\_\_\_\_ @ 1553 Labels checked by:\_

Report Comment Entered:

Sample Integrity Pg 2 of 3 BSK Bottles (Yes)

WO



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) 1-2 Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap

None (p) Blue Cap w/NII4 + Buffer

HNO<sub>3</sub> (p) Red Cap

H<sub>2</sub>SO<sub>4</sub> (p) Vellow Cap NaOH (p) Green Cap Other: Dissolved Oxygen 300ml (g) Centrifuge Tube HNO3 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Labet 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Label 1 Liter (AG) None 1 Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 Blue Label 1 Liter (P) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide 1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 Turquoise Label 1 Liter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neon Green Label 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear - HCL 40ml VOA Vial Amber Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net ELAP Certification Number: 2385

Wednesday, December 08, 2010

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 **Lab Number:** AA71039

Lab Hamber: 75 ... 1000

Collection Date/Time: 11/12/2010 14:00 Sample Collector: LEAR, J

Submittal Date/Time: 11/12/2010 14:40 Sample ID

Analyte         Method         Unit         Result         Qual         PQL         MCL         Date And D	nalyzed
Ammonia-N         4500NH3 D         mg/L         Not Detected         0.05         11/24/2           Arsenic, Total         EPA200.8         ug/L         2         1         10         11/23/2           Barium, Total         EPA200.8         ug/L         21         10         1000         11/23/2           Bicarbonate (as HCO3-)         2320B         mg/L         168         10         11/16/2           Boron         EPA200.7         mg/L         Not Detected         0.05         11/16/2           Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/12/2           Fluoride         EPA300.0         mg/L         1.1         E	
Arsenic, Total         EPA200.8         ug/L         2         1         10         11/23/2           Barium, Total         EPA200.8         ug/L         21         10         1000         11/23/2           Bicarbonate (as HCO3-)         2320B         mg/L         168         10         11/16/2           Boron         EPA200.7         mg/L         Not Detected         0.05         11/16/2           Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-CI G         mg/L         Not Detected         10         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/12/2           Gross Alpha         EPA300.0         mg/L         0.19 <t< td=""><td>010</td></t<>	010
Barium, Total         EPA200.8         ug/L         21         10         1000         11/23/2           Bicarbonate (as HCO3-)         2320B         mg/L         168         10         11/12/2           Boron         EPA200.7         mg/L         Not Detected         0.05         11/16/2           Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         Not Detected         0.05         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         1.1         E         0.2         11/23/2           Gross Alpha         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L	010
Bicarbonate (as HCO3-)         2320B         mg/L         168         10         11/12/2           Boron         EPA200.7         mg/L         Not Detected         0.05         11/16/2           Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-Cl G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Hardness (as CaCO3)         2340B         mg/L         Not Detected         E         60         11/23/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E	010
Boron         EPA200.7         mg/L         Not Detected         0.05         11/16/2           Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L	010
Calcium         EPA200.7         mg/L         48         0.5         11/16/2           Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Chloride         EPA300.0         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07 <td>010</td>	010
Carbonate as CaCO3         2320B         mg/L         Not Detected         10         11/12/2           Chloramines         SM4500-Cl G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Chloramines         SM4500-Cl G         mg/L         Not Detected         0.05         11/12/2           Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Chloride         EPA300.0         mg/L         29         1         250         11/12/2           Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Dissolved Organic Carbon         SM5310-C         mg/L         1.1         E         0.2         11/23/2           Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Fluoride         EPA300.0         mg/L         0.19         0.10         2.0         11/12/2           Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Gross Alpha         EPA900.0         pCi/L         2.69±1.81         E         15         11/24/2           Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Haloacetic Acids         EPA552         ug/L         Not Detected         E         60         11/23/2           Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Hardness (as CaCO3)         2340B         mg/L         157         10         11/17/2           Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Iron         EPA 200.7         ug/L         Not Detected         10         11/16/2           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Iron, Dissolved         EPA 200.7         ug/L         Not Detected         10         300         11/16/2           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         0.2         11/17/2           Langlier Index ( 15 deg. C)         2330B         -0.07         11/18/2	010
Langlier Index ( 15 deg. C) 2330B -0.07 11/18/2	010
	010
Langlier Index ( 60 deg. C) 2330B <b>0.53</b> 11/18/2	010
	010
Lithium EPA200.8 ug/L <b>7</b> 1 11/23/2	010
Magnesium EPA200.7 mg/L <b>9</b> 0.5 11/16/2	010
Manganese, Dissolved EPA 200.7 ug/L <b>Not Detected</b> 10 50 11/16/2	010
Manganese, Total EPA 200.7 ug/L <b>Not Detected</b> 10 50 11/16/2	010
Methane         EPA174/175         ug/L         Not Detected         E         5         11/17/2	010
Molybdenum, Total EPA200.8 ug/L <b>6</b> 1 1000 11/23/2	010
Nickel, Total EPA200.8 ug/L <b>Not Detected</b> 10 100 11/23/2	010

mg/L: Milligrams per liter (=ppm)

ug/L : Micrograms per liter (=ppb)

PQL: Practical Quantitation Limit

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

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



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

montereybayanalytical@usa.net ELAP Certification Number: 2385

Wednesday, December 08, 2010

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 Lab Number: AA71039

Collection Date/Time: 11/12/2010 14:00 Sample Collector: LEAR, J

Submittal Date/Time: 11/12/2010 14:40 Sample ID

	Sa	mple Descrip	otion: MW1			
Analyte	Method	Unit	Result Qual	PQL	MCL	Date Analyzed
Nitrate as NO3	EPA300.0	mg/L	Not Detected	1	45	11/16/2010
Nitrate as NO3-N	EPA300.0	mg/L	0.06	0.05	10	11/12/2010
Nitrite as Nitrogen	EPA300.0	mg/L	Not Detected	0.05	1.00	11/12/2010
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	0.05	1.00	11/12/2010
o-Phosphate-P	EPA300.0	mg/L	0.05	0.05		11/12/2010
pH (Laboratory)	4500-H+B	STD. Units	7.6			11/12/2010
Phosphorus, Total	HACH 8190	mg/L	0.05	0.03		11/13/2010
Potassium	EPA200.7	mg/L	2.7	0.1		11/16/2010
QC Anion Sum x 100	Calculaltion	%	98%			11/17/2010
QC Anion-Cation Balance	Calculaltion	%	0			11/17/2010
QC Cation Sum x 100	Calculaltion	%	98%			11/17/2010
QC Ratio TDS/SEC	Calculation		0.55			11/18/2010
Radium 226	EPA903.1	pCi/L	0.038±0.269 E		3	12/5/2010
Selenium, Total	EPA200.8	ug/L	Not Detected	2	50	11/23/2010
Sodium	EPA200.7	mg/L	44	0.5		11/16/2010
Specific Conductance (E.C)	2510B	umhos/cm	524	1	900	11/12/2010
Strontium, Total	EPA200.8	ug/L	249	5		11/23/2010
Sulfate	EPA300.0	mg/L	74	1	250	11/12/2010
Total Diss. Solids	2540C	mg/L	290	10	500	11/16/2010
Total Nitrogen	Calculation	mg/L	Not Detected	0.2		11/18/2010
Total Organic Carbon	SM5310C	mg/L	1.1 E	0.20		11/23/2010
Trihalomethanes	EPA524.2	ug/L	53 E		80	11/19/2010
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected	1	30	11/23/2010
Vanadium, Total	EPA200.8	ug/L	Not Detected	1	1000	11/23/2010
Zinc, Total	EPA200.8	ug/L	Not Detected	10	5000	11/23/2010

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

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

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



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS

montereybayanalytical@usa.net ELAP Certification Number: 2385

Wednesday, December 08, 2010

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 **Lab Number:** AA71062

Collection Date/Time: 11/15/2010 13:14 Sample Collector: LEAR, J

Submittal Date/Time: 11/15/2010 13:10 Sample ID

Sample Description: ASR-1									
Analyte	Method	Unit	Result Qual	PQL	MCL	Date Analyzed			
Alkalinity, Total (as CaCO3)	2320B	mg/L	141	2		11/17/2010			
Ammonia-N	4500NH3 D	mg/L	Not Detected	0.05		11/24/2010			
Arsenic, Total	EPA200.8	ug/L	1	1	10	11/23/2010			
Barium, Total	EPA200.8	ug/L	63	10	1000	11/23/2010			
Bicarbonate (as HCO3-)	2320B	mg/L	172	10		11/17/2010			
Boron	EPA200.7	mg/L	Not Detected	0.05		11/16/2010			
Calcium	EPA200.7	mg/L	46	0.5		11/16/2010			
Carbonate as CaCO3	2320B	mg/L	Not Detected	10		11/17/2010			
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05		11/15/2010			
Chloride	EPA300.0	mg/L	34	1	250	11/15/2010			
Dissolved Organic Carbon	SM5310-C	mg/L	1.1 E	0.2		11/19/2010			
luoride	EPA300.0	mg/L	0.18	0.10	2.0	11/15/2010			
Gross Alpha	EPA900.0	pCi/L	1.10±1.60 E		15	11/24/2010			
laloacetic Acids	EPA552	ug/L	4.0 E		60	11/23/2010			
lardness (as CaCO3)	2340B	mg/L	168	10		11/17/2010			
on	EPA 200.7	ug/L	194	10		11/16/2010			
on, Dissolved	EPA 200.7	ug/L	Not Detected	10	300	11/16/2010			
(jehldahl Nitrogen	4500-NH3 B,C.E	mg/L	Not Detected	0.2		11/17/2010			
anglier Index ( 15 deg. C)	2330B		-0.19			11/18/2010			
anglier Index ( 60 deg. C)	2330B		0.41			11/18/2010			
ithium	EPA200.8	ug/L	7	1		11/23/2010			
Magnesium	EPA200.7	mg/L	13	0.5		11/16/2010			
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected	10	50	11/16/2010			
Manganese, Total	EPA 200.7	ug/L	23	10	50	11/16/2010			
Methane	EPA174/175	ug/L	0.54 E	5		11/17/2010			
olybdenum, Total	EPA200.8	ug/L	6	1	1000	11/23/2010			
lickel, Total	EPA200.8	ug/L	Not Detected	10	100	11/23/2010			
litrate as NO3	EPA300.0	mg/L	Not Detected	1	45	11/16/2010			
litrate as NO3-N	EPA300.0	mg/L	0.08	0.05	10	11/15/2010			
litrite as Nitrogen	EPA300.0	mg/L	Not Detected	0.05	1.00	11/15/2010			
litrite as NO2-N	EPA300.0	mg/L	Not Detected	0.05	1.00	11/15/2010			

mg/L: Milligrams per liter (=ppm)

ug/L : Micrograms per liter (=ppb)

PQL: Practical Quantitation Limit

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

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



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ELAP Certification Number: 2385

Wednesday, December 08, 2010

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 Lab Number: AA71062

Collection Date/Time: 11/15/2010 13:14 Sample Collector: LEAR, J

Submittal Date/Time: 11/15/2010 13:10 Sample ID

Sample Description: ASR-1										
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed			
o-Phosphate-P	EPA300.0	mg/L	0.19		0.05		11/15/2010			
pH (Laboratory)	4500-H+B	STD. Units	7.5				11/15/2010			
Phosphorus, Total	HACH 8190	mg/L	0.29		0.03		12/3/2010			
Potassium	EPA200.7	mg/L	2.9		0.1		11/16/2010			
QC Anion Sum x 100	Calculaltion	%	97%				11/17/2010			
QC Anion-Cation Balance	Calculaltion	%	1				11/17/2010			
QC Cation Sum x 100	Calculaltion	%	99%				11/17/2010			
QC Ratio TDS/SEC	Calculation		0.60				11/18/2010			
Radium 226	EPA903.1	pCi/L	0.000±0.248	E		3	12/5/2010			
Selenium, Total	EPA200.8	ug/L	Not Detected		2	50	11/23/2010			
Sodium	EPA200.7	mg/L	45		0.5		11/16/2010			
Specific Conductance (E.C)	2510B	umhos/cm	547		1	900	11/15/2010			
Strontium, Total	EPA200.8	ug/L	240		5		11/23/2010			
Sulfate	EPA300.0	mg/L	74		1	250	11/15/2010			
Total Diss. Solids	2540C	mg/L	328		10	500	11/16/2010			
Total Nitrogen	Calculation	mg/L	Not Detected		0.2		11/18/2010			
Total Organic Carbon	SM5310C	mg/L	1.1	E	0.20		11/19/2010			
Trihalomethanes	EPA524.2	ug/L	54	E		80	11/19/2010			
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected		1	30	11/23/2010			
Vanadium, Total	EPA200.8	ug/L	Not Detected		1	1000	11/23/2010			
Zinc, Total	EPA200.8	ug/L	212		10	5000	11/23/2010			

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A0K1161

11/30/2010

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 11/17/2010 07:09.

If additional clarification of any information is required, please contact your Client Services Representative, Joni Blankfield at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Joni Blankfield

Client Services Representative

mittamf O



11/30/2010

#### **Case Narrative**

#### **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A0K1161 COC Number:

Project:General ChemistryTAT: 10Client Project:MPWMDPO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact COC/Labels Agree Received On Wet Ice

Packing Material - Bubble Wrap Packing Material - Paper

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

FAL Final Report.rpt

A0K1161 FINAL 11302010 1155

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#### **Certificate of Analysis**

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

Report Issue Date: 11/30/2010 11:55 **Received Date: 11/17/2010** Received Time: 07:09

Lab Sample ID: A0K1161-01 Sample Date: 11/12/2010 14:00

Grab Sample Type:

Client Project: MPWMD Sampled by: J Lear

Matrix: Drinking Water

Sample Description: MW1 // 71039

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A011701	11/23/10	11/23/10	
Total Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A011702	11/23/10	11/23/10	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	13	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Chloroform	EPA 524.2	35	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Dibromochloromethane	EPA 524.2	4.5	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	53		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A011599	11/20/10	11/23/10	
Trichloroacetic Acid (TCAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	ND		ug/L					
		<u>Method</u>	<u>Result</u>						

EPA 524.2

Surrogate: Bromofluorobenzene 103 % Acceptable range: 70-130 % Surrogate: 2,3-Dibromopropionic Acid EPA 552.2 101 % Acceptable range: 70-130 %

A0K1161 FINAL 11302010 1155



#### **General Chemistry Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011701				Analyst:	SAB	Prepared:	11/23/2	010			
Blank (A011701-BLK1) SM 5310 C	- Quality Control										
Dissolved Organic Carbon	ND	0.20	mg/L							11/23/10	
Blank Spike (A011701-BS1) SM 5	310 C - Quality Cont	rol									
Dissolved Organic Carbon	10	0.20	mg/L	10		101	80-120			11/23/10	
Blank Spike Dup (A011701-BSD1)	SM 5310 C - Quality	y Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		101	80-120	1	20	11/23/10	
Batch: A011702				Analyst:	SAB	Prepared:	11/23/2	010			
Blank (A011702-BLK1) SM 5310 C	- Quality Control										
Total Organic Carbon	ND	0.20	mg/L							11/23/10	
Blank Spike (A011702-BS1) SM 5	310 C - Quality Cont	rol									
Total Organic Carbon	10	0.20	mg/L	10		103	80-120			11/23/10	
Blank Spike Dup (A011702-BSD1)	SM 5310 C - Quality	y Control									
Total Organic Carbon	10	0.20	mg/L	10		102	80-120	0	20	11/23/10	
Matrix Spike (A011702-MS1) SM 5	310 C - Quality Con	trol				Source:	A0K121	1-01			
Total Organic Carbon	11	0.20	mg/L	10	0.73	102	80-120			11/23/10	
Matrix Spike (A011702-MS2) SM 5	310 C - Quality Con	trol				Source:	A0K141	7-03			
Total Organic Carbon	11	0.20	mg/L	10	0.60	102	80-120			11/23/10	
Matrix Spike Dup (A011702-MSD1)	SM 5310 C - Qualit	ty Control	ſ			Source:	A0K121	1-01			
Total Organic Carbon	11	0.20	mg/L	10	0.73	102	80-120	0	20	11/23/10	
Matrix Spike Dup (A011702-MSD2)	SM 5310 C - Qualit	ty Control				Source:	A0K141	7-03			
Total Organic Carbon	11	0.20	mg/L	10	0.60	102	80-120	0	20	11/23/10	



				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011417				Analyst:	JGB	Prepared	d: 11/18/2	010			
Blank (A011417-BLK1)	1.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							11/18/10	
Bromoform	ND	0.50	ug/L							11/18/10	
Chloroform	ND	0.50	ug/L							11/18/10	
Dibromochloromethane	ND	0.50	ug/L							11/18/10	
Surrogate: Bromofluorobenzene	4.6			5.0		93	70-130			11/18/10	
Blank Spike (A011417-BS1) EP.	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.8	0.50	ug/L	5.0		95	70-130			11/18/10	
Bromoform	4.4	0.50	ug/L	5.0		87	70-130			11/18/10	
Chloroform	5.1	0.50	ug/L	5.0		102	70-130			11/18/10	
Dibromochloromethane	4.6	0.50	ug/L	5.0		93	70-130			11/18/10	
Surrogate: Bromofluorobenzene	4.7			5.0		95	70-130			11/18/10	
Blank Spike Dup (A011417-BSD1)	EPA 524.2 - Qu	ality Control									
Bromodichloromethane	4.6	0.50	ug/L	5.0		93	70-130	3	30	11/18/10	
Bromoform	4.1	0.50	ug/L	5.0		81	70-130	7	30	11/18/10	
Chloroform	4.9	0.50	ug/L	5.0		99	70-130	3	30	11/18/10	
Dibromochloromethane	4.3	0.50	ug/L	5.0		86	70-130		30	11/18/10	
Surrogate: Bromofluorobenzene	4.4			5.0		88	70-130	-	-	11/18/10	
Batch: A011599				Analyst:	KHH	Prepared	d: 11/20/2	010			
– Blank (A011599-BLK1)     EPA 552	2.2 - Quality Contro	NI									
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							11/23/10	
Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							11/23/10	
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							11/23/10	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L							11/23/10	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							11/23/10	
Monobromoacetic Acid (MBAA) (2C)	ND ND	1.0	ug/L ug/L							11/23/10	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L ug/L							11/23/10	
MONOCHIOLOGOCHIC ACIA (MICAA)		2.0	ug/L ug/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)			uy/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)	ND ND		-							11/23/10	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid			-	25		98	70-130			11/23/10	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid	ND ND 24	1.0	ug/L	25 25						11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid	ND ND 24	1.0	ug/L	25 25		98 100	70-130 70-130				
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 24	1.0	ug/L							11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1) EP	ND ND 24 25	1.0	ug/L							11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  EP	ND ND 24 25 <b>A 552.2 - Quality C</b>	1.0 1.0	ug/L ug/L	25		100	70-130			11/23/10 11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA) (2C)	ND ND 24 25 <b>A 552.2 - Quality C</b>	1.0 1.0 ontrol	ug/L ug/L ug/L	25		110	70-130			11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 24 25 <b>A 552.2 - Quality C</b> 11	1.0 1.0 ontrol 1.0 1.0	ug/L ug/L ug/L ug/L	10 10		100 110 110	70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C	1.0 1.0 ontrol 1.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10		110 110 110 107	70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Oichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C 11 11 11	1.0 1.0 ontrol 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		110 110 110 107 108	70-130 70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C 11 11 11 11	1.0 1.0 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10		110 110 110 107 108 101	70-130 70-130 70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	

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				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011599				Analyst:	KHH	Prepare	d: 11/20/2	010			
Blank Spike (A011599-BS1) EPA	552.2 - Quality C	ontrol									
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		101	70-130			11/23/10	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		105	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	23			25		91	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)	24			25		96	70-130			11/23/10	
Blank Spike Dup (A011599-BSD1)	EPA 552.2 - Qua	ality Control									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		109	70-130	0	30	11/23/10	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		112	70-130	2	30	11/23/10	
Dichloroacetic Acid (DCAA)	11	1.0	ug/L	10		109	70-130	2	30	11/23/10	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10		108	70-130	1	30	11/23/10	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		101	70-130	0	30	11/23/10	
Monobromoacetic Acid (MBAA) (2C)	10	1.0	ug/L	10		100	70-130	0	30	11/23/10	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10		104	70-130		30	11/23/10	
Monochloroacetic Acid (MCAA) (2C)	11	2.0	ug/L	10		108	70-130		30	11/23/10	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		105	70-130	4	30	11/23/10	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		108	70-130	2	30	11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	24			25		98	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)	27			25		106	70-130			11/23/10	
Duplicate (A011599-DUP1) EPA 5	52.2 - Quality Co	ntrol				Source	e: A0K119	7-03			
Dibromoacetic Acid (DBAA)	5.1	1.0	ug/L		5.1			1	30	11/23/10	
Dichloroacetic Acid (DCAA)	1.6	1.0	ug/L		1.6			2	30	11/23/10	
Monobromoacetic Acid (MBAA) (2C)	ND	1.0	ug/L		ND				30	11/23/10	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	11/23/10	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L		ND				30	11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	24			25		96	70-130			11/23/10	
Matrix Spike (A011599-MS1) EPA	552.2 - Quality C	Control				Source	e: A0K114	8-22			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	108	70-130			11/23/10	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10	ND	112	70-130			11/23/10	
Dichloroacetic Acid (DCAA)	46	1.0	ug/L	10	38	78	70-130			11/23/10	
Dichloroacetic Acid (DCAA) (2C)	48	1.0	ug/L	10	40	84	70-130			11/23/10	
Monobromoacetic Acid (MBAA)	23	1.0	ug/L	10	15	78	70-130			11/23/10	
Monobromoacetic Acid (MBAA) (2C)	11	1.0	ug/L	10	ND	105	70-130			11/23/10	
Monochloroacetic Acid (MCAA)	23	2.0	ug/L	10	15	80	70-130			11/23/10	
Monochloroacetic Acid (MCAA) (2C)	18	2.0	ug/L	10	4.9	134	70-130				MS01 Hig
Trichloroacetic Acid (TCAA)	51	1.0	ug/L	10	46	52	70-130				MS02 Lov
Trichloroacetic Acid (TCAA) (2C)	52	1.0	ug/L	10	45	71	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	23			25		92	70-130			11/23/10	
	25			25		99	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)											
(2C)	EPA 552.2 - Qu	ality Contro	ı			Source	e: A0K114	18-22			
	<b>EPA 552.2 - Q</b> u	nality Contro	ug/L	10	ND	Source 110	e: <b>A0K11</b> 4 70-130		30	11/23/10	

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				Spike	Source		%REC		RPD	Date		
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual	
Batch: A011599				Analyst:	KHH	Prepare	d: 11/20/2	010				
Matrix Spike Dup (A011599-MSD1)	EPA 552.2 - Q	uality Control				Sourc	e: A0K114	18-22				
Dichloroacetic Acid (DCAA)	47	1.0	ug/L	10	38	85	70-130	2	30	11/23/10		
Dichloroacetic Acid (DCAA) (2C)	49	1.0	ug/L	10	40	93	70-130	2	30	11/23/10		
Monobromoacetic Acid (MBAA)	23	1.0	ug/L	10	15	83	70-130	2	30	11/23/10		
Monobromoacetic Acid (MBAA) (2C)	11	1.0	ug/L	10	ND	106	70-130	1	30	11/23/10		
Monochloroacetic Acid (MCAA)	23	2.0	ug/L	10	15	83	70-130	1	30	11/23/10		
Monochloroacetic Acid (MCAA) (2C)	19	2.0	ug/L	10	4.9	137	70-130	2	30	11/23/10	MS01	High
Trichloroacetic Acid (TCAA)	53	1.0	ug/L	10	46	69	70-130	3	30	11/23/10	MS02	Low
Trichloroacetic Acid (TCAA) (2C)	54	1.0	ug/L	10	45	93	70-130	4	30	11/23/10		
Surrogate: 2,3-Dibromopropionic Acid	24			25		95	70-130			11/23/10		
Surrogate: 2,3-Dibromopropionic Acid (2C)	26			25		102	70-130			11/23/10		



#### **Certificate of Analysis**

11/30/2010

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### **Certifications:**

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) CFU: μg/L: :DL x Dilution Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Percent Recovered (surrogates) 1 or more CFU/100mLs %: pCi/L: Picocuries per Liter Present: Non-Reportable RL Mult: **RL** Multiplier

MS02 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

MS01 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

A0K1161 FINAL 11302010 1155

1414 Stanislaus Street Fresno, CA 93706 (559) 497-2888 FAX (559) 485-6935
An Employee-Owned Company | Analytical Testing | Construction Observation

## A0K1161

# **Monterey Bay Analytical**

Monte6227

11172010

David Holland General Chemistry Turnaround:

Standard

Due Date:

12/03/2010

 Sample ID
 Sample Description
 Date Sampled
 Lab Notes

 A0K1161-01
 MW1
 11/12/2010

Printed: 11/17/2010 18:23:35

# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

Shipping Method: Relinquished by: (Signature and Printed Name) Relinquished by: (Signature and Printed Name) Matrix Types: Required Fields David Holland Lear, J. Sampler Name Printed / Signature How would you like your completed results sent? 🖌 E-Mail 🔲 Fax 🔲 EDD Client/Company Name \*: Project Information 4 Justin Ct. Monterey Bay Analytical MPWMD RSW - Raw Surface Water RGW - Raw Ground Water 11/12/10 Date CAO UPS GSO WALK-IN SIVC FED EX OTHER Sampled Mar Va 14:00 Time sumantha bara MW1 Sample Description / Location \* CFW = Clorinated Finished Water CWW = ( FW = Finished Water WW = Waste Water Monterey David Holland Report Attention \*: STD Level II MBAS State \* Ç CWW = Chorinated Waste Water BW = Bottled Water te Water SW = Storm Water DW = Drinking Water ✓STD ☐5 Day\*\* ☐2 Day\*\* ☐1 Day\* ₽0 # Mail Only Quote # 464 Result Request \*\* Surcharge 3 Date 11/16/10 93940 <u>ال</u> الك Phone \* #: (831)-357-6227 FAX \* #(831)-641-0734 B-mail: 4MBAS@Sbcglobal.net Cooling Method: . Lime Time 1600 5 Matrix \* Date: Payment Received at Delivery: Received by (Signature and Print Name) 71039 Received by (Signature and Print Name) Comments / Station Code TEMP: CDHS Fresno Co Regulatory Compliance Electronic Data Transfer: System No. \* Merced Co 🔲 Tulare Co 🔲 Carbon Copies: WET SO = SolidBLUE NONE EPA 🔲 Ğ z [ Check/Cash/Card PIA# Packing Material: TTHM HAA5 Monte6227 ANALYSIS REQUESTED Company Dissolved Methane ۸, TOC ٠, DOC Ĭii.

Notice: Payment for services rendered as noted been are down full within 30 days from when invoked. If not so paid, account belances are desinated religious to recordly serviced rendered as noted been and only interest calculated at 1.12 % per month, 18% from when invoked. If not so paid, account belances are deemed definquent. Delirquent balances are subject to recordly serviced responsible for serviced as not of legislates, including attempts from or in linguistic wholes controlled by judgment, settlement, compromise or otherwise. The person signing for the dient/Company expressley acknowledges that they are editor the Client or advanced agent to the Client, and the Client and the Client of the person signing for the dient/Company expressley acknowledges that they are editor the Client or advanced agent to the Client, and the Client of the person signing for the dient/Company expressley acknowledges that they are editor the Client or advanced agent to the Client of the person signing for the dient/Company expressley acknowledges that they are editor the Client or advanced agent to the Client of the person signing for the dient/Company expressley acknowledges that they are editor the Client of the person signing for the dient/Company expressley acknowledges that they are editor the Client of the Client of the person signing for the client of the person signing for the client of the client of the person signing for the per SR-FL 0012-00 (Analytical)

11/17/20 Page 10 of 12

A0K1161

11/17/2010

Sample Integrity Pg. 1 of 2 WORK



Date Received 1117110		an ann deilein ear iseal heir éile ine ineal deile is
Section 1- Receiving Information		
Sample Transport: (NTRAC) UPS PMS Walk-In	BSK-Courier GS	O Fed Exp. Other:
Samples arrived at lab on same day sampled: Yes N	No (If Yes- Temp	perature is not needed)
Coolers/Ice Chests Description/Temperature(s): (If more than 4 re	ceived, list information in comm	nent section)
1		
Was Temperature In Range: Y N N/A Received On	Ice: Wet Blue	Received Ambient: Y N
Describe type of packing materials Bubble Wrap Foam	Packing Peanuts	Paper Other:
Initial Receipt: BSK-Visalia BSK-Bakersfield BS	K-SAC BSK-FD	L BSK-FAL
Were ice chest custody seals present? Y Intact: Y		
Section 2- COC Info.  Completed Info From Yes No Container		Completed Info Fro Yes No Contain
Was COC Received	Analysis Requested	
Date Sampled —	Any hold times less th	
Time Sampled	Client Name	
Sample ID -	Address	_
Special Storage/Handling Ins.	Telephone #	
Section 3- Bottles / Analysis	Y	es No N/A Comme
Did all bottles arrive unbroken and intact?		
Were bottle custody seals present?		
Were bottle custody seals intact?		
Did all bottle labels agree with COC?		
Were correct containers used for the tests requested?		
Were correct preservations used for the tests requested?	· · · · · · · · · · · · · · · · · · ·	
Was a sufficient amount of sample sent for tests indicated? Were bubbles present in VOA Vials? (Volatile Methods O	nlu\	
Were Ascorbic Acid Bottles received with the VOAs?	miy)	<u> </u>
Were resource read Bottles received with the VOAs:		
Section 4- Comments / Discrepancies		
Sample(s) Split/Preserve: Yes (No) Container:	Preservation:	Dt/Time/Init
Container:	Preservation:	Dt/Time/Init
Was Client Service Rep. notified of discrepancies: Yes No	N/A) CSR:	Notified By:
Explanations / Comments	)_(1\(\frac{1}{2}\)	Notified by:
	<del></del>	
Report Comment Entered:		

Labeled by: \_\_\_\_\_\_\_ Labels checked by:\_\_\_

Sample Integrity Pg O of O

BSK Bottles

250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)			<del></del>				
Container(s) Received	1						
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			133 13 Section of Control of Cont		STATE OF THE PARTY		
None (p) White Cap	<b>YE</b> (-			Service of Boar Vancour Variation (Co. 1)	AND THE PROPERTY OF THE PROPER		Commence of the commence of th
None (p) Blue Cap w/NH4 + Buffer				ancessummeter			iotadistaniotalia.
HNO <sub>3</sub> (p) Red Cap		7.0					
None (p) Blue Cap w/NH4 + Buffer  HNO <sub>3</sub> (p) Red Cap  H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap		contract to the series					
NaGH (p) Green Cap							
- десенья при селения при		415		27-00-00-00-00-00-00-00-00-00-00-00-00-00			
Other		A STATE OF THE STA		Programment of the programment o			The second secon
Dissolved Oxygen 300ml (g)	8 8000000000000000000000000000000000000		33		The state of the s		diacaccaca
Centrifuge Tube HNO:				1	\		
250ml (AG) None				Emergency In	À.		777
250ml (AG) H <sub>2</sub> SO <sub>4</sub> COD Yellow Label			mgacci3988gi	The second of th			
L250mE6AG1Na.S.O. 515 547 Due Label							
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label		on the committee of the first of the		334000			
OSOMI (AG) NIH CI SSO Furple Label					revenue de la la companya de la comp		de ar ac
250ml (AG) EDA DBPs Brown Label						<u> </u>	
250ml (AG) Other:	AND THE PROPERTY OF THE PROPER				i liney	g Branton	
				1,242.24			
500ml (AG) None 500ml (AG) H <sub>2</sub> SO <sub>4</sub> TPH-Diesel <sup>Yellow Label</sup>					7	Management of the property of	
500ml (AG) H <sub>2</sub> SO <sub>4</sub> TPH-Diesel Yellow Label	and the second s			4	and an accidental	lininasa sa Sisais	THE CONTRACTOR OF THE PARTY OF
					4		
1 Liter (AG) None	H. H. Harrison December					1111	
L Liter (AG) H <sub>2</sub> SO <sub>4</sub> O&G Yellow (atte)		A view of the second of the se	1 th man rearrange of 1 th of the same of				
1 Liter (AG) $Na_2S_2O_3 = 548 / 525 / 521$	A CONTRACTOR OF THE CONTRACTOR				The property of the second	<del>  8</del> 2	
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + 11 <sub>2</sub> SO <sub>4</sub> 549	ongoonsels jug	Sing period		The state of the s	E CATAL MILITARY	III.	
1 Liter (AG) NaOH+ZnAc Sulfide		Section (1), American section (1) (2), S	By the control of the				
Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label Liter (AG) CuSO4/Trizma 529 Turqueise Label		0.01		P CONTROL OF THE PROPERTY OF T			1 3.5
1 Liter (AG) Na <sub>2</sub> SO <sub>3</sub> -/HCL 525 UCMR Neon Green Label							
1 Liter (AG) Ammonium Chloride 535 Purple Label	20 200000000000000000000000000000000000	, Maptawine Blanch		2 11 11 11 11 11 11 11 11 11 11 11 11 11		100000000000000000000000000000000000000	
				artinanti di Companya			
40ml VOA Vial Clear – HCL	10000000000000000000000000000000000000	9-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3		2			
40ml VOA Vial Amber - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	3	E-					
40ml VOA Vial Clear – None					1		
40ml VOA Viat Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505	The second secon			The second secon	ŲΨ.		
40ml VOA Vial Clear – H <sub>3</sub> PO <sub>4</sub>	3			V)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ATTENDED CONTROL OF	25.856666666
			III The second of the second o				
Other:	Control of the Contro						
Asbestos ILiter Plastic/Foil	The programme will			Transmission C		1	
Radon 200ml Clear (g)		3		l in New S		1	2:365.66
Low Level Hg/Metals Double Baggie			to the second se			A STATE OF THE PROPERTY OF T	* *************************************
Bioassay Jug	040000000000000000000000000000000000000				The second secon		
250 Clear Glass In	k <b>1</b> 898 00 00 00 00 00 00 00 00 00 00 00 00 00						51210/550#JBSSI
250 Clear Glass Jar 500 Clear Glass Jar		A CONTROL OF THE STATE OF THE S				The state of the s	· [: 34800000000
1 Liter Clear Glass Jar		Pillian China					- Carris - Jacomora
Plastic Bag			100000000000000000000000000000000000000	The second		100000000000000000000000000000000000000	
Soil Tube Brass / Steel / Plastic	1000000000000000		COOCON-HEDCOOK		· Partition of the same		
Tedlar Bags			Formation 100 100		adeciose 77		
	The second second	1 -1000mpo1-15.	· posterni de la composição de la compos		sa paddisa spydłoczneśćić	delicity of the state of the st	



# CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT

	Lab Number: 011903	TEST DESCRIPTION AND ANALYSES REQUESTED
Client: Monterey Bay Analytical Services Customer Number: Address: 4 Justin Court, Suite D. Monterey CA 93940		
Phone: 831-375-6227 Fax: 831-641-0734  Email Address: 4mbas@sbcglobal.net  Contact Person: David Holland  Project Name: MPWMD  Purchase Order Number:  Quote Number:  Sampler(s): Lear, J.  Sampling Fee: Pickup Fee:  Compositor Setup Date: Time:	Method of Sampling: Composite (C) Grab (G)  Number of Containers  Type of Containers: Glass (G) Plastic (P) VOA (V) Metal Tube (MT)  Polable (P) Non-Potable (NP) Ag Water (AgW)	Surface Water (SW) Monitoring Well (MW) Ground Water (GW) Travel Blank (TB) Waste Water (WW) Dninking Water (DW) Soil (S) Sludge (SLG) Solid (SLD) Oil (O) Bact: System (Sys) Source (SRC) Waste (W) Bact: Routine (ROUT) Repeat (RPT) Other (OTH) Replace (RPL) Special (SPL) Leaf Tissue (LT) Petiole Tissue (PET) Produce (PRD) Preservative: (1) NaOH + ZnAc, (2) NaOH, (3) HCI (4) H2SO4, (5) HNO3, (6) NaZS203, (7) Other  Gross A I Pha  Radium 226
Samp Location Description Date Time Sampled Sampled	Methy Numt Type	Surface   Travel Bl Soil (S)   Bact Sy Bact   Ro Special (I Leaf Tiss Presenva (4) H2SC   CTC   RA   RA   RA   RA   RA   RA   RA   R
MW 1 11/12/10 14:00	G 2 P P	DW 7 X X
		entre de la companya de la companya En la companya de la
Remarks	Relinquished Dat	ate: Time: Relinquished Date: Time: Relinquished Date: Time:
71039	Holland, D. 11	1/17/10 Ups 11/19/10 11W
Corporate Offices & Laboratory	Received By: Da	ate: Time: Received By: Date: Time: Received By: Date: Time:

Gorporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93080 TEL: 805/392-2000 FAX: 805/525-4172 CA NELAP Certification No. 01110CA Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: 208/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563 office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: 530/343-5818
FAX: 530/343-3807
CA ELAP Certification No. 2670

Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

Doc ID: F2REC005.011 Page: 1 of 1

# Santa Paula - Condition Upon Receipt (Attach to COC)

	Danta I adia - Constituti opod 1400 mi	
Sami I.	le Receipt:  Number of ice chests/packages received:  Note as OTC if received over the counter unpackaged.	
2.	Were samples received in a chilled condition? Temps: \( \frac{1}{2} \)  Acceptable is 2° to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.	
3.	Do the number of bottles received agree with the COC?	
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	
5.	Were sample custody seals intact?  N/A Yes No	
Sign	and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.	
Sam	ple Verification, Labeling and Distribution: Were all requested analyses understood and acceptable?  No	
2.	Did bottle labels correspond with the client's ID's?	
3.	Were all bottles requiring sample preservation properly preserved? Yes No WA FGL	
4.	VOAs checked for Headspace? Yes No NA	
5.	Were all analyses within holding times at time of receipt?	
6.	Have rush or project due dates been checked and accepted?  N/A) Yes No	
Att	ch labels to the containers and include a copy of the COC for lab delivery.	
San	pie Receipt, Login and Verification completed by (initials):	
Dis An	Person Contacted: Mascon Phone Number:  Initiated By: Mascon Date: Mascon Problem:  Problem: Charles Only received 2  Resolution:  Output Muscon.	
2.	Person Contacted: Phone Number: Initiated By: Date:	-
	Problem:  (2-19144)  Resolution:  Monterey Bay Analytical Services  SP 1011903  IV-11/19/2010-11:05:48	





Analytical Chemists December 7, 2010

Monterey Bay Analytical ServicesLab ID: SP 10119034 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 3 pages divided into 3 sections:

Case Narrative (1 pages): An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix	
MW 1	11/12/2010	11/19/2010	SP 1011903-001	DW	

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	11/24/2010:215142 All analysis quality controls are within established criteria
	11/22/2010:212185 All preparation quality controls are within established criteria
903.0	12/05/2010:215571 All analysis quality controls are within established criteria
	12/03/2010:212563 All preparation quality controls are within established criteria

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.







Analytical Chemists
December 7, 2010

Lab ID : SP 1011903-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : November 12, 2010-14:00

Monterey, CA 93940 Sampled By : Lear, J.

Received On: November 19, 2010-11:00

Matrix : Drinking Water

Description : MW 1 Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Sample Analysis		
Constituent	Result ± Ellor	MDA	Omts	WICL/AL	Method	Date/ID	Method	Date/ID	
Radio Chemistry P:1'5									
Gross Alpha	$2.69 \pm 1.81$	1.68	pCi/L	15/5	900.0	11/22/10:212185	900.0	11/24/10:215142	
Total Alpha Radium (226)	$0.038 \pm 0.269$	0.412	pCi/L	3	903.0	12/03/10:212563	903.0	12/05/10:215571	

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





#### **Analytical Chemists**

December 7, 2010 Lab ID : SP 1011903 **Monterey Bay Analytical Services** : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	11/24/2010:215142	CCV CCB	cpm cpm	10280	40.8 % 0.0600	38 - 47 0.12	
Gross Alpha	900.0	11/22/2010:212185 (CH 1077808-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	149.4 149.4 149.4 149.4	0.32 121 % 84.7 % 65.8 % 25.0%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	12/05/2010:215571	CCV CCB	cpm cpm	10270	40.9 % 0.100	38 - 46 0.15	
Total Alpha Radium (226)	903.0	12/03/2010:212563	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	18.17 18.17 18.17 18.17	0.17 66.0 % 64.4 % 72.4 % 11.8%	2 52-89 43-92 43-92 ≤35.5	

efi		

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that

BSD the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD

and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation BSRPD

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

McCampbell Analytical, Inc.
"When Ouality Counts"

Monterey Bay Analytical	Client Project ID: MPWMD	Date Sampled: 11/12/10
4 Justin Court, Suite D		Date Received: 11/17/10
Tousin Court, Build B	Client Contact: David Holland	Date Reported: 11/22/10
Monterey, CA 93940	Client P.O.:	Date Completed: 11/18/10

WorkOrder: 1011504

November 22, 2010

Dear David:

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

1011504

#### CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 WILLOW PASS ROAD TURN AROUND TIME PITTSBURG, CA 94565-1701 Website: www.mccampbell.com Email: main@mccampbell.com RUSH 24 HR 48 HR 72 HR 5 DAY ☐ GeoTracker EDF ☐ PDF Telephone: (877) 252-9262 Excel ☐Write On (DW) Fax: (925) 252-9269 Report To: David Holland Bill To: Analysis Request Other Comments Company: Monterey Bay Analytical Services Fotal Petroleum Oil & Grease (1664 / 5520 E/B&F) 8015) Filter 4 Justin Ct. Suite D Samples Monterey, Ca 93940 E-Mail: 4mbas@sbcglobal.net for Metals CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) EPA 608 / 8082 PCB's ONLY; Aroclors / C LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) Tele: (831) 641 - 0734 Fax: (831) 375 - 6227 MTBE / BTEX ONLY (EPA 602 / 8021) EPA 502.2 / 601 / 8010 / 8021 (HVOCs) analysis: fotal Petroleum Hydrocarbons (418.1) EPA 8270 SIM / 8310 (PAHs / PNAs) Project #: Project Name: MPWMD Yes / No EPA 505/ 608 / 8081 (CI Pesticides) Project Location: MW 1 (PH as Diesel / Motor Oil (8015) Lead (200.7 / 200.8 / 6010 / 6020) EPA 507 / 8141 (NP Pesticides) EPA 524.2 / 624 / 8260 (VOCs) Sampler Signature: METHOD SAMPLING MATRIX Type Containers Dissolved Methane PRESERVED # Containers LOCATION/ MTBE / BTEX SAMPLE ID Field Point Sludge Water Name Date Time Other HNO3 HCL Soil MW 1 11/12/10 14:00 X 71039 Relinquished By: S. M. Ginns For GOOD CONDITION Date: Time: Received By: COMMENTS: lace 11/17/10 12:40p David Holland 11/16/1 1595 HEAD SPACE ABSENT Relinquished By: / Date: Received By: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

#### McCampbell Analytical, Inc.

# 1534 Willow Pass Rd

### CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Prepared by: Melissa Valles

Pittsburg, CA 94565-1701 WorkOrder: 1011504 ClientCode: MBAS (925) 252-9262 WaterTrax WriteOn EDF Excel Fax ✓ Email HardCopy ThirdParty J-flag Bill to: Report to: Requested TAT: 5 days **David Holland** Accounts Payable Email: 4mbas@sbcglobal.net Monterey Bay Analytical Monterey Bay Analytical cc: Date Received: 11/17/2010 PO: 4 Justin Court, Suite D 4 Justin Court, Suite D ProjectNo: MPWMD Monterey, CA 93940 Monterey, CA 93940 Date Printed: 11/17/2010 831-375-6227 FAX 831-641-0734 Requested Tests (See legend below) Lab ID **Client ID** Matrix Collection Date Hold 2 3 5 6 8 9 10 12 1 11 1011504-001 MW 1 Water 11/12/2010 14:00 Α Test Legend: 5 2 **PRDISSOLVED** RSK174 DISS 3 7 10 6 8 11 12

#### **Comments:**

#### **Sample Receipt Checklist**

Client Name:	Monterey Bay Analytic	al				Date a	and Time Recei	ived: '	11/17/2010	1:16:04 PM	
Project Name:	MPWMD					Check	klist completed	and rev	riewed by:	Melissa Valles	;
WorkOrder N°:	<b>1011504</b> Matrix	<u>Water</u>				Carrie	er: <u>UPS</u>				
		Chain of	Cus	stody (C	OC)	Informa	ation .				
Chain of custody	present?	Y	'es	<b>V</b>		No 🗆					
Chain of custody	signed when relinquished an	d received? Y	'es	<b>V</b>		No 🗆					
Chain of custody	agrees with sample labels?	Y	'es	<b>V</b>		No 🗌					
Sample IDs noted	by Client on COC?	Y	'es	<b>V</b>		No 🗆					
Date and Time of	collection noted by Client on C	COC? Y	'es	<b>V</b>		No 🗆					
Sampler's name r	noted on COC?	Y	'es			No 🗹					
		<u>Sam</u>	ple	Receipt	Info	rmation	<u>1</u>				
Custody seals in	tact on shipping container/coc	oler? Y	'es			No 🗆		N	IA 🔽		
Shipping containe	er/cooler in good condition?	Y	'es	<b>V</b>		No 🗆					
Samples in prope	er containers/bottles?	Y	'es	<b>~</b>		No 🗆					
Sample containe	rs intact?	Y	'es	<b>✓</b>		No 🗆					
Sufficient sample	e volume for indicated test?	Y	'es	<b>✓</b>		No 🗌					
	<u>S</u>	ample Preserva	ition	and Ho	old Ti	me (HT	) Information	!			
All samples recei	ived within holding time?	Y	'es	<b>✓</b>		No 🗌					
Container/Temp B	Blank temperature	С	oole	r Temp:	6°C			Ν	IA 🗆		
Water - VOA vial	ls have zero headspace / no l	bubbles? Y	'es	<b>V</b>		No 🗆	No VOA vials	submitte	ed 🗆		
Sample labels ch	necked for correct preservatio	n? Y	'es	<b>V</b>		No 🗌					
Metal - pH accep	table upon receipt (pH<2)?	Y	'es			No 🗆		N	IA 🔽		
Samples Receive	ed on Ice?		'es	<b>✓</b>		No 🗆					
		(Ice Type:	BLU	IE ICE	)						
* NOTE: If the "N	No" box is checked, see comm	ments below.									
	=======	=====				==		===	====	=====	
Client contacted:		Date contacted	:				Con	tacted b	y:		
Comments:											

	"When Ouality Counts"		Telephone: 8	377-252-9262 Fa	ix: 925-25	2-9269	
Monterey Ba	y Analytical	Client Project ID:	MPWMD	Date Sample	ed: 11	/12/10	
4 Justin Cour	t Suite D			Date Receiv	ed: 11	/17/10	
4 Justin Cour	t, Suite D	Client Contact: D	David Holland	Date Extract	ed: 11	/17/10	
Monterey, CA	A 93940	Client P.O.:		Date Analyz	zed 11	/17/10	
		Light Gas H	[ydrocarbons*				
Extraction method	RSK 174/175	Analytical 1	methods RSK174/175		Wo	ork Order:	1011504
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments
001A	MW 1	w	ND		1	N/A	
	porting Limit for DF =1;	W	0.4			μg/L	r
	means not detected at or bove the reporting limit	S	NA			NA	
* water samples	are reported in µg/L.						
	Recovery of Surrogate Standard						
DF = Dilution F	actor						

QC SUMMARY REPORT FOR RSK174/175

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 54410 WorkOrder 1011504

EPA Method RSK174/175	RSK174/175 Extraction RSK 174/175 Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	Criteria (%)	1	
7 way to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Ethane	N/A	2.38	N/A	N/A	N/A	88.6	89.8	1.38	N/A	N/A	80 - 120	20
Ethene	N/A	3.08	N/A	N/A	N/A	88.8	89.7	0.985	N/A	N/A	80 - 120	20
Methane	N/A	1.17	N/A	N/A	N/A	108	107	0.884	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 54410 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1011504-001A	11/12/10 2:00 PM	<b>1</b> 11/17/10	11/17/10 5:19 PM				

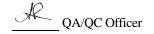
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





A0K1158

11/30/2010

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 11/17/2010 07:09.

If additional clarification of any information is required, please contact your Client Services Representative, Joni Blankfield at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Joni Blankfield

Client Services Representative

mittamf O



11/30/2010

#### **Case Narrative**

#### **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A0K1158 COC Number:

Project:General ChemistryTAT: 10Client Project:MPWMDPO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact COC/Labels Agree Received On Wet Ice

Packing Material - Bubble Wrap

Packing Material - Paper

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

FAL Final Report.rpt

A0K1158 FINAL 11302010 1213



#### **Certificate of Analysis**

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

Report Issue Date: 11/30/2010 12:13 **Received Date: 11/17/2010** Received Time: 07:09

Lab Sample ID: A0K1158-01 Client Project: MPWMD Sample Date: 11/15/2010 12:00 Sampled by: J Lear

Matrix: Drinking Water Grab Sample Type:

Sample Description: ASR-1 // 71062

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A011573	11/19/10	11/19/10	
Total Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A011574	11/19/10	11/19/10	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	12	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Chloroform	EPA 524.2	37	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Dibromochloromethane	EPA 524.2	4.5	0.50	ug/L	1	A011417	11/17/10	11/19/10	
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	54		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Dichloroacetic Acid (DCAA)	EPA 552.2	1.8	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A011599	11/20/10	11/23/10	
Trichloroacetic Acid (TCAA)	EPA 552.2	2.2	1.0	ug/L	1	A011599	11/20/10	11/23/10	
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	4.0		ug/L					
		<u>Method</u>	<u>Result</u>						

Surrogate: Bromofluorobenzene EPA 524.2 86 % Acceptable range: 70-130 % Surrogate: 2,3-Dibromopropionic Acid EPA 552.2 101 % Acceptable range: 70-130 %

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#### **General Chemistry Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011573				Analyst:	SAB	Prepared	d: 11/19/2	010			
Blank (A011573-BLK1) SM 5310 (	C - Quality Contro	l									
Dissolved Organic Carbon	ND	0.20	mg/L							11/19/10	
Blank Spike (A011573-BS1) SM 5	310 C - Quality Co	ontrol									
Dissolved Organic Carbon	10	0.20	mg/L	10		102	80-120			11/19/10	
Blank Spike Dup (A011573-BSD1)	SM 5310 C - Qua	lity Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		102	80-120	0	20	11/19/10	
Matrix Spike (A011573-MS1) SM (	5310 C - Quality C	ontrol				Source	: A0K115	8-01			
Dissolved Organic Carbon	11	0.20	mg/L	10	1.1	99	80-120			11/19/10	
Matrix Spike Dup (A011573-MSD1)	SM 5310 C - Qu	ality Control				Source	: A0K115	8-01			
Dissolved Organic Carbon	11	0.20	mg/L	10	1.1	99	80-120	1	20	11/19/10	
Batch: A011574				Analyst:	SAB	Prepared	d: 11/19/2	010			
Blank (A011574-BLK1) SM 5310 (	C - Quality Contro	I									
Total Organic Carbon	ND	0.20	mg/L							11/19/10	
Blank Spike (A011574-BS1) SM 5	310 C - Quality Co	ontrol									
Total Organic Carbon	10	0.20	mg/L	10		103	80-120			11/19/10	
Blank Spike Dup (A011574-BSD1)	SM 5310 C - Qua	lity Control									
Total Organic Carbon	10	0.20	mg/L	10		103	80-120	0	20	11/19/10	
Matrix Spike (A011574-MS1) SM (	5310 C - Quality C	ontrol				Source	: A0K118	3-01			
Total Organic Carbon	11	0.20	mg/L	10	0.89	100	80-120			11/19/10	
Matrix Spike Dup (A011574-MSD1)	SM 5310 C - Qu	ality Control				Source	: A0K118	3-01			
Total Organic Carbon	11	0.20	mg/L	10	0.89	100	80-120	0	20	11/19/10	



				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011417				Analyst:	JGB	Prepared	d: 11/18/2	010			
Blank (A011417-BLK1)	1.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							11/18/10	
Bromoform	ND	0.50	ug/L							11/18/10	
Chloroform	ND	0.50	ug/L							11/18/10	
Dibromochloromethane	ND	0.50	ug/L							11/18/10	
Surrogate: Bromofluorobenzene	4.6			5.0		93	70-130			11/18/10	
Blank Spike (A011417-BS1) EP.	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.8	0.50	ug/L	5.0		95	70-130			11/18/10	
Bromoform	4.4	0.50	ug/L	5.0		87	70-130			11/18/10	
Chloroform	5.1	0.50	ug/L	5.0		102	70-130			11/18/10	
Dibromochloromethane	4.6	0.50	ug/L	5.0		93	70-130			11/18/10	
Surrogate: Bromofluorobenzene	4.7			5.0		95	70-130			11/18/10	
Blank Spike Dup (A011417-BSD1)	EPA 524.2 - Qu	ality Control									
Bromodichloromethane	4.6	0.50	ug/L	5.0		93	70-130	3	30	11/18/10	
Bromoform	4.1	0.50	ug/L	5.0		81	70-130	7	30	11/18/10	
Chloroform	4.9	0.50	ug/L	5.0		99	70-130	3	30	11/18/10	
Dibromochloromethane	4.3	0.50	ug/L	5.0		86	70-130		30	11/18/10	
Surrogate: Bromofluorobenzene	4.4			5.0		88	70-130	-	-	11/18/10	
Batch: A011599				Analyst:	KHH	Prepared	d: 11/20/2	010			
– Blank (A011599-BLK1)     EPA 552	2.2 - Quality Contro	NI									
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							11/23/10	
Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							11/23/10	
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							11/23/10	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L							11/23/10	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							11/23/10	
Monobromoacetic Acid (MBAA) (2C)	ND ND	1.0	ug/L ug/L							11/23/10	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L ug/L							11/23/10	
MONOCHIOLOGOCHIC ACIA (MICAA)		2.0	ug/L ug/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)			uy/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)	ND ND		-							11/23/10	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L							11/23/10	
Monochloroacetic Acid (MCAA) (2C)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid			-	25		98	70-130			11/23/10	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid	ND ND 24	1.0	ug/L	25 25						11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid	ND ND 24	1.0	ug/L	25 25		98 100	70-130 70-130				
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 24	1.0	ug/L							11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  EP.	ND ND 24 25	1.0	ug/L							11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  EP	ND ND 24 25 <b>A 552.2 - Quality C</b>	1.0 1.0	ug/L ug/L	25		100	70-130			11/23/10 11/23/10	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA) (2C)	ND ND 24 25 <b>A 552.2 - Quality C</b>	1.0 1.0 ontrol	ug/L ug/L ug/L	25		110	70-130			11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 24 25 <b>A 552.2 - Quality C</b> 11	1.0 1.0 ontrol 1.0 1.0	ug/L ug/L ug/L ug/L	10 10		100 110 110	70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C	1.0 1.0 ontrol 1.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10		110 110 110 107	70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Oichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C 11 11 11	1.0 1.0 ontrol 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		110 110 110 107 108	70-130 70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A011599-BS1)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)	ND ND 24 25 A 552.2 - Quality C 11 11 11 11	1.0 1.0 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10		110 110 110 107 108 101	70-130 70-130 70-130 70-130 70-130 70-130			11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10 11/23/10	

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				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A011599				Analyst:	KHH	Prepare	d: 11/20/2	2010			
Blank Spike (A011599-BS1) EPA	552.2 - Quality C	ontrol									
Γrichloroacetic Acid (TCAA)	10	1.0	ug/L	10		101	70-130			11/23/10	
Frichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		105	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	23			25		91	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)	24			25		96	70-130			11/23/10	
Blank Spike Dup (A011599-BSD1)	EPA 552.2 - Qu	ality Control									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		109	70-130	0	30	11/23/10	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		112	70-130	2	30	11/23/10	
Dichloroacetic Acid (DCAA)	11	1.0	ug/L	10		109	70-130	2	30	11/23/10	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10		108	70-130	1	30	11/23/10	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		101	70-130	0	30	11/23/10	
Monobromoacetic Acid (MBAA) (2C)	10	1.0	ug/L	10		100	70-130	0	30	11/23/10	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10		104	70-130	6	30	11/23/10	
Monochloroacetic Acid (MCAA) (2C)	11	2.0	ug/L	10		108	70-130	2	30	11/23/10	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		105	70-130		30	11/23/10	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		108	70-130	2	30	11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	24			25		98	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)	27			25		106	70-130			11/23/10	
Duplicate (A011599-DUP1) EPA 5	52.2 - Quality Co	ntrol				Source	e: A0K119	97-03			
Dibromoacetic Acid (DBAA)	5.1	1.0	ug/L		5.1			1	30	11/23/10	
Dichloroacetic Acid (DCAA)	1.6	1.0	ug/L		1.6			2	30	11/23/10	
Monobromoacetic Acid (MBAA) (2C)	ND	1.0	ug/L		ND				30	11/23/10	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	11/23/10	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L		ND				30	11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	24			25		96	70-130			11/23/10	
Matrix Spike (A011599-MS1) EPA	552.2 - Quality (	Control				Source	e: A0K114	<b>1</b> 8-22			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	108	70-130			11/23/10	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10	ND	112	70-130			11/23/10	
Dichloroacetic Acid (DCAA)	46	1.0	ug/L	10	38	78	70-130			11/23/10	
Dichloroacetic Acid (DCAA) (2C)	48	1.0	ug/L	10	40	84	70-130			11/23/10	
Monobromoacetic Acid (MBAA)	23	1.0	ug/L	10	15	78	70-130			11/23/10	
Monobromoacetic Acid (MBAA) (2C)	11	1.0	ug/L	10	ND	105	70-130			11/23/10	
Monochloroacetic Acid (MCAA)	23	2.0	ug/L	10	15	80	70-130			11/23/10	
Monochloroacetic Acid (MCAA) (2C)	18	2.0	ug/L	10	4.9	134	70-130				MS01 Hig
Trichloroacetic Acid (TCAA)	51	1.0	ug/L	10	46	52	70-130				MS02 Lou
Trichloroacetic Acid (TCAA) (2C)	52	1.0	ug/L	10	45	71	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid	23			25		92	70-130			11/23/10	
Surrogate: 2,3-Dibromopropionic Acid (2C)	25			25		99	70-130			11/23/10	
	ED4.550.0	iality Cantra				Source	e: A0K114	18-22			
Matrix Spike Dup (A011599-MSD1)	EPA 552.2 - Qu	ianty Contro	'!				,,,,,,,,,,,				
Matrix Spike Dup (A011599-MSD1) Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	110	70-130		30	11/23/10	

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				Spike	Source		%REC		RPD	Date		
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual	
Batch: A011599				Analyst:	KHH	Prepare	ed: 11/20/2	010				
Matrix Spike Dup (A011599-MSD1)	EPA 552.2 - Q	uality Control				Sourc	e: A0K114	18-22				
Dichloroacetic Acid (DCAA)	47	1.0	ug/L	10	38	85	70-130	2	30	11/23/10		
Dichloroacetic Acid (DCAA) (2C)	49	1.0	ug/L	10	40	93	70-130	2	30	11/23/10		
Monobromoacetic Acid (MBAA)	23	1.0	ug/L	10	15	83	70-130	2	30	11/23/10		
Monobromoacetic Acid (MBAA) (2C)	11	1.0	ug/L	10	ND	106	70-130	1	30	11/23/10		
Monochloroacetic Acid (MCAA)	23	2.0	ug/L	10	15	83	70-130	1	30	11/23/10		
Monochloroacetic Acid (MCAA) (2C)	19	2.0	ug/L	10	4.9	137	70-130	2	30	11/23/10	MS01	High
Trichloroacetic Acid (TCAA)	53	1.0	ug/L	10	46	69	70-130	3	30	11/23/10	MS02	Low
Trichloroacetic Acid (TCAA) (2C)	54	1.0	ug/L	10	45	93	70-130	4	30	11/23/10		
Surrogate: 2,3-Dibromopropionic Acid	24			25		95	70-130			11/23/10		
Surrogate: 2,3-Dibromopropionic Acid (2C)	26			25		102	70-130			11/23/10		



#### **Certificate of Analysis**

11/30/2010

#### 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 one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- · All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### **Certifications:**

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) MDA: Min. Detected Activity Milligrams/Kilogram (ppm) mg/Kg: RL: Reporting Limit MPN: Most Probable Number Micrograms/Liter (ppb) CFU: μg/L: :DL x Dilution Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Percent Recovered (surrogates) 1 or more CFU/100mLs %: pCi/L: Picocuries per Liter Present:

NR: Non-Reportable RL Mult: RL Multiplier

MS02 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

MS01 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

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## A0K1158

# **Monterey Bay Analytical**

**Monte6227** 

11172010

David Holland

General Chemistry

Turnaround:

Standard

Due Date:

12/03/2010

Sample ID Sample Description Date Sampled Lab Notes

A0K1158-01 ASR-1

11/15/2010

Printed: 11/17/2010 18:23:48

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RSK ANALYTICAL

1414 Stanislaus Street, Fresno, CA 93706-1623

Required Fields  Classifications Name 4	(559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com	197-2893 •	www.bskla	TEMP:	Northernand († 1864) G	A0I Mo	A0K1158 Monte6227	27	10
Monterey Bay Analytical	David Holland		E-mail: 4MB	4MBAS@Sbcglobal.net		;	1		
Address * City * 4 Justin Ct. Mont	* State * Zi	Zip * 93940		Carbon Copies:					
Project Information:		•		d Co 🔲 Tulare Co 🛭			ane		
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Lear, J.	STD Level II STD S Day** 12 Day** 1 Day**	ıy** ∐2 Day	,*** ☐I Day***						
Matrix Types: RSW - Raw Surface Water CFW = ( RGW - Raw Ground Water FW = Fi	CFW = Clorinated Finished Water	nated Waste V = Storm Wat	Vater BW = er DW = Dr	BW = Bottled Water  DW = Drinking Water SO = Solid	TTH	HAA	TOC	DOC	
Sample # Sampled Sample Descri	Sample Description / Location *		Matrix *	Comments / Station Code					
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Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)		δ.	Company		
Recented for Lab by: (Signature and Primer) Name)	amontha arac		1,20L	Payment Received at Delivery:  Amount  Ch	Check/Cash/Cash		PΓΛ #	Ī.	
Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER	SJVC FED EX OTHER	a	Cooling Method:	WE BLUE NONE	Packing Material:	Mater Mater	<b>★</b> ∰		
				•	•				

Monor Physical for services rendered as need berein are down full widin 30 days from when invoiced. If not so paid, account belances are deemed delinquent. Dalinquent belances are subject to monthly services belongs and unterest calculated at 1.12% per month, 18% per annum. BSK & Associates shall be entitled to non-view or delanquent accounts, costs of callestons, including attempts fees incurred prior to or in linguistic wholes; concluded by judgement, settlement, compromes or otherwise. The person signing for the client/Company expressing administrations and the Client for any samples reconstituting the part of the client and the Client and the Client and the Client for the payment for analysis reconstituting the payment for analysis required to the Client and the Client and the Client for the client and the Client for the payment for analysis reconstituting the payment for analysis required to the Client and the Client for the client for the client for the client and the Client for the client SR-FL-0012-30 (Analytical)

Page 10 of 12

Sample Integrity Pg. 1 of 2 WORK OR



Date Received 1117	110			<b>a</b> l/	rans amsekti 991. italit 1469s bilili 100 l	(1811 87171 11 <b>1</b>
Section 1- Receiving Inform	nation					]
Sample Transport: (N	TRAC UPS	PMS Walk-	In BSK-Courier	GSO Fed E	Exp. Other;	
Samples arrived at lab or	ı same day sampl	ed: Yes	No X (lf Yes	- Temperature is	not needed)	
Coolers/Ice Chests Desc	ription/Temperati	${ m IFC}(s)$ : (If more than	4 received, list information	in comment section)		
1)	2)		3)	4)		
Was Temperature In Rar	ıge: Y N N/	A Received	On Ice: Web Blı	neReceived	Ambient: Y	
Describe type of packin	g materials. Buł	ble Wrap Fo	am Packing Pea	nuts Paper	) Other:	
Initial Receipt: BSK-V	isalia BSK-)	Bakersfield	BSK-SAC BS	K-FDL	SK-FAL	
Were ice chest custody	seals present?	Y N Intact:	Y 🔷			
Section 2- COC Info.	Сотр	oleted Info Fr	от		Completed	Info From
W- COC D - i - 1	Yes	No Contai	<del></del>	1	Yes No	Container
Was COC Received Date Sampled		`	Analysis Requ			
Time Sampled		ļ. <u> </u>	Any hold times Client Name	less than 72m	<del>                                     </del>	
Sample ID	<del></del>	<del> </del>	Address		<del> </del>	
Special Storage/Handling	Ine		Telephone #			
Special Storage Handling	1113.	_ <del></del>	Telephone n		<u> </u>	
Section 3- Bottles / Analysi	s			Yes N	No N/A	Comment
Did all bottles arrive unbro	oken and intact?					
Were bottle custody seals	present?					
Were bottle custody seals	intact?					
Did all bottle labels agree						
Were correct containers us			. <u> </u>			
Were correct preservation						
Was a sufficient amount o		<del></del>				
Were bubbles present in V	<del></del>		Only)	عبر		
Were Ascorbic Acid Bottl	es received with	the VOAs?	<u> </u>		·	
Section 4- Comments / Disc	repancies					
Sample(s) Split/Preserve: Y	es No Contain	er:	Preservation:		_ Dt/Time/Init _	
	Contain	er:	Preservation:		_Dt/Time/Init _	
Was Client Service Rep. not Explanations / Comments	ified of discrepan	cies: (Yes)	No N/A C	sr: Paul	Notified By: S	8
Montru	Us stat	non coc	le meaton	12 \$ Sa	riple ic	t date
but th	e time	Sample	on Samp	ou conta	anus S	als
Report Comment Entered:	please c	unfirm	11/17/38	<u> </u>		
y			Λ		<del></del>	111
		Labeled by:_	14 @ 1531	Labels checke	d by:@@	<u>Illo</u>

Sample Integrity Pg 7 of 9

BSK Bottles Yes WORK



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer **%**| ()\_\_ HNO<sub>5</sub> (ρ) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) NaOH (p) Green Cap Dissolved Oxygen 300ml (g) Centrifuge Tube HNO: 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Labe 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>1</sub> 515,547 Blue Labal 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Label 1 Liter (AG) None 1 Liter (AG) Fl<sub>2</sub>SO<sub>4</sub> O&G Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 1 Liter (P) Na<sub>3</sub>S<sub>2</sub>O<sub>3</sub>+ H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide 1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 Turquoise Label LLiter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neon Green I abel 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear - HCL 40ml VOA Vial Amber - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos ILiter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



# CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT

Client Montarrey Bay Analytical Services Contoner Number: Addres: Addr		Lab Number	r:	TEST DESCRIPTION AND ANAL	YSES REQUESTED
Email Address: AmbaseSptcglobal.net Contact Person: David Holland Project Name: MPRWID Purchase Order Number: Quote Number: Sampler(s): Lear, J.  Sampler(	Customer Number: Address:	The state of the s			
Remarks 71062  Relinquished Date: Time: Relinquished Date: Time: Received By: Date: Time: Receiv	Email Address: 4mbas@sbcglobal.net  Contact Person: David Holland  Project Name: MPWMD  Purchase Order Number:  Quote Number:  Sampler(s): Lear, J.  Sampling Fee: Pickup Fee:  Compositor Setup Date: Time:  Samp	3	table (P) Non-Potable (NP) Ag Water (AgW) face Water (SW) Monitoring Well (MW) Ground Water (GW) wel Blank (TB) Waste Water (WW) Drinking Water (DW) il (S) Sludge (SLG) Solid (SLD) Oil (O) ct: System (Sys) Source (SRC) Waste (W)	ct: Routine (ROUT) Repeat (RPT) Other (OTH) Replace (RPL) ecial (SPL)  af Tissue (LT) Petiole Tissue (PET) Produce (PRD)  seenative: (1) NaOH + ZnAc, (2) NaOH, (3) HCI  H2SO4, (5) HNO3, (6) NaZSZQ3, (7) Other  Gross AIPha  Sadium 226	
Remarks 71062  Relinquished Jol Obate: Time: Relinquished Date: Time: Residuished Date: Time: Received By: Date: Time: Regrived By: Date: Time: Received By: Date: Time: Re	Consider the contract of the c	4	The second secon	<del>arana ar</del> an da arangan <del>da manana</del> an mengangan arang bahan arang	And the second s
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		Holland, D.	V.		Retinquished Date: Time:
Corporate Offices & Laboratory  Office & Laboratory  Office & Laboratory  Field Office				Required by:	Received By: Date: Time:

Corporate Offices & Laboratory 853 Corporation Street Sante Paula, CA 93080 TEL: 805/392-2000 FAX: 805/525-4172 CA NELAP Certification No. 01110CA Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: 208/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563 Office & Laboratory 563 E. Lindo Avenue Chico, CA 95926 TEL: 530/343-5818 FAX: 530/343-3807 CA ELAP Certification No. 2670

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

Doc ID: F2REC905.011 Page: 1 of 1

# Santa Paula - Condition Upon Receipt (Attach to COC)

	Danta Tamia Condition Open 21000-1	
Samı I.	ple Receipt: Number of ice chests/packages received: Note as OTC if received over the counter unpackaged.	Dim .
2.	Were samples received in a chilled condition? Temps:	for tests/H.T.'s/rushes/Bacti's to prioritize bacti samples received.
3.	Do the number of bottles received agree with the COC?	Yes No N/A,
<b>4.</b>	Were samples received intact? (i.e. no broken bottles, lea	
5.	Were sample custody seals intact?	MA Yes No
Sigr	n and date the COC, obtain LIMS sample numbers, select n	nethods/tests and print labels.
	nple Verification, Labeling and Distribution:  Were all requested analyses understood and acceptable?	No No
2.	Did bottle labels correspond with the client's ID's?	Yes No
3.	Were all bottles requiring sample preservation properly p	oreserved? Yes No NA FGL
4.	VOAs checked for Headspace?	Yes No (N/A)
5.	Were all analyses within holding times at time of receipt	Mag No
5.	Have rush or project due dates been checked and accepte	su? (VII) 1
	tach labels to the containers and include a copy of the COC	. (1 7 )
Car	mple Receipt, Login and Verification completed by (initial	5):
Dis An 1.	Problem:  Description:  Initiated By:  Thuz CWarmans  District  Theorem of the Community of	Phone Minion Hyper 1
	OKper musin.	
2.	Person Contacted:	Phone Number: Date:
	Resolution:	Monterey Bay Analytical Services
		SP 1011902
	F	IV-11/19/2010-11:04:48





Analytical Chemists December 7, 2010

Monterey Bay Analytical ServicesLab ID: SP 10119024 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 3 pages divided into 3 sections:

Case Narrative (1 pages): An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
ASR-1	11/15/2010	11/19/2010	SP 1011902-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	11/24/2010:215141 All analysis quality controls are within established criteria
	11/22/2010:212185 All preparation quality controls are within established criteria
903.0	12/05/2010:215571 All analysis quality controls are within established criteria
	12/03/2010:212563 All preparation quality controls are within established criteria

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.







Analytical Chemists
December 7, 2010

Lab ID : SP 1011902-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On: November 15, 2010-13:14

Monterey, CA 93940 Sampled By : Lear, J.

Received On : November 19, 2010-11:00

Matrix : Drinking Water

Description : ASR-1 Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Sampl	e Analysis
Constituent	Result ± Ellor	MDA	Omts	WICL/AL	Method	lethod Date/ID		Date/ID
Radio Chemistry P:1'5								
Gross Alpha	$1.10 \pm 1.60$	2.03	pCi/L	15/5	900.0	11/22/10:212185	900.0	11/24/10:215141
Total Alpha Radium (226)	$0.000 \pm 0.248$	0.412	pCi/L	3	903.0	12/03/10:212563	903.0	12/05/10:215571

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





#### **Analytical Chemists**

December 7, 2010 Lab ID : SP 1011902 **Monterey Bay Analytical Services** : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	11/24/2010:215141	CCV CCB	cpm cpm	10280	41.1 % 0.0400	38 - 47 0.11	
Gross Alpha	900.0	11/22/2010:212185 (CH 1077808-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	149.4 149.4 149.4 149.4	0.32 121 % 84.7 % 65.8 % 25.0%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	12/05/2010:215571	CCV CCB	cpm cpm	10270	40.9 % 0.100	38 - 46 0.15	
Total Alpha Radium (226)	903.0	12/03/2010:212563	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	18.17 18.17 18.17 18.17	0.17 66.0 % 64.4 % 72.4 % 11.8%	2 52-89 43-92 43-92 ≤35.5	

efi		

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that BSD

the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD

and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation BSRPD

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

McCampbell Analytical, Inc.
"When Ouality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay Analytical	Client Project ID: MPWMD	Date Sampled: 11/15/10
4 Justin Court, Suite D		Date Received: 11/17/10
Tousin Court, Build B	Client Contact: David Holland	Date Reported: 11/22/10
Monterey, CA 93940	Client P.O.:	Date Completed: 11/18/10

WorkOrder: 1011503

November 22, 2010

<b>D</b>	<b>D</b>		-	
Dear	1 10	T 71		۰
Dear	120	. V I	u	L.

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius

Laboratory Manager

McCampbell Analytical, Inc.

Wet Telephor Report To: David	osite: <u>www.mc</u> ne: (877) 252 Holland	PITTSBU campbell -9262	LLOW PA RG, CA 9 .com Em	SS RO. 4565-17	AD 701 nin@n F	ncca		II.coi		69					UR l G			OU	n E	DF	IM	E		RUS <b>)F</b>	SH	ς	HR		48 1	HR W	RD 72 I rite C	n (	5 DAY (DW)
Company: Monto	erey Bay Ana tin Ct. Suite I	_	Services											8015)			5520 E/B&F)				geners			*								- 1	Filter Samples
	erey, Ca 939	40		-Mai				_	al.n	et			4	+			20 E/				Com						(02	6					for Metals
Tele: (831) 641 -	0734			ax: (									4	Gas (602 / 8021	(17		155	÷.	ŝ		ors		3			6	/ 60	/ 602					analysis:
Project #:			F	rojec	t Nar	ne:	MP	¥M!	D				_	602	2 / 8(		1664	(418	100	(sa)	Vroc		picid			NA	0109	010	_			1	Yes / No
Project Location: ASR-1							4	388 (	A 60	8015	ase (	2000	H) 13	sticid	N; /	des)	Herl	3	DCs)	l/sH	187	9/8	6020										
Sampler Signatur	e:			_	_	_			_		WI GEN	ion	$\perp$	88	(EP.	10	Gre	carl	/ 802	1 Pes	ONI	estici	CC	S	(SV	(PAI	/ 200	/ 200	10/				
		SAMI	PLING	, s	iers	1	MAT	RIX			ETE			TPH 3	NLY	lotor	Oil &	Hydro	8010	)81 (C	CB's	NP P	Acidi	8260	8270	8310	200.7	2007	8/60	lane			
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	НСГ	HNO3	Other	MTBE / BTEX &	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664/	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (C1 Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI 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)	Dissolved Methane			
	ASR 1	11/15/10	13:14	3	Voa	X		Т			X		Т																	Х		1	71062
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Relinquished By: S. M. Ginris for Date: Time: Received By:  David Holland McLinis 10 1515 We Will 11/17/10 123			235	140	GO	OD (	PAC	DITI E A	BSE	TA	1		,																				
Relinquished By: Date: Time: Received By:			APPROPRIATE CONTAINERS																														
Relinquished By: Date: Time: Received By:			PRESERVED IN LAB																														
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REC'D SEALED & INTACT VIA UPS 11 17 10

### McCampbell Analytical, Inc.

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsbur	fillow Pass Rd rg, CA 94565-1701							:: 1011	1503			code: M					
(925) 2	52-9262	☐ WaterTrax	WriteOn	☐ EDF		Exce		Fax		<b>✓</b> Email		Hard		Thir	rdParty	J-	-flag
Report to:  David Holla  Monterey Ba 4 Justin Coi  Monterey, C  831-375-622	ay Analytical urt, Suite D CA 93940	Email: 4 cc: PO: ProjectNo: M	4mbas@sbcglobal.net : MPWMD				M 4	ccounts onterey Justin (	ccounts Payab onterey Bay Ar Justin Court, S onterey, CA 93				Date	uested e Rece e Prin	ived:	5 ( 11/17/ 11/17/	
									Req	uested	Tests	(See le	gend b	elow)			
Lab ID	Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1011503-001	ASR 1		Water	11/15/2010 13:14		Α	Α								$\overline{}$		
Test Legend:  1 PRDIS 6 11	SOLVED	RSK174_D	olss	3 8					4 9				-	5 10			
												_	Prepa	red by:	: Melis	ssa Valle	es

#### **Comments:**

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

#### **Sample Receipt Checklist**

Client Name:	Monterey Bay Analytic	al			Date	and Time Received:	11/17/2010	1:12:13 PM
Project Name:	MPWMD				Chec	klist completed and r	eviewed by:	Melissa Valles
WorkOrder N°:	<b>1011503</b> Matrix	<u>Water</u>			Carrie	er: <u>UPS</u>		
		<u>Chain</u>	of Cu	stody (C	OC) Inform	ation		
Chain of custody	present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when relinquished ar	nd received?	Yes	V	No 🗆			
Chain of custody	agrees with sample labels?		Yes	✓	No 🗌			
Sample IDs noted	by Client on COC?		Yes	<b>V</b>	No $\square$			
Date and Time of	collection noted by Client on C	COC?	Yes	✓	No 🗆			
Sampler's name r	noted on COC?		Yes		No 🗸			
		<u>Sa</u>	mple	Receipt	Informatio	<u>n</u>		
Custody seals int	tact on shipping container/coo	oler?	Yes		No 🗆		NA 🔽	
Shipping containe	er/cooler in good condition?		Yes	<b>V</b>	No 🗆			
Samples in prope	er containers/bottles?		Yes	✓	No 🗆			
Sample containe	rs intact?		Yes	✓	No 🗆			
Sufficient sample	e volume for indicated test?		Yes	✓	No 🗌			
	<u>s</u>	ample Preser	vatior	n and Ho	ld Time (HT	[] Information		
All samples recei	ved within holding time?		Yes	<b>✓</b>	No 🗌			
Container/Temp E	Blank temperature		Coole	er Temp:	6°C		NA $\square$	
Water - VOA vial	ls have zero headspace / no	bubbles?	Yes	✓	No 🗆	No VOA vials subm	nitted $\square$	
Sample labels ch	necked for correct preservation	n?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH<2)?		Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗆			
		(Ice Type	: BLU	JE ICE )	)			
* NOTE: If the "N	No" box is checked, see com	ments below.						
	=======			===		======	====	======
Client contacted:		Date contacte	ed:			Contacted	I by:	
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

	when Quanty Counts		Telephone:	5//-232-9202 F	IX: 923-23	2-9209	
Monterey Ba	ny Analytical	Client Project II	D: MPWMD	Date Sample	ed: 11	/15/10	
4 Justin Cour	t Suite D			Date Receiv	ed: 11	/17/10	
4 Justin Cour	it, Suite D	Client Contact:	David Holland	Date Extract	ted: 11	/17/10	
Monterey, Ca	A 93940	Client P.O.:		Date Analyz	zed 11	/17/10	
		Light Gas	Hydrocarbons*				
Extraction method	RSK 174/175	Analytic	cal methods RSK174/175		Wo	ork Order:	1011503
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments
001A	ASR 1	W	0.54		1	N/A	
					<u> </u>		
	eporting Limit for DF =1;  Deporting means not detected at or	W	0.4			μg/L	
	bove the reporting limit	S	NA			NA	
* water samples	are reported in $\mu g/L$ .						
%SS = Percent I	Recovery of Surrogate Standard						
DF = Dilution F							

W.O. Sample Matrix: Water

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

BatchID: 54410

WorkOrder 1011503

#### QC SUMMARY REPORT FOR RSK174/175

QC Matrix: Water

EPA Method RSK174/175	Extra	ction RSI	K 174/17	5				5	Spiked San	nple ID	: N/A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Ethane	N/A	2.38	N/A	N/A	N/A	88.6	89.8	1.38	N/A	N/A	80 - 120	20
Ethene	N/A	3.08	N/A	N/A	N/A	88.8	89.7	0.985	N/A	N/A	80 - 120	20
Methane	N/A	1.17	N/A	N/A	N/A	108	107	0.884	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 54410 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1011503-001A	11/15/10 1:14 PM	1 11/17/10	11/17/10 5:08 PM				

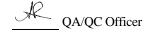
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

ELAP Certification Number: 2385

Tuesday, August 30, 2011

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 **Lab Number:** AA78437

Collection Date/Time: 7/20/2011 13:45

Sample Collector: LEAR J

Submittal Date/Time: 7/20/2011 16:30 Sample ID

	Sam	ple Descrip	otion: MW1				
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Alkalinity, Total (as CaCO3)	2320B	mg/L	131		2		7/22/2011
Ammonia-N	4500NH3 D	mg/L	Not Detected		0.05		7/21/2011
Boron	EPA200.7	mg/L	Not Detected		0.05		7/29/2011
Calcium	EPA200.7	mg/L	44		0.5		7/29/2011
Chloramines	SM4500-CI G	mg/L	Not Detected		0.05		7/20/2011
Chloride	EPA300.0	mg/L	28		1	250	7/21/2011
Dissolved Organic Carbon	SM5310-C	mg/L	1.1	E	0.2		7/29/2011
Gross Alpha	EPA900.0	pCi/L	2.06 ± 1.39	E		15	8/23/2011
Haloacetic Acids	EPA552	ug/L	5.6	E		60	8/4/2011
Iron	EPA 200.7	ug/L	114		10		7/29/2011
Iron, Dissolved	EPA 200.7	ug/L	Not Detected		10	300	7/29/2011
Kjehldahl Nitrogen	4500-NH3 B,C.E	mg/L	0.5	E	0.2		7/21/2011
Magnesium	EPA200.7	mg/L	11		0.5		7/29/2011
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected		10	50	7/29/2011
Manganese, Total	EPA 200.7	ug/L	Not Detected		10	50	7/29/2011
Methane	EPA174/175	ug/L	Not Detected		0.4		7/25/2011
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	45	7/21/2011
Nitrate as NO3-N	EPA300.0	mg/L	0.08		0.05	10	7/21/2011
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected		0.05	1.00	7/21/2011
o-Phosphate-P	EPA300.0	mg/L	Not Detected		0.05		7/21/2011
oH (Laboratory)	4500-H+B	STD. Units	7.6				7/20/2011
Phosphorus, Total	HACH 8190	mg/L	0.11		0.03		8/4/2011
Potassium	EPA200.7	mg/L	2.8		0.1		7/29/2011
QC Anion Sum x 100	Calculattion	%	98%				8/1/2011

mg/L: Milligrams per liter (=ppm)

ug/L : Micrograms per liter (=ppb)

PQL: Practical Quantitation Limit

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

 $\mathsf{D} = \mathsf{Method}$  deviates from standard method due to insufficient sample for MS/MSD



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net ELAP Certification Number: 2385

Tuesday, August 30, 2011

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085

Lab Number: AA78437

Collection Date/Time: 7/20/2011 13:45 Sample Collector: LEAR J

Submittal Date/Time: 7/20/2011 16:30 Sample ID

	Sa	ımple Descrip	otion: MW1				
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
QC Anion-Cation Balance	Calculaltion	%	2				8/1/2011
QC Cation Sum x 100	Calculaltion	%	103%				8/1/2011
Sodium	EPA200.7	mg/L	43		0.5		7/29/2011
Specific Conductance (E.C)	2510B	umhos/cm	491		1	900	7/20/2011
Sulfate	EPA300.0	mg/L	68		1	250	7/21/2011
Total Nitrogen	Calculation	mg/L	0.6		0.5		8/15/2011
Total Organic Carbon	SM5310C	mg/L	1.1		0.20		8/1/2011
Total Radium 226	EPA903.0	pCi/L	0.154±.266	Е		3	8/24/2011
Trihalomethanes	EPA524.2	ug/L	67	E		80	7/28/2011

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

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

 $\label{eq:decomposition} D = \mbox{Method deviates from standard method due to insufficient sample for MS/MSD}$ 



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montereybayanalytical@usa.net ELAP Certification Number: 2385

Tuesday, August 30, 2011

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 Lab Number: AA78438

Collection Date/Time: 7/20/2011 13:30 Sample Collector: LEAR J

Submittal Date/Time: 7/20/2011 16:30 Sample ID

Analyte         Method         Unit         Result         Qual         PQL         MCL           Alkalinity, Total (as CaCO3)         2320B         mg/L         130         2           Ammonia-N         4500NH3 D         mg/L         Not Detected         0.05           Boron         EPA200.7         mg/L         Not Detected         0.05           Calcium         EPA200.7         mg/L         38         0.5           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05           Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         0.2           Magnesium         EPA200.7					tion: ASR1	ple Descrip	Sam	
Ammonia-N         4500NH3 D         mg/L         Not Detected         0.05           Boron         EPA200.7         mg/L         Not Detected         0.05           Calcium         EPA200.7         mg/L         38         0.5           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05           Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Manganesium         EPA200.7         ug/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50	Date Analyzed	MCL	PQL	Qual	Result	Unit	Method	Analyte
Boron         EPA200.7         mg/L         Not Detected         0.05           Calcium         EPA200.7         mg/L         38         0.5           Chloramines         SM4500-Cl G         mg/L         Not Detected         0.05           Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         ug/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         0.4 </td <td>7/22/2011</td> <td></td> <td>2</td> <td></td> <td>130</td> <td>mg/L</td> <td>2320B</td> <td>Alkalinity, Total (as CaCO3)</td>	7/22/2011		2		130	mg/L	2320B	Alkalinity, Total (as CaCO3)
Calcium         EPA200.7         mg/L         38         0.5           Chloramines         SM4500-CI G         mg/L         Not Detected         0.05           Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA900.7         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         Not Detected         0.2           Magnesium         EPA200.7         mg/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50	7/21/2011		0.05		Not Detected	mg/L	4500NH3 D	Ammonia-N
Chloramines         SM4500-CI G         mg/L         Not Detected         0.05           Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         ug/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L <td< td=""><td>7/29/2011</td><td></td><td>0.05</td><td></td><td>Not Detected</td><td>mg/L</td><td>EPA200.7</td><td>Boron</td></td<>	7/29/2011		0.05		Not Detected	mg/L	EPA200.7	Boron
Chloride         EPA300.0         mg/L         27         1         250           Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         mg/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA300.0         mg/L         Not Detected         0.4         1         45           Nitrate as NO3-N         EPA300.0         mg/L         Not Detected         1         45           Nitritic as NO2-N         EPA30	7/29/2011		0.5		38	mg/L	EPA200.7	Calcium
Dissolved Organic Carbon         SM5310-C         mg/L         1.3         E         0.2           Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         ug/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         0.4         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4         45           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P <td>7/20/2011</td> <td></td> <td>0.05</td> <td></td> <td>Not Detected</td> <td>mg/L</td> <td>SM4500-CI G</td> <td>Chloramines</td>	7/20/2011		0.05		Not Detected	mg/L	SM4500-CI G	Chloramines
Gross Alpha         EPA900.0         pCi/L         0.540 ± 1.54         E         15           Haloacetic Acids         EPA552         ug/L         16         E         60           Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         ug/L         Not Detected         10         50           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         0.4         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4         145           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           pH (Laborator	7/21/2011	250	1		27	mg/L	EPA300.0	Chloride
Haloacetic Acids   EPA552   ug/L   16   E   60     Iron   EPA 200.7   ug/L   94   10     Iron, Dissolved   EPA 200.7   ug/L   77   10   300     Kjehldahl Nitrogen   4500-NH3 B,C.E   mg/L   Not Detected   E   0.2     Magnesium   EPA200.7   ug/L   12   0.5     Manganese, Dissolved   EPA 200.7   ug/L   Not Detected   10   50     Manganese, Total   EPA 200.7   ug/L   Not Detected   10   50     Methane   EPA174/175   ug/L   Not Detected   0.4     Nitrate as NO3   EPA300.0   mg/L   Not Detected   1   45     Nitrate as NO3-N   EPA300.0   mg/L   0.09   0.05   10     Nitrite as NO2-N   EPA300.0   mg/L   Not Detected   0.05   1.00     O-Phosphate-P   EPA300.0   mg/L   Not Detected   0.05   1.00     O-Phosphate-P   EPA300.0   mg/L   Not Detected   0.05   1.00     O-Phosphate-P   EPA300.0   mg/L   Not Detected   0.05   1.00     STD. Units   7.6	7/29/2011		0.2	E	1.3	mg/L	SM5310-C	Dissolved Organic Carbon
Iron         EPA 200.7         ug/L         94         10           Iron, Dissolved         EPA 200.7         ug/L         77         10         300           Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected E         0.2           Magnesium         EPA200.7         mg/L         12         0.5           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           pH (Laboratory)         4500-H+B         STD. Units         7.6         7.6	8/23/2011	15		E	0.540 ± 1.54	pCi/L	EPA900.0	Gross Alpha
Iron, Dissolved	8/4/2011	60		E	16	ug/L	EPA552	Haloacetic Acids
Kjehldahl Nitrogen         4500-NH3 B,C.E         mg/L         Not Detected         E         0.2           Magnesium         EPA200.7         mg/L         12         0.5           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           pH (Laboratory)         4500-H+B         STD. Units         7.6         7.6	7/29/2011		10		94	ug/L	EPA 200.7	Iron
Magnesium         EPA200.7         mg/L         12         0.5           Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           D-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         0.05           DH (Laboratory)         4500-H+B         STD. Units         7.6         7.6         7.6	7/29/2011	300	10		77	ug/L	EPA 200.7	ron, Dissolved
Manganese, Dissolved         EPA 200.7         ug/L         Not Detected         10         50           Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           oH (Laboratory)         4500-H+B         STD. Units         7.6         7.6	7/21/2011		0.2	Е	Not Detected	mg/L	4500-NH3 B,C.E	Kjehldahl Nitrogen
Manganese, Total         EPA 200.7         ug/L         Not Detected         10         50           Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           pH (Laboratory)         4500-H+B         STD. Units         7.6         7.6	7/29/2011		0.5		12	mg/L	EPA200.7	Magnesium
Methane         EPA174/175         ug/L         Not Detected         0.4           Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05         1.00           pH (Laboratory)         4500-H+B         STD. Units         7.6         7.6	7/29/2011	50	10		Not Detected	ug/L	EPA 200.7	Manganese, Dissolved
Nitrate as NO3         EPA300.0         mg/L         Not Detected         1         45           Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05           pH (Laboratory)         4500-H+B         STD. Units         7.6	7/29/2011	50	10		Not Detected	ug/L	EPA 200.7	Manganese, Total
Nitrate as NO3-N         EPA300.0         mg/L         0.09         0.05         10           Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05           pH (Laboratory)         4500-H+B         STD. Units         7.6	7/25/2011		0.4		Not Detected	ug/L	EPA174/175	Methane
Nitrite as NO2-N         EPA300.0         mg/L         Not Detected         0.05         1.00           o-Phosphate-P         EPA300.0         mg/L         Not Detected         0.05           pH (Laboratory)         4500-H+B         STD. Units         7.6	7/21/2011	45	1		Not Detected	mg/L	EPA300.0	Nitrate as NO3
o-Phosphate-P EPA300.0 mg/L <b>Not Detected</b> 0.05 pH (Laboratory) 4500-H+B STD. Units <b>7.6</b>	7/21/2011	10	0.05		0.09	mg/L	EPA300.0	Nitrate as NO3-N
pH (Laboratory) 4500-H+B STD. Units <b>7.6</b>	7/21/2011	1.00	0.05		Not Detected	mg/L	EPA300.0	Nitrite as NO2-N
	7/21/2011		0.05		Not Detected	mg/L	EPA300.0	o-Phosphate-P
Phosphorus, Total HACH 8190 mg/L <b>0.30</b> 0.03	7/20/2011				7.6	STD. Units	4500-H+B	pH (Laboratory)
	8/4/2011		0.03		0.30	mg/L	HACH 8190	Phosphorus, Total
Potassium EPA200.7 mg/L <b>2.7</b> 0.1	7/29/2011		0.1		2.7	mg/L	EPA200.7	Potassium
QC Anion Sum x 100 Calculaltion % 97%	8/15/2011				97%	%	Calculattion	QC Anion Sum x 100
QC Anion-Cation Balance Calculaltion % 0	8/1/2011				0	%	Calculaltion	QC Anion-Cation Balance
QC Cation Sum x 100 Calculaltion % 97%	8/1/2011				97%	%	Calculaltion	QC Cation Sum x 100
Sodium EPA200.7 mg/L <b>41</b> 0.5	7/29/2011		0.5		41	mg/L	EPA200.7	Sodium

mg/L: Milligrams per liter (=ppm)

ug/L : Micrograms per liter (=ppb)

PQL: Practical Quantitation Limit

H = Analyzed ouside of hold time

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

 $\mathsf{D} = \mathsf{Method}$  deviates from standard method due to insufficient sample for MS/MSD



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net ELAP Certification Number: 2385

Tuesday, August 30, 2011

MPWMD Joe Oliver P.O. Box 85

Monterey, CA 93442-0085 **Lab Number: AA78438** 

Collection Date/Time: 7/20/2011 13:30 Sample Collector:

Submittal Date/Time: 7/20/2011 16:30 Sample ID

Sample Description: ASR1 PQL Method Unit MCL Analyte Result Qual Date Analyzed Specific Conductance (E.C) 2510B umhos/cm 486 1 900 7/20/2011 Sulfate EPA300.0 1 250 7/21/2011 mg/L 66 Total Nitrogen **Not Detected** 0.5 8/15/2011 Calculation mg/L Total Organic Carbon SM5310C mg/L 1.2 0.20 8/2/2011 Total Radium 226 EPA903.0 pCi/L 0.051 ± 0.223 E 8/24/2011 3

LEAR J

92

Trihalomethanes
Sample Comments:

Report Approved by:

ug/L

David Holland, Laboratory Director

80

7/28/2011

EPA524.2



A1G1817

08/05/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 07/22/2011 08:15.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



08/05/2011

#### **Case Narrative**

#### **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1G1817 COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

Final.rpt



#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Lab Sample ID:** A1G1817-01 **Sample Date:** 07/20/2011 13:30

Sample Type: Grab

Sampled by: J Lear Matrix: Water

Sample Description: MW1 // 78437

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A108864	07/29/11	07/29/11	
Total Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A109086	08/01/11	08/01/11	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	18	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Bromoform	EPA 524.2	0.88	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Chloroform	EPA 524.2	40	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Dibromochloromethane	EPA 524.2	8.2	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Surrogate: Bromofluorobenzene	EPA 524.2	107 %		Acceptable ra	ange: 70-130 %	ó			
*Total Trihalomethanes, EPA 524.2		67	0.50	ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A109135	08/02/11	08/04/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	5.6	1.0	ug/L		A109135	08/02/11	08/04/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	117 %		Acceptable ra	ange: 70-130 %	ć			
*Total Haloacetic Acids, EPA 552.2		5.6	2.0	ug/L					



#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Lab Sample ID:** A1G1817-02 **Sample Date:** 07/20/2011 13:45

Sample Type: Grab

Sampled by: J Lear Matrix: Water

Sample Description: ASR 1 // 78438

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.3	0.20	mg/L	1	A108864	07/29/11	07/29/11	
Total Organic Carbon	SM 5310 C	1.2	0.20	mg/L	1	A109154	08/02/11	08/02/11	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	25	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Bromoform	EPA 524.2	0.98	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Chloroform	EPA 524.2	57	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Dibromochloromethane	EPA 524.2	9.6	0.50	ug/L	1	A108894	07/28/11	07/28/11	
Surrogate: Bromofluorobenzene	EPA 524.2	107 %		Acceptable ra	nge: 70-130 9	%			
Total Trihalomethanes, EPA 524.2		92	0.50	ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	2.3	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A109135	08/02/11	08/04/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	14	1.0	ug/L	1	A109135	08/02/11	08/04/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	108 %		Acceptable ra	nge: 70-130 9	%			
Total Haloacetic Acids, EPA 552.2		16	2.0	ug/L					



#### **General Chemistry Quality Control Report**

° 9	Ger	ierai Che	ıııısıı y	Quality (		rehour					
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A108864				Analyst:	AJT	Prepared	: 07/29/2	011			
Blank (A108864-BLK1) SM 531	0 C - Quality Contro	I									
Dissolved Organic Carbon	ND	0.20	mg/L							07/29/11	
Blank Spike (A108864-BS1) SM	/I 5310 C - Quality Co	ontrol									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120			07/29/11	
Blank Spike Dup (A108864-BSD1	) SM 5310 C - Qua	ality Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120	1	20	07/29/11	
Batch: A109086				Analyst:	SMP	Prepared	· 08/01/2	<b>011</b>			
				Analyst.	Olvii	Troparca	. 00/01/2				
	0 C - Quality Contro									00/6///	
Total Organic Carbon	ND	0.20	mg/L							08/01/11	
	/I 5310 C - Quality Co										
Total Organic Carbon	10	0.20	mg/L	10		103	80-120			08/01/11	
Blank Spike Dup (A109086-BSD1	) SM 5310 C - Qua	ality Control									
Total Organic Carbon	10	0.20	mg/L	10		103	80-120	0	20	08/01/11	
Matrix Spike (A109086-MS1) Si	M 5310 C - Quality C	ontrol				Source	: A1G168	0-02			
Total Organic Carbon	12	0.20	mg/L	10	1.6	100	80-120			08/01/11	
Matrix Spike Dup (A109086-MSD	1) SM 5310 C - Qu	ality Control	1			Source	: A1G168	0-02			
Total Organic Carbon	12	0.20	mg/L	10	1.6	100	80-120		20	08/01/11	
Batch: A109154				Analyst:	SMP	Prepared	: 08/02/2	011			
Blank (A109154-BLK1) SM 531	0 C - Quality Contro	I									
Total Organic Carbon	ND	0.20	mg/L							08/02/11	
Blank Spike (A109154-BS1) SM	// 5310 C - Quality Co	ontrol									
Total Organic Carbon	11	0.20	mg/L	10		105	80-120			08/02/11	
	) CM 5240 C C	alita Comtue I	-								
Blank Spike Dup (A109154-BSD1 Total Organic Carbon	11 SM 5310 C - Qua	0.20	mg/L	10		105	80-120	0	20	08/02/11	
·			⊎, ⊏	.0						33.3 <u>2</u> /11	
	M 5310 C - Quality C		ma/l	40	2.0		A1G175 80-120	2-04		08/02/11	
Total Organic Carbon	12	0.20	mg/L	10	2.0	99	00-120			00/02/11	
							A1G185	9-03			
	M 5310 C - Quality C										
Matrix Spike (A109154-MS2) Si Total Organic Carbon	<b>M 5310 C - Quality C</b> 15	0.20	mg/L	10	4.8	99	80-120			08/02/11	
Total Organic Carbon	15	0.20	_	10	4.8		80-120 A1G175	52-04		08/02/11	
Total Organic Carbon  Matrix Spike Dup (A109154-MSD	15	0.20	_	10	2.0				20	08/02/11	
	15 <b>1) SM 5310 C - Qu</b> 12	0.20 ality Control 0.20	l mg/L			Source 98	: A1G175	1	20		

A1G1817 FINAL 08052011 1615



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A108894				Analyst:	JGB	Prepare	d: 07/28/2	011			
Blank (A108894-BLK1)	2 - Quality Contro	I									
Bromodichloromethane	ND	0.50	ug/L							07/28/11	
Bromoform	ND	0.50	ug/L							07/28/11	
Chloroform	ND	0.50	ug/L							07/28/11	
Dibromochloromethane	ND	0.50	ug/L							07/28/11	
Surrogate: Bromofluorobenzene	5.6			5.0		111	70-130			07/28/11	
Blank Spike (A108894-BS1) EPA	524.2 - Quality Co	ontrol									
romodichloromethane	9.9	0.50	ug/L	10		99	70-130			07/28/11	
romoform	9.9	0.50	ug/L	10		99	70-130			07/28/11	
Chloroform	11	0.50	ug/L	10		108	70-130			07/28/11	
Dibromochloromethane	9.4	0.50	ug/L	10		94	70-130			07/28/11	
Surrogate: Bromofluorobenzene	4.9			5.0		98	70-130			07/28/11	
Blank Spike Dup (A108894-BSD1)	EPA 524.2 - Qua	lity Control									
romodichloromethane	10	0.50	ug/L	10		100	70-130	0	30	07/28/11	
romoform	9.8	0.50	ug/L	10		98	70-130	2	30	07/28/11	
hloroform	11	0.50	ug/L	10		112	70-130	4	30	07/28/11	
ibromochloromethane	9.6	0.50	ug/L	10		96	70-130	2	30	07/28/11	
urrogate: Bromofluorobenzene	4.9			5.0		98	70-130			07/28/11	
atch: A109135				Analyst:	KHH/X	Prepare	d: 08/02/2	011			
Blank (A109135-BLK1) EPA 552.	2 - Quality Contro	I									
•										00/04/44	
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							08/04/11	
Dibromoacetic Acid (DBAA)	ND ND	1.0 1.0	ug/L ug/L							08/04/11 08/04/11	
			-								
ibromoacetic Acid (DBAA) iichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA)	ND	1.0	ug/L							08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA)	ND ND	1.0 1.0	ug/L ug/L							08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (TCAA)	ND ND ND	1.0 1.0 2.0	ug/L ug/L ug/L	25		110	70-130			08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND ND ND ND	1.0 1.0 2.0 1.0	ug/L ug/L ug/L	25		110	70-130			08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND ND ND ND	1.0 1.0 2.0 1.0	ug/L ug/L ug/L	25		110	70-130 70-130			08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ibichloroacetic Acid (DCAA) Idonobromoacetic Acid (MBAA) Idonochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A109135-BS1) EPA Ibromoacetic Acid (DBAA)	ND ND ND 27 1.552.2 - Quality Co	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L							08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) Ionochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A109135-BS1) EPA Ibromoacetic Acid (DBAA) Ichloroacetic Acid (DCAA)	ND ND ND 27 • 552.2 - Quality Co	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10		104	70-130			08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A109135-BS1) ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA)	ND ND ND 27 • 552.2 - Quality Co	1.0 1.0 2.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10		104 80	70-130 70-130			08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (MCAA) surrogate: 2,3-Dibromopropionic Acid lank Spike (A109135-BS1) ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA)	ND ND ND 27 2552.2 - Quality Co 10 8.0 9.8	1.0 1.0 2.0 1.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10		104 80 98	70-130 70-130 70-130			08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (MCAA) richloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid Ilank Spike (A109135-BS1) Ibromoacetic Acid (DBAA) ibromoacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA)	ND ND ND 27 <b>1552.2 - Quality Co</b> 10 8.0 9.8 19	1.0 1.0 2.0 1.0 2.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20		104 80 98 96	70-130 70-130 70-130 70-130			08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A109135-BS1) Islank Spike (A109135-BS1) Ichloroacetic Acid (DBAA) Ionobromoacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Islank Spike (A109135-BS1) Ionochloroacetic Acid (MCAA) Ionochloroacetic Acid (MCAA) Ionochloroacetic Acid (TCAA) Islank Spike (A109135-BS1) Ionochloroacetic Acid (MCAA) Ionochloroacetic Acid (TCAA) Islank Spike (A109135-BS1) Ionochloroacetic Acid (MCAA) Ionochloroacetic Acid (TCAA)	ND ND ND 27 <b>552.2 - Quality Co</b> 10 8.0 9.8 19	1.0 1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10		104 80 98 96 110	70-130 70-130 70-130 70-130 70-130			08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
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ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (MCAA) surrogate: 2,3-Dibromopropionic Acid lank Spike (A109135-BS1) ibromoacetic Acid (DBAA) ichloroacetic Acid (DCAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (MCAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) surrogate: 2,3-Dibromopropionic Acid lank Spike Dup (A109135-BSD1) ibromoacetic Acid (DBAA)	ND ND ND 27 2552.2 - Quality Co 10 8.0 9.8 19 11 31 EPA 552.2 - Qua	1.0 2.0 1.0 2.0 1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10 25		104 80 98 96 110	70-130 70-130 70-130 70-130 70-130		30 30	08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11 08/04/11	
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A1G1817 FINAL 08052011 1615



#### **Organics Quality Control Report**

		•		•	•						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A109135				Analyst:	KHH/X	Prepare	d: 08/02/2	011			
Matrix Spike (A109135-MS1) E	PA 552.2 - Quality Co	ontrol				Source	e: A1G170	06-05			
Dibromoacetic Acid (DBAA)	9.9	1.0	ug/L	10	ND	99	70-130			08/04/11	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10	ND	103	70-130			08/04/11	
Monobromoacetic Acid (MBAA)	9.2	1.0	ug/L	10	ND	92	70-130			08/04/11	
Monochloroacetic Acid (MCAA)	19	2.0	ug/L	20	ND	97	70-130			08/04/11	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10	ND	104	70-130			08/04/11	
Surrogate: 2,3-Dibromopropionic Acid	d 31			25		123	70-130			08/04/11	
Matrix Spike Dup (A109135-MSD	01) EPA 552.2 - Qua	lity Contro	I			Source	e: A1G170	6-05			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	107	70-130	8	30	08/04/11	
Dichloroacetic Acid (DCAA)	8.2	1.0	ug/L	10	ND	82	70-130	23	30	08/04/11	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10	ND	102	70-130	11	30	08/04/11	
Monochloroacetic Acid (MCAA)	22	2.0	ug/L	20	ND	110	70-130	12	30	08/04/11	
Trichloroacetic Acid (TCAA)	11	1.0	ug/L	10	ND	111	70-130	6	30	08/04/11	
Surrogate: 2,3-Dibromopropionic Acid	d 28			25		112	70-130			08/04/11	



#### **Certificate of Analysis**

08/05/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- · BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

mg/L: Milligrams/Liter (ppm) M: Method Detection Limit MDA: Min. Detected Activity Milligrams/Kilogram (ppm) MPN: Most Probable Number mg/Kg: RL: Reporting Limit Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

A1G1817 FINAL 08052011 1615

www.bsklabs.com

# A1G1817

# **Monterey Bay Analytical**

**Monte6227** 

07222011

Turnaround:

Standard

Due Date:

08/05/2011

Printed: 07/22/2011 18:49:52

# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

Packing Material:	WET BLUE NONE	Cooling Method:	îR	CAS UPS GSO WALK-IN SIVC FED EX OTHER	SO WALK-II	CAR UPS (	ombjang sacatoa.	i i
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Company	newered by (algulating and Film (Name)							
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	78437	FW			MW 1	7/20/11 13:30		-
	Comments / Station Code	Matrix *		Sample Description / Location *		Sampled Date Time	Bottles	Sample #
TTH DOI TOO	SO = Solid	aste Water - BW − B 1 Water - DW = Dri	CWW = Chorinated Waste Water BW = Bottled Water Vaste Water SW = Storm Water DW = Drinking Water	CFW = Clorinated Finished Water CWW = FW = Finished Water WW = Waste Water		RSW = Raw Surface Water RGW = Raw Ground Water	"	Matrix
С		2 Day** ☐1 Day**	STD s Day** 2 Day** 1 Day**	STD Level II			ľ	Lear, J.
	System No. *	rcharge	Result Request ** Surcharge	QC Request		ed / Signature	Sampler Name Printed / Signature	Sampl
	atory Compliance		Mail Only	How would you like your completed results sent! TE-Mail Fax FDD	esults sent?	your completed r	vould you like	Howv
	Other:		Quote # 464	Monterey Peninsula Water Management District	ater Manag	eninsula W	nterey Pe	Mo
	_		PO#				Project Information:	Projec
-	CDHS Presno Co EPA	940		Monterey CA	M		4 Justin Ct.	4 J.
	Carlion Conies:		Zip *	State *	City *		\$5 *	Address
ANALYSIS REQUESTED	음	E-mail 4MB/	ind	David Holland	alytical	Monterey Bay Analytical	onterey	Ž
	)-357-6227 FAX*#(B31)-641-0734	Phone * # (831)-357-6227		Report Attention *		me *:	Client/Company Name *:	Client
BSTN-nes	TEMP:						Required Fields	* Requi
III III III	bs.com	93 • www.bsklal	(559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com	(559) 497-2888	FORIES	UUIN LABORATORIES		C
	_	0.00	Control of Control Control		į		7	7

Notice Payment for services randeed as motel herein are the in full within 30 days from what invoiced. How so park account bulinoss are steemed delinquent. Delinquent behaves are stigled to monthly expressive, a bullet and altered unknown as in delinquent accounts, costs of collections, medicing, amonts of its interned prior to or in linguism whether concluded by judgened, swittened, contactings or otherwise. The person signing for the cheek Company expressive acknowledges that they are either the Court or advanted agented to the Clemina of the responsible for payment for many time across on this Chain of Custody. Any modification of the analysis requested clim type or quantities, will be stood and agreed upon this Chain of Custody. The tirm around time for any samples seen at other 370 pm will begin the medicalises day.

SP-E-Coll 200 Advancials SP-FL-0012-00 (Analytical)

Page 10 of 12

07/22/201

AIG1817

07/22/2011

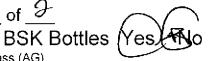
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ample integrity Pg. $$ of $\angle$	
ate Received 719Mn	IN TOOL HALL TOOK HALL TOOK HALL TOOL HALL TOOK HAD TOOK HOLD TO

Section 1- Receiving Information		<del></del>		1
Sample Transport: ONTRAC UI	PS PMS Walk-In B	SK <u>-</u> Courier GS	O Fed Exp.	Other:
Samples arrived at lab on same day		<i>X</i> )		
Coolers/Ice Chests Description/Ter				İ
1) _ 2)	) 4)	"=		
Was Temperature In Range:			· \	ved Ambient: Y N
Describe type of packing materials:	Bulble Wrap Foam	Packing Pear	nuts Faper	Other:
Initial Receipt: BSK-Visalia	BSK-Bakersfield	BSK-SAC	BSK-FAI	-
Were ice chest custody seals prese	ent? Y 🕥 Intact:	Y 슚		
Section 2- COC Info.	Completed Info From Yes No Container			Completed Info From Yes No Container
Was COC Received		Analysis Reque		
Date Sampled		Hold times less	than 72hr	
Time Sampled		Client Name		
Sample ID		Address		
Special Storage/Handling Ins.		Telephone #		
Section 3- Bottles / Analysis			Yes No	N/A Comment
Did all bottles arrive unbroken ar	nd intact?		100	107.
Were bottle custody seals prese	<del>,</del>			
Were bottle custody seals intact	···	<u> </u>		
Did all bottle labels agree with C				
Were correct containers used for			1	
Were correct preservations used		d?		
Was a sufficient amount of samp				
Were bubbles present in VOA Vi				
Were Ascorbic Acid Bottles rece				
Section & Comments / Diseases	anion.			
Section 4- Comments / Discrepar	Cicles			
Sample(s) Split/Preserve: Yes (K	ontainer:	Preservation	n:	Dt/Time/Init
	Container:	Preservatio	n:	Dt/Time/Init
Was Client Service Rep. notified of	discrepancies: Yes No	NVA) CSR:	Not	ified By/Time:
Explanations / Comments				
Report Comment Entered:				
Laheled by \$ 16(3)	ahels checked by:	alling	RHSH Paged	by:

(4/11)

Sample Integrity  $Pg \mathcal{Y} of \mathcal{Y}$ 





DON DO	ouics (		∨و	84.1	EAR HIANN ABBY MBAR IBNIN NIBN NBAR MAAN, BRYRY NA
250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)	1 1	<del>_</del> _		ī	l l ı
Container(s) Received	1-2				
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>					
None (p) White Cao					
! None (n) Blue Cap w/NH4 + Buffer					
HNO <sub>3</sub> (p) Red Cap					
HaSO, (b) Tellow Cap					
					$\sim$
EDA (p) Brown Cap/Label					)
	Stration 1	6			
Other:					
Dissolved Oxygen 300ml (g)					
CONTROL OF THE PROPERTY OF THE		p. 15000000000000000000000000000000000000		5	
250ml (AG) None		770000000			
250ml (AG) H <sub>2</sub> SO <sub>4</sub> ,COD Yellow Label	, person, i militaro (1920)	troporoim Por Tible	F-::::::::::::::::::::::::::::::::::::		The second secon
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515,547 Blue Label	distriction	geneer age 77%			
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label	waceries and a second	gegenervodiboğlik	L. J. CHOS SERVICES		
250ml (AG) NH <sub>4</sub> Cl 552 Purple Label	150 1 PS**000				
250ml (AG) EDA DBPs Brown Label	1 1179 ASSOSSO: 1,3	<u>go roppatijasen</u>	The second secon		<u> 2000 (2007) (100 (100 100 100 100 100 100 100 100 1</u>
250ml (AG) Other:					
ZDUID (AG) CITIETES OF Translational substitutions of the		per, suger			
BEFORE LEGACINE AND RESERVED AND SERVED AND	1391 1.4.036	-96606666665.56-	19024:4018		i i i i i i i i i i i i i i i i i i i
500ml (AG) None		000000000000000000000000000000000000000		/	
500ml (AG) H <sub>2</sub> SO <sub>4</sub> Yellow Label	r respective	i. i.e.	nnohimaas		
The A Man wall have a second of the announce o			31,000-1,011117 1000-1,011117		<b></b>
1 Liter (AG) None	100v 1t	inneren San Jak			((00
	i gasa, sajiri				
Filter (AG) Na <sub>2</sub> G <sub>2</sub> C <sub>3</sub>					10010000000000000000000000000000000000
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> # H <sub>2</sub> SO <sub>4</sub> 549					
1 Liter (AG) NaOH+ZnAc Sulfide	AVAIL OF THE PARTY				
907 * 100 3000 1000 10					
40ml VOA Vial Clear – HCL					USD Tribet
40ml VOA Vial Clear – Buffer pH 4				\	
40ml VOA Vial Clear – None Aa	×3			\	
40ml VOA Vial Amber = Na₂S₂O₃	-3		1 (1990)		
40ml VOA Vial Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505					
40ml VOA Vial Clear – H₃PO₄	3	370 mg			
				/	
Other	Site and	2005			
½ Gallon (p)					
Asbestos 1Liter Plastic/Foil			1955 2007		
Radon 200ml Clear (g)					
Low Level Hg/Metals Double Baggie					
Bioassay Jug					
Ampule					
PT Sample Bottle				1.0000	1
250 Clear Glass Jar					
500 Clear Glass Jar	A. Order States	- 38800000 344			
1 Liter Clear Glass Jar					W. T. C. C. (1982)
Plastic Bag	1.73	100000000		1000 2002	
Soil Tube Brass / Steel / Plastic	F-1		romani di	1 201 1550:61	awan :
Tedlar Bags			- tueiti		
The second secon	122		'cro55' 1		<u> </u>

# CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT TEST DESCRIPTION AND ANALYSES REQUESTED

853 Corporation Street Santa Paula, CA 93060 TEL: 805/392-2000 FAX: 805/525-4172 CA NELAP Certification No. 01110CA	Plea	Remarks 78437-78438	Sampling Fee:Pickup Fee:Pickup Fee:	Client Monterey Bay Analytical Services Customer Number: Address: 4 Justin Court, Suite D. Monterey CA 93940 Phone: 831-375-6227 Fax: 831-641-0734 Email Address: 4mbas@sbcglobal.net Contact Person: David Holland Project Name: MPWMD Purchase Order Number: Quote Number	
Critice & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: 209/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563	· <u>×</u>	Relinquished Date: Time: Holland, D. 8/15/11 16:00	Method of Sampling: Composite (C) Grab  Method of Sampling: Composite (C) Grab  Number of Containers  Type of Containers Glass (G) Plastic (P) V  Potable (P) Non-Potable (NP) Ag Water (Ag  Surface Water (SW) Monitoring Well (MW) Travel Blank (TB) Waste Water (WW) Drink  Soil (S) Sludge (St.G) Solid (St.D) Oil (O)  Bact: System (Sys) Source (SRC) Waste (V)	(G)  /OA (V) Metal Tube (MT)  gW)  Ground Water (GW)  ting Water (DW)	I at Manager
CA ELAP Certification No. 2670	Red ved By: Date: Time:	Relinquished Date Time:	Bact: Routine (ROUT) Repeat (RPT) Other (C Special (SPL)  Leaf Tissue (LT) Petiole Tissue (PET) Produce (A) H2SO4, (5) HNO3, (6) Na2S203, (7) Other (C Second Control of Control	DTH) Replace (RPL)  uce (PRD)  ) HCI	The second of th
Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435	Received By: Date: Time:	Relinquished Date: Time:		LYSES REQUESTED	

69:70:11-1105/71/80-VI

## Santa Paula - Condition Upon Receipt (Attach to COC)

26LN I CG2	<b>855</b> 0 1			<i>Monter</i>		-
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					Problem:	
	·		.12011	Phone Mu: :Date:	Person Contacted: Initiated By:	.7.
			.aoqu	ml/ enoda	Portoctus Control	ι
					Resolution:	
			-		Loplem:	
_				Date:	Initiated By:	
	.bəvl	pe resc	· ·	ons (i.e. temps Phone Mu	repancy Documentation: items above which are "No" or do not meet specification Person Contacted:	
		- T		sls):	ole Receipt, Login and Verification completed by (initia	Samı
		-	very.	ilsb del rof O	OD of the containers and include a copy of the CO	Attac
	oN	(e)	V/N	Speig	Have rush or project due dates been checked and accep	9
	•	οN	(Kg	Stqi	Were all analyses within holding times at time of recei	.ζ
		ONF	W. Com		VOAs checked for Headspace?	t
EGF	A(V)	οN	Yes	y preserved?	Were all bottles requiring sample preservation properly	3.
		oV	(e)	••	Did bottle labels correspond with the client's ID's?	7
		. oN	(E)	કડ	ple Verification, Labeling and Distribution: Were all requested analyses understood and acceptable	Sam L
•	pels.	lsi tniro	t pue s	sə1/sbod1əm 1	and date the COC, obtain LIMS sample numbers, selec	ngi2
•	V/N	οN	<b>%</b> \(\)		Were sample custody seals intact?	۶.
		oN		leaks etc.)	Were samples received intact? (i.e. no broken bottles, I	t
i,	Y/N	oN	(Sə)	ડે	Do the number of bottles received agree with the COC	Έ.
Inres	ist sture fai es/Bacti's	for temp [.'s/rush	t contact T.H\stast	d on ice (ROI) for of receipt. Clien e time check for	Acceptable is above freezing to 6° C. Also acceptable is received received at room temperature (RRT) if sampled within one hour of must be documented below. If many packages are received at one prioritize further review. Please notify Microbiology personnel in Acceptable is above freezing to 6.	
	/	/	/	/b:	Number of ice chests/packages received: Were samples received in a chilled condition? Temps:	7 I
				•	ple Receipt:	•





August 26, 2011

Monterey Bay Analytical ServicesLab ID: SP 11082994 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 5 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.

Sample Results (2 pages): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### **Case Narrative**

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
MW 1	07/20/2011	08/17/2011	SP 1108299-001	DW
ASR 1	07/20/2011	08/17/2011	SP 1108299-002	DW

**Sampling and Receipt Information:** All samples were received, prepared and analyzed within the method specified holding times. All samples arrived at 9 °C. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	08/23/2011:212349 All analysis quality controls are within established criteria
	08/18/2011:209117 All preparation quality controls are within established criteria
903.0	08/24/2011:212487 All analysis quality controls are within established criteria
	08/23/2011:209273 All preparation quality controls are within established criteria

August 26, 2011 Lab ID : SP 1108299 Monterey Bay Analytical Services Customer : 2-19144

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.





August 26, 2011 Lab ID : SP 1108299-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : July 20, 2011-13:30

Monterey, CA 93940 Sampled By : Lear, J

Received On : August 17, 2011-09:30

Matrix : Drinking Water

Description : MW 1 Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units MCL/AL		Sample	Preparation	Sampl	e Analysis
Constituent	Result ± Ellor	MDA	Omts	Units WICL/AL		Date/ID	Method	Date/ID
Radio Chemistry P:1'5								
Gross Alpha	$2.06 \pm 1.39$	1.63	pCi/L	15/5	900.0	08/18/11:209117	900.0	08/23/11:212349
Total Alpha Radium (226)	$0.154 \pm 0.266$	0.439	pCi/L	3	903.0	08/23/11:209273	903.0	08/24/11:212487

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2 \* PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





August 26, 2011 Lab ID : SP 1108299-002

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : July 20, 2011-13:45

Monterey, CA 93940 Sampled By : Lear, J

Received On : August 17, 2011-09:30

Matrix : Drinking Water

Description : ASR 1 Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units MCL/AL		Sample	Preparation	Sampl	e Analysis
Constituent	Result ± Ellor	MDA	Omts	Units WCL/AL		Date/ID	Method	Date/ID
Radio Chemistry P:1'5								
Gross Alpha	$0.540 \pm 1.54$	2.28	pCi/L	15/5	900.0	08/18/11:209117	900.0	08/23/11:212349
Total Alpha Radium (226)	$0.051 \pm 0.223$	0.439	pCi/L	3	903.0	08/23/11:209273	903.0	08/24/11:212487

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2 \* PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = Assigned Value(Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





August 26, 2011 **Monterey Bay Analytical Services**  Lab ID : SP 1108299 : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	08/23/11:212349emv	CCV CCB	cpm cpm	10040	39.4 % 0.0600	38 - 47 0.15	
Gross Alpha	900.0	08/18/11:209117jmb (SP 1108308-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	150.4 150.4 150.4 150.4	0.01 99.4 % 87.1 % 87.9 % 0.8%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	08/24/11:212487mmf	CCV CCB	cpm cpm	10040	39.3 % 0.0500	38 - 47 0.15	
Total Alpha Radium (226)	903.0	08/23/11:209273fhh	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	17.85 17.85 17.85 17.85	0.02 66.7 % 58.7 % 50.5 % 15.0%	2 52-89 43-92 43-92 ≤35.5	

-		• .	
I)	etn	nıt	ion

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that BSD

the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD

and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation BSRPD

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

# **Analytical Report**

Monterey Bay Analytical	Monterey Bay Analytical Client Project ID: MPWMD	
4 Justin Court, Suite D		Date Received: 07/22/11
+ Justin Court, Buile B	Client Contact: David Holland	Date Reported: 07/27/11
Monterey, CA 93940	Client P.O.:	Date Completed: 07/25/11

WorkOrder: 1107618

July 27, 2011

Dear David:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: MPWMD,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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McCAMPBELL ANALYTICAL, INC.											CHAIN OF CUSTODY RECORD TURN AROUND TIME																							
1534 WILLOW PASS ROAD PITTSBURG, CA 94565-1701											T	UR	IN.	AR	OU	INI	) T	IM	E		D. 1.4		1	1		۳.	1	-	1	M				
Website: www.mccampbell.com Email: main@mccampbell.com											GeoTracker EDF PDF Excel Write On (DW)																							
Telephone: (877) 252-9262 Fax: (925) 252-9269											-	- 0	CO.	lla	CK	CI I	ועונ	200	- ment	11	10		-et I	XCC	CI.	-	£ <b>V</b> V	rite (	л	(DW)				
Report To: David Holland Bill To:										$\forall$						7	Anal	lysis	Rec	ques	it							ther	Т	Comments				
Company: Monterey Bay Analytical Services															-															$\neg$				
4 Justin Ct. Suite D													8015)			B&F				gene												Filter Samples		
Monterey, Ca 93940 E-Mail: 4mbas@sbcglobal.net												+			20 E				S						(02	6					for Metals			
Tele: (831) 641 - 0734 Fax: (831) 375 - 6227  Project #: Project Name: MPWMD									4	802	021)		/ 55	3	3		lors		8			8	7.60	/ 602					analysis:					
Project #:				-			-	_	MD					$\dashv$	602	2 / 8	8	1664	(418	NO	les)	Aroc		bicid		_	N.	0109	0109	-				Yes / No
Project Location:		eninsula	Water I	Mana	geme	nt D	isti	rict		-				$\dashv$	as Gas (602 / 8021	A 60	(801	ase (	bons	21 (F	sticie	1.5	ides)	Herl	(S)	2	Hs/	0.87	18/6	6020				
Sampler Signatur	e: Lear, J.			_			_			_	M	ETE	IOL	$\dashv$	l as	(EP	ē	S	ocar	/80	J. Pe	O	estic	0 0	S	(\$)	(PA)	/ 20	/ 200	010				
	LOCATION/ Field Point Name	SAMPLING		S	ers		MATRIX				METHOD PRESERVED				& TPH	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 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclars / 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)				
SAMPLE ID				Containers	Type Containers											EX O	el/N	una	uma	/109	8/8	82 P	141	151	624 /	625	IM.	tals (	als (3	/200				
		Date	Time	ıtai	Ö	L			a,				5		MTBE / BTEX	BT	Dies	etrol	etrol	2.2	2/ 60	8/8	7 / 8	90	4.27	5.27	S 023	7 Me	Met	00.7	ne			
	rvaine	Date	Time	l o	, pe	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO	Other	CBE	LBE	H as	tal P	tal P	A 50	A 50	09 V	A 50	A SI	A 52	A 52	A 85	- W	E	nd (2	Methane			
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	MW 1	7/20/11	13:30	3	voa	X				П				X													2.				Х		Т	78437
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David Holland 7			1600	1 11 21 00 -122/11									in	GO	OOD	CON	DIT	ION			/													
Relinquished By:	Date:	Time:	Rece	eived B	_						_		┪	HEAD SPACE ABSENT  DECHLORINATED IN LAB																				
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#### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1107618 ClientCode: MBAS □WaterTrax WriteOn □ EDF ☐ Excel ∏Fax ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 5 days David Holland Email: 4mbas@sbcglobal.net Accounts Payable Monterey Bay Analytical Monterey Bay Analytical cc: Date Received: 07/22/2011 PO: 4 Justin Court, Suite D 4 Justin Court, Suite D ProjectNo: MPWMD Monterey, CA 93940 Monterey, CA 93940 Date Printed: 07/22/2011 831-375-6227 FAX: 831-641-0734 Requested Tests (See legend below) 2 3 5 7 8 10 Lab ID Client ID Matrix Collection Date Hold 1 4 11 12 1107618-001 MW 1 Water 7/20/2011 13:30 Α 1107618-002 ASR 1 Water 7/20/2011 13:45 Α

#### Test Legend:

1	RSK174_W	2	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Melissa Valles

#### **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.

#### **Sample Receipt Checklist**

Client Name:	Monterey Bay Analytical			Date a	and Time Received:	7/22/2011	12:16:52 PM
Project Name:	MPWMD			Check	list completed and re	eviewed by:	Melissa Valles
WorkOrder N°:	<b>1107618</b> Matri	x: <u>Water</u>		Carrie	r: <u>UPS</u>		
		Chain of	Custody (0	COC) Informat	ion		
Chain of custody	present?	Ye	s 🗸	No 🗌			
Chain of custody	signed when relinquished ar	nd received? Ye	s 🗸	No 🗆			
Chain of custody	agrees with sample labels?	Ye	s 🗸	No 🗆			
Sample IDs note	ed by Client on COC?	Ye	s 🗸	No 🗆			
Date and Time of	of collection noted by Client or	n COC? Ye	s 🗸	No 🗆			
Sampler's name	noted on COC?	Ye	s 🗸	No 🗌			
		<u>Sam</u>	ple Receip	t Information			
Custody seals in	tact on shipping container/co	oler? Ye	s $\square$	No 🗌		NA 🗹	
Shipping contain	ner/cooler in good condition?	Ye	s 🗸	No 🗌			
Samples in prop	er containers/bottles?	Ye	s 🗸	No 🗌			
Sample containe	ers intact?	Ye	s 🗸	No 🗌			
Sufficient sample	e volume for indicated test?	Ye	s 🗸	No 🗆			
		Sample Preservat	tion and He	old Time (HT)	<u>Information</u>		
All samples rece	eived within holding time?	Ye	s 🗸	No 🗌			
Container/Temp	Blank temperature	Со	oler Temp:	15.8°C		NA 🗌	
Water - VOA via	Is have zero headspace / no	bubbles? Ye	s 🗸	No 🗆	No VOA vials subm	itted	
Sample labels ch	hecked for correct preservation	on? Ye	s 🗸	No 🗌			
Metal - pH accep	otable upon receipt (pH<2)?	Ye	s $\square$	No 🗆		NA 🗹	
Samples Receiv	ed on Ice?	Ye	s 🗸	No 🗆			
		(Ice Type: E	BLUE ICE	)			
* NOTE: If the "N	No" box is checked, see com	ments below.					
=====		=====			======		======
Client egetest		Data acreticate d			Cantago	b	
Client contacted:		Date contacted:			Contacted	Dy.	
Comments:							



Monterey Ba	y Analytical	Client Proje	ct ID: MPWMD	Date Sam	pled:	07/20/11	
4 Justin Cour	t Suite D			Date Rece	eived:	07/22/11	
4 Justin Cour	t, Suite D	Client Conta	act: David Holland	Date Extr	acted	07/25/11	
Monterey, Ca	A 93940	Client P.O.:		Date Ana	lyzed	07/25/11	
			Gas Hydrocarbons*				
Extraction method:  Lab ID	RSK 174/175  Client ID	Ana Matrix	alytical methods: RSK174/175  Methane		DF	Work Order: % SS	Comments
					<i>D</i> 1		Comments
1107618-001A	MW 1	W	ND		1	N/A	
1107618-002A	ASR 1	W	ND		1	N/A	
Don	porting Limit for DF =1;	***	0.4			-	
ND	means not detected at or	W S	0.4 NA			μg/L NA	
	are reported in µg/L.	5				1121	
%SS = Percent R	ecovery of Surrogate Standard						
DF = Dilution Fa	Ctor						

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

#### QC SUMMARY REPORT FOR RSK174/175

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 59937 WorkOrder: 1107618

EPA Method: RSK174/175	PA Method: RSK174/175 Extraction: RSK 174/175							Spiked Sample ID: N/A						
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)					
, analyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD		
Methane	N/A	1.17	N/A	N/A	N/A	109	109	0	N/A	N/A	80 - 120	20		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 59937 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1107618-001A	07/20/11 1:30 PM	07/25/11	07/25/11 11:45 AM	1107618-002A	07/20/11 1:45 PM	07/25/11	07/25/11 11:56 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

A QA/QC Officer



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

ELAP Certification Number: 2385

Page 1 of 2 Monday, January 10, 2011

Lab Number: AA71943

Collection Date/Time: 12/21/2010 16:00 Sample Collector: LEAR, J

Submittal Date/Time: 12/21/2010 16:35 Sample ID

	Sample Description: Injectate											
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed					
Alkalinity, Total (as CaCO3)	2320B	mg/L	137		2		12/27/2010					
Ammonia-N	4500NH3 D	mg/L	Not Detected		0.05		12/29/2010					
Arsenic, Total	EPA200.8	ug/L	Not Detected	l	1	10	12/22/2010					
Barium, Total	EPA200.8	ug/L	54		10	1000	12/22/2010					
Bicarbonate (as HCO3-)	2320B	mg/L	167		10		12/27/2010					
Boron	EPA200.7	mg/L	Not Detected	l	0.05		12/28/2010					
Calcium	EPA200.7	mg/L	45		0.5		12/28/2010					
Carbonate as CaCO3	2320B	mg/L	Not Detected	l	10		12/27/2010					
Chloramines	SM4500-CI G	mg/L	0.06	Н	0.05		12/27/2010					
Chloride	EPA300.0	mg/L	26		1	250	12/22/2010					
Dissolved Organic Carbon	SM5310-C	mg/L	1.6	Е	0.2		1/6/2011					
Fluoride	EPA300.0	mg/L	0.17		0.10	2.0	12/22/2010					
Gross Alpha	EPA900.0	pCi/L	2.14 ± 1.23	Е		15	1/1/2011					
Haloacetic Acids	EPA552	ug/L	20	Е		60	1/4/2011					
Hardness (as CaCO3)	2340B	mg/L	166		10		12/28/2010					
Iron	EPA 200.7	ug/L	15		10		12/28/2010					
Iron, Dissolved	EPA 200.7	ug/L	Not Detected	l	10	300	12/28/2010					
Kjehldahl Nitrogen	4500-NH3 B,C.E	mg/L	Not Detected	l	0.5		12/28/2010					
Langlier Index ( 15 deg. C)	2330B		-0.10				1/3/2011					
Langlier Index ( 60 deg. C)	2330B		0.50				1/3/2011					
Lithium	EPA200.8	ug/L	6		1		12/22/2010					
Magnesium	EPA200.7	mg/L	13		0.5		12/28/2010					
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected		10	50	12/28/2010					
Manganese, Total	EPA 200.7	ug/L	Not Detected		10	50	12/28/2010					
Methane	EPA174/175	ug/L	0.43	E	5		12/23/2010					
Molybdenum, Total	EPA200.8	ug/L	3		1	1000	12/22/2010					
Nickel, Total	EPA200.8	ug/L	2		10	100	12/22/2010					
Nitrate as NO3	EPA300.0	mg/L	Not Detected		1	45	12/22/2010					
Nitrate as NO3-N	EPA300.0	mg/L	Not Detected		0.05	10	12/22/2010					

mg/L: Milligrams per liter ug/L: Micrograms per liter PQL: Practical Quantitation Limit MCL: Maximum Contamination Level H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

Lab Number: AA71943

Collection Date/Time: 12/21/2010 16:00 Sample Collector: LEAR, J

Submittal Date/Time: 12/21/2010 16:35 Sample ID

Sample Description: Injectate											
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed					
Nitrite as Nitrogen	EPA300.0	mg/L	Not Detected	0.05	1.00	12/22/2010					
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	0.05	1.00	12/22/2010					
o-Phosphate-P	EPA300.0	mg/L	0.23	0.05		12/22/2010					
pH (Laboratory)	4500-H+B	STD. Units	7.6			12/21/2010					
Phosphorus, Total	HACH 8190	mg/L	0.46	0.03		12/22/2010					
Potassium	EPA200.7	mg/L	3.1	0.1		12/28/2010					
QC Anion Sum x 100	Calculattion	%	94%			12/28/2010					
QC Anion-Cation Balance	Calculattion	%	3			12/28/2010					
QC Cation Sum x 100	Calculattion	%	101%			12/28/2010					
QC Ratio TDS/SEC	Calculation		0.59			1/3/2011					
Selenium, Total	EPA200.8	ug/L	Not Detected	2	50	12/22/2010					
Sodium	EPA200.7	mg/L	44	0.5		12/28/2010					
Specific Conductance (E.C)	2510B	umhos/cm	527	1	900	12/20/2010					
Strontium, Total	EPA200.8	ug/L	237	5		12/22/2010					
Sulfate	EPA300.0	mg/L	72	1	250	12/22/2010					
Total Diss. Solids	2540C	mg/L	313	10	500	12/29/2010					
Total Nitrogen	Calculation	mg/L	Not Detected	0.5		12/29/2010					
Total Organic Carbon	SM5310C	mg/L	1.4 E	0.20	_	1/4/2011					
Total Radium 226	EPA903.0	pCi/L	0.000 ± 0.308 E	_	3	12/29/2010					
Trihalomethanes	EPA524.2	ug/L	<b>32</b> E		80	12/24/2010					
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected	1	30	12/22/2010					
Vanadium, Total	EPA200.8	ug/L	Not Detected	1	1000	12/22/2010					
Zinc, Total	EPA200.8	ug/L	311	10	5000	12/22/2010					

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A0L2039

01/07/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 12/29/2010 08:30.

If additional clarification of any information is required, please contact your Client Services Representative, Joni Blankfield at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Joni Blankfield

Client Services Representative

mt Amf O



01/07/2011

#### **Case Narrative**

#### **Work Order Information**

Client Name: Monterey Bay Analytical Submitted by: David Holland

Client Code:Monte6227Shipped by:ONTRACWork Order:A0L2039COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Custody Seals
Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Report ManagerReport FormatDavid HollandFAL Final Report.rpt

A0L2039 FINAL 01072011 1757



#### **Certificate of Analysis**

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

Report Issue Date: 01/07/2011 17:57 **Received Date: 12/29/2010** 

Received Time: 08:30

Lab Sample ID: A0L2039-01

Sample Date: 12/21/2010 16:00

Sample Type: Grab Matrix: Drinking Water

Sampled by: Lear, J.

Sample Description: Injectate // 71943

#### **General Chemistry**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.6	0.20	mg/L	1	A100207	01/06/11	01/06/11	_



#### **General Chemistry Quality Control Report**

					0						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A100207				Analyst: S	SAB	Prepared	: 01/06/20	011			
Blank (A100207-BLK1) SM 5310	C - Quality Control										
Dissolved Organic Carbon	ND	0.20	mg/L							01/06/11	
Blank Spike (A100207-BS1) SM	5310 C - Quality Con	trol									
Dissolved Organic Carbon	10	0.20	mg/L	10		102	80-120			01/06/11	
Blank Spike Dup (A100207-BSD1)	SM 5310 C - Quali	ty Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		102	80-120	0	20	01/06/11	



#### **Certificate of Analysis**

01/07/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Percent Recovered (surrogates) Present: 1 or more CFU/100mLs %: pCi/L: Picocuries per Liter NR· Non-Reportable RL Mult: **RL** Multiplier

A0L2039 FINAL 01072011 1757

### A0L2039

## **Monterey Bay Analytical**

Monte6227

12292010

David Holland

**MPWMD** 

Turnaround:

Standard

Due Date:

01/13/2011

Sample ID

Sample Description

Date Sampled

Lab Notes

A0L2039-01 Injectate

12/21/2010

Printed: 12/29/2010 18:23:58

Page 6 of 9

## BSK ANALYTICAL LABORATORIES

Required Fields

Chent/Company Name \*

Report Attention \*:

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

TEMP:

Monte6227 A0L2039

12/29/2010

Page 7 of 9

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	-

Shipping Method: Sample # Relinquished by: (Signature and Printed Name) Relinquished by: (Signature and Printed Name) Matrix Types: David Holland Sampler Name Printed / Signature How would you like your completed tesults sen? 🖊 F-Mail 🔲 Fax 🔲 FDD Project Information 4 Justin Ct Lear, J. Monterey Bay Analytical MPWMD Bottles RSW - Raw Surface Water RGW - Raw Ground Water 12/21/10 | 12/21/ Date CAG UPS GSO WALK-IN SIVC FED EX OTHER Time 200 ) SIMONTMA Cara a valgas Sample Description / Location \* Monterey Injectante **David Holland** STD Level II QC Request Company Company S STD 5 Day\*\* 2 Day\*\* 1 Day\* Mail Only Result Request \*\* Surcharge PO # Quote # 464 7ip \* Date Date 12/28/10 93940 Phone \* #: (831)-357-6227 E-mail: Cooling Method: Time Time 1600 ۵V Matrix \* 4MBAS@Sbcglobal.net Payment Received at Delivery: Received by (Signature and Print Name) Received by (Signature and Print Name) 71943 Comments / Station Code CDHS ☐ Fresno Cu ☐ Regulatory Compliance Electronic Data Transfer. Merced Co Tulare Co System No. \* Carbon Copies: WET SO = Solid BLUE FAX \* #(831)-641-0734 HONE  $\stackrel{\prec}{\Box}$ EPA 🗌 N N Check/Cash/Card PIA # Packing Material: ۷, DOC ANALYSIS REQUESTED Company Company 1101

12/29/2010 10

Sample Integrity	-	-	WORK				
Date Received 12(291							
Section 1- Receiving Information							
Sample Transport: ØNTRAC			BSK-Courier				****
Samples arrived at lab on same da	y sampled: Yes	N	lo X (If Yes-	Temperature	is not nee	eded)	
Coolers/Ice Chests Description/Te	emperature(s): (If	more than 4 re	ceived, list information ir	comment section	)		
1) <u>(</u> ) 2) _		3)		4)_			
Was Temperature In Range:							N N
Describe type of packing materia	ls: Bubble Wraj	p Foath	Packing Pean	uts Paper	Other	<u> </u>	
Initial Receipt: BSK-Visalia					BSK-FA		
Were ice chest custody seals pres	ent? Y N	Intact: Y	N)				
Section 2- COC Info.	Completed	Info From				npleted No	Info From Container
Was COC Received	Yes No	Container	Analysis Reque	ested	Yes	:NO	Container
Date Sampled			Any hold times l				
Time Sampled			Client Name		(		
Sample ID	حـــ		Address		7	•	
Special Storage/Handling Ins.			Telephone #				
Section 3- Bottles / Analysis				Yes	No	N/A	Comment
Did all bottles arrive unbroken and							
Were bottle custody seals present?	'			2			
Were bottle custody seals intact?	VC9			= = = = = = = = = = = = = = = = = = = =			
Did all bottle labels agree with CC		. 10		3			
Were correct containers used for the	<del></del>			5			
Were correct preservations used for Was a sufficient amount of sample				1-5-			
Were bubbles present in VOA Via	<del></del>		nlv)			_	
Were Ascorbic Acid Bottles receiv							
Section 4- Comments / Discrepanci	es						
Sample(s) Split/Preserve: Yes No	Container:		Preservation: _		Dt/Ti	ime/Init _	
_	Container:		Preservation: _		Dt/Ti	ime/Init _	
Was Client Service Rep. notified of d	liscrepancies: \frac{1}{2}	Yes No	$_{\rm N/A}$ $_{\rm CS}$	SR:	Notif	ied Bv:	
Explanations / Comments		× 11					
					AAAAAAA T		
Report Comment Entered:							

Labeled by: JHD @ 17.47 Labels checked by:

12/29/2010 10

Sample Integrity Pg 2 of 2 BSK Bottles Yes

250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)

250ml (A) 500ml (B) TLiter (C) Amber Glass (AG)	1		<u> </u>	1		ı	
Container(s) Received							
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			Property of the control of the contr		Pagasa	736775 / 1 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
					<b>,</b>		
None (p) White Cap None (p) Blue Cap w/NH4 + Buffer	\ 6				The second secon	00000 6:00-775	7.77.77
None (p) Blue Cap w/NH4 + Buffer				Statement of the state of the s	rressandoudol.7	l	nalezanean a estárez en
HNO <sub>5</sub> (p) Red Cap H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap	C.144.16.14.14.14.14.14.14.14.14.14.14.14.14.14.			The second secon		mer we have a second se	
			annini sugarana			orobre (FREE	
NaOH (p) Green Cap	The second secon	Transmission (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)			(V) 200 (V) 20		
	SSERVED AND SETTING	200			/	***************************************	N.) 46 - 500 Taylor 1999
Others 200 L(s)			The representation of the second				
Dissolved Oxygen 300ml (g)	<b>\$</b> 36686666666688	(1721) 77 Yerra An Jenny 1 5213 (1	gggggggdbillitet	Victorian declaration and the second	ganteiraides 19	100000000000000000000000000000000000000	53453716346
Centrifuge Tube HNO <sub>3</sub>							
COLLYACAYNT	<b>\$</b> 640,000,000,000,000.00						
250ml (AG) None 250ml (AG) H <sub>2</sub> SO <sub>4</sub> ,COD <sup>Yellow Label</sup>				Stores Library	1000 Chia Chi 1000 Chi		
250ml (AC) No.S. O. 515 S47 Blue Label	Contract former ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Commence Constitution		::::::::::::::::::::::::::::::::::::::
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515,547 Blos Label 250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label	Section 1999		100000000000000000000000000000000000000	190000000000000000000000000000000000000	<b>\</b>	80800000000000000000000000000000000000	bataman, BRE
250ml (AG) NH <sub>4</sub> Cl 552 Puple Label	The second secon		Van van en	i i i i i i i i i i i i i i i i i i i			35.25.0
250ml (AG) EDA DBPs Brown Label				1814944000000000	\	www.pperticectable	0.7000000000000000000000000000000000000
250ml (AG) Other:		1.781) <b>variatio</b>	Tradition and Company of the Company	William Committee of the Committee of th	**************************************	TO THE STATE OF TH	
	OCCUPANTS ALGINES	* Company	***************************************	, can	1		
500ml (AG) None							i de la compa
500ml (AG) None 500ml (AG) H <sub>2</sub> SO <sub>4</sub> TPH-Diesel Yellow Label		200 to be believe menuscriences				( - 4 )	
				1	Ú		rs.wils.ir
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Biter (AG) H <sub>2</sub> SO <sub>4</sub> SO&G Yellow Label	Jen to		The second secon		Fig. 1 Charles and arrest arranged to	8/	SELECTION OF THE PROPERTY OF T
1 Liter (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 548 / 525 / 521 Blue Label							
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + H <sub>2</sub> SO <sub>4</sub> 549	And the Control of th	X TOO STATE	Property Conference of the Con				30.4527 555 5-11.855
1 Liter (AG) NaOH+ZnAc Sulfide	7 - C. 303 N. 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3				LU. Bast. est to di Nel Nel Nel	<b>W</b>	
1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Lubel		The second secon	A Company of the Comp				7337 677 777 777
1 Liter (AG) CuSO4/Trizma 529 Turquoise Label					WALTER V.		
LLiter (AG) Na <sub>2</sub> SO <sub>3</sub> / HCL S25 UCMR Neon Green Label	The second secon	Hill the comment of the	The state of the s	A CONTROL OF THE CONTROL OF T		### 1990   1990	V TOTAL OF STORY LANGUAGE V TO VITAL LEVEL TO STORY LANGUAGE V TO VITAL LEVEL TO STORY LANGUAGE V TO VITAL LEVEL TO STORY LANGUAGE V LANGUAGE VITAL LANGUAGE VALUE V LANGUAGE V LANGUAGE
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40ml VOA Vial Clear – H <sub>3</sub> PO <sub>4</sub>		i i i i i i i i i i i i i i i i i i i			1		
		logoogaarroom					
Other:		198910191808888888888888888888888888888	100000000000000000000000000000000000000	1	/	Programme and a second courts	Seatter, 21564813300
Asbestos ILiter Plastic/Foil					1		
Radon 200ml Clear (g)							
Low Level Hg/Metals Double Baggie			200000000				
Bioassay Jug							
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250 Clear Glass Jar		0.750.750.470.55					Total de l'action de la company de la compan
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1 Liter Clear Glass Jar				exercises to the state			
Plastic Bag			PROPERTY THE PROPERTY OF THE P	Will work to the control of the cont			jerignečnek
Soil Tube Brass / Steel / Plastic	lidolidonoorie -		El Sala Series	manoliji Nji Albouti or			
Tedlar Bags						30000000000	



A0L1608

01/06/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 12/22/2010 07:30.

If additional clarification of any information is required, please contact your Client Services Representative, Joni Blankfield at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Joni Blankfield

Client Services Representative

mittamf O



#### 01/06/2011

#### **Case Narrative**

#### **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A0L1608 COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 4

Containers Intact COC/Labels Agree Received On Wet Ice

Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report ManagerReport FormatDavid HollandFAL Final Report.rpt

A0L1608 FINAL 01062011 1701



#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Report Issue Date:** 01/06/2011 17:01 **Received Date:** 12/22/2010 **Received Time:** 07:30

**Lab Sample ID:** A0L1608-01 **Sample Date:** 12/21/2010 16:00

Sample Type: Grab

Sampled by: J Lear

Matrix: Drinking Water

Sample Description: Injectate // 71943

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Total Organic Carbon	SM 5310 C	1.4	0.20	mg/L	1	A012828	12/27/10	12/27/10	
Organics									
					RL				
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	11	0.50	ug/L	1	A012795	12/23/10	12/24/10	
Bromoform	EPA 524.2	1.1	0.50	ug/L	1	A012795	12/23/10	12/24/10	
Chloroform	EPA 524.2	13	0.50	ug/L	1	A012795	12/23/10	12/24/10	
Dibromochloromethane	EPA 524.2	7.4	0.50	ug/L	1	A012795	12/23/10	12/24/10	
Surrogate: Bromofluorobenzene	EPA 524.2	89 %		Acceptable ra	nge: 70-130 s	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	32		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	3.9	1.0	ug/L	1	A013023	12/30/10	01/04/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	8.8	1.0	ug/L	1	A013023	12/30/10	01/04/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A013023	12/30/10	01/04/11	
Monochloroacetic Acid (MCAA) (2C)	EPA 552.2	ND	2.0	ug/L	1	A013023	12/30/10	01/04/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	7.2	1.0	ug/L	1	A013023	12/30/10	01/04/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	109 %		Acceptable ra	nge: 70-130 s	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	20		ug/L					

A0L1608 FINAL 01062011 1701



#### **General Chemistry Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A012828				Analyst:	SAB	Prepared	d: 12/27/2	010			
Blank (A012828-BLK1) SM	5310 C - Quality Contro	ol									
Total Organic Carbon	ND	0.20	mg/L							12/27/10	
Blank Spike (A012828-BS1)	SM 5310 C - Quality C	ontrol									
Total Organic Carbon	11	0.20	mg/L	10		106	80-120			12/27/10	
Blank Spike Dup (A012828-BS	SD1) SM 5310 C - Qu	ality Control									
Total Organic Carbon	11	0.20	mg/L	10		106	80-120	1	20	12/27/10	
Matrix Spike (A012828-MS1)	SM 5310 C - Quality	Control				Source	e: A0L160	8-01			
Total Organic Carbon	12	0.20	mg/L	10	1.4	103	80-120			12/27/10	
Matrix Spike (A012828-MS2)	SM 5310 C - Quality	Control				Source	e: A0L171	8-01			
Total Organic Carbon	14	0.20	mg/L	10	4.2	102	80-120			12/28/10	
Matrix Spike Dup (A012828-M	SD1) SM 5310 C - Q	uality Control	l			Source	e: A0L160	8-01			
Total Organic Carbon	12	0.20	mg/L	10	1.4	105	80-120	2	20	12/27/10	
Matrix Spike Dup (A012828-M	SD2) SM 5310 C - Q	uality Control	l			Source	e: A0L171	8-01			
Total Organic Carbon	15	0.20	mg/L	10	4.2	105	80-120	2	20	12/28/10	



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A012795				Analyst:	JGB	Prepared	d: 12/23/2	010			
Blank (A012795-BLK1)	4.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							12/24/10	
Bromoform	ND	0.50	ug/L							12/24/10	
Chloroform	ND	0.50	ug/L							12/24/10	
Dibromochloromethane	ND	0.50	ug/L							12/24/10	
Surrogate: Bromofluorobenzene	4.5			5.0		90	70-130			12/24/10	
Blank Spike (A012795-BS1) EP	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.2	0.50	ug/L	5.0		85	70-130			12/24/10	
Bromoform	4.4	0.50	ug/L	5.0		87	70-130			12/24/10	
Chloroform	4.5	0.50	ug/L	5.0		90	70-130			12/24/10	
Dibromochloromethane	4.1	0.50	ug/L	5.0		82	70-130			12/24/10	
Surrogate: Bromofluorobenzene	4.6			5.0		93	70-130			12/24/10	
Blank Spike Dup (A012795-BSD1)	) EPA 524.2 - Qu	ality Control									
Bromodichloromethane	4.2	0.50	ug/L	5.0		84	70-130	1	30	12/24/10	
Bromoform	4.4	0.50	ug/L	5.0		87	70-130	0	30	12/24/10	
Chloroform	5.0	0.50	ug/L	5.0		101	70-130	11	30	12/24/10	
Dibromochloromethane	4.2	0.50	ug/L	5.0		84	70-130	3	30	12/24/10	
Surrogate: Bromofluorobenzene	4.7			5.0		93	70-130			12/24/10	
Batch: A013023				Analyst:	LBA	Prepared	d: 12/30/2	010			
Blank (A013023-BLK1)	2.2 - Quality Contro	ol									
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							01/04/11	
Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							01/04/11	
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							01/04/11	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L							01/04/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							01/04/11	
Monobromoacetic Acid (MBAA) (2C)	ND	1.0	ug/L							01/04/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							01/04/11	
	ND	2.0	ug/L							01/04/11	
Monochloroacetic Acid (MCAA) (2C)										01/04/11	
	ND	1.0	ug/L								
Monochloroacetic Acid (MCAA) (2C) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)		1.0 1.0	ug/L ug/L							01/04/11	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)	ND ND		•	25		107	70-130			01/04/11	
Trichloroacetic Acid (TCAA)	ND ND 27		•	25 25		107 106	70-130 70-130				
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 27	1.0	•							01/04/11	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A013023-BS1) EP	ND ND 27 27	1.0	•							01/04/11	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A013023-BS1) EP Dibromoacetic Acid (DBAA)	ND ND 27 27 A 552.2 - Quality C	1.0	ug/L	25		106	70-130			01/04/11 01/04/11	
Frichloroacetic Acid (TCAA) Frichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A013023-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA) (2C)	ND ND 27 27 A 552.2 - Quality C	1.0 ontrol	ug/L	25		106	70-130			01/04/11 01/04/11 01/04/11	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND 27 27 A 552.2 - Quality C	1.0 ontrol 1.0 1.0	ug/L ug/L ug/L	10 10		106 109 112	70-130 70-130 70-130			01/04/11 01/04/11 01/04/11 01/04/11	
Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A013023-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA) (2C)  Dichloroacetic Acid (DCAA)	ND ND 27 27 A 552.2 - Quality C	1.0 ontrol 1.0 1.0 1.0	ug/L ug/L ug/L ug/L	10 10 10		106 109 112 108	70-130 70-130 70-130 70-130			01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A013023-BS1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Olichloroacetic Acid (DCAA) (2C)  Monobromoacetic Acid (MBAA)	ND ND 27 27 A 552.2 - Quality C 11 11 11	1.0 ontrol 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10		109 112 108 105	70-130 70-130 70-130 70-130 70-130			01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	
Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A013023-BS1)  Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND 27 27 A 552.2 - Quality C 11 11 11 11 9.7	1.0 ontrol 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10		109 112 108 105 97	70-130 70-130 70-130 70-130 70-130 70-130			01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	

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#### **Organics Quality Control Report**

9	U										
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
atch: A013023				Analyst: I	LBA	Prepared	l: 12/30/2	010			
Blank Spike (A013023-BS1) EPA	552.2 - Quality Contro	ol									
Frichloroacetic Acid (TCAA)	11	1.0	ug/L	10		112	70-130			01/04/11	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		110	70-130			01/04/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		113	70-130			01/04/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	28			25		113	70-130			01/04/11	
Blank Spike Dup (A013023-BSD1)	EPA 552.2 - Quality	Control									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		111	70-130	2	30	01/04/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		115	70-130	3	30	01/04/11	
Dichloroacetic Acid (DCAA)	11	1.0	ug/L	10		108	70-130	0	30	01/04/11	
Dichloroacetic Acid (DCAA) (2C)	10	1.0	ug/L	10		104	70-130	2	30	01/04/11	
Monobromoacetic Acid (MBAA)	9.5	1.0	ug/L	10		95	70-130	2	30	01/04/11	
Monobromoacetic Acid (MBAA) (2C)	9.1	1.0	ug/L	10		91	70-130	5	30	01/04/11	
Monochloroacetic Acid (MCAA)	9.7	2.0	ug/L	10		97	70-130	5	30	01/04/11	
Monochloroacetic Acid (MCAA) (2C)	8.6	2.0	ug/L	10		86	70-130	9	30	01/04/11	
Frichloroacetic Acid (TCAA)	12	1.0	ug/L	10		116	70-130	3	30	01/04/11	
Frichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		112	70-130	2	30	01/04/11	
Surrogate: 2,3-Dibromopropionic Acid	31			25		123	70-130			01/04/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		121	70-130			01/04/11	
Duplicate (A013023-DUP1) EPA 5	52.2 - Quality Contro	]				Source	: A0L172	4-01			
Dibromoacetic Acid (DBAA)	1.3	1.0	ug/L		1.2			3	30	01/04/11	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L		ND				30	01/04/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	01/04/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	01/04/11	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L		ND				30	01/04/11	
Surrogate: 2,3-Dibromopropionic Acid	30			25		122	70-130			01/04/11	
Matrix Spike (A013023-MS1) EPA	552.2 - Quality Contr	ol				Source	: A0L160	6-03			
	. <b>552.2 - Quality Contr</b>	<b>1.0</b>	ug/L	10	2.0	Source	: <b>A0L160</b> 70-130	6-03		01/04/11	
Dibromoacetic Acid (DBAA)			ug/L ug/L	10 10	2.0 ND			6-03		01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C)	13	1.0	-			108	70-130	6-03			
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	13 10	1.0	ug/L	10	ND	108 104	70-130 70-130	6-03		01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA)	13 10 9.5	1.0 1.0 1.0	ug/L ug/L	10 10	ND ND	108 104 95	70-130 70-130 70-130	6-03		01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)	13 10 9.5 10	1.0 1.0 1.0 2.0	ug/L ug/L ug/L	10 10 10	ND ND ND	108 104 95 102	70-130 70-130 70-130 70-130	6-03		01/04/11 01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	13 10 9.5 10 12	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10	ND ND ND	108 104 95 102 119	70-130 70-130 70-130 70-130 70-130			01/04/11 01/04/11 01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A013023-MSD1)	13 10 9.5 10 12	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10	ND ND ND	108 104 95 102 119	70-130 70-130 70-130 70-130 70-130 70-130	6-03	30	01/04/11 01/04/11 01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A013023-MSD1) Dibromoacetic Acid (DBAA)	13 10 9.5 10 12 27 EPA 552.2 - Quality	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10 25	ND ND ND ND	108 104 95 102 119 109 Source	70-130 70-130 70-130 70-130 70-130 70-130	<b>6-03</b>	30 30	01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	
Matrix Spike (A013023-MS1) EPA Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A013023-MSD1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	13 10 9.5 10 12 27 EPA 552.2 - Quality	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	ND ND ND ND	108 104 95 102 119 109 <b>Source</b>	70-130 70-130 70-130 70-130 70-130 70-130 : A0L160 70-130	<b>6-03</b> 1 4		01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (MBAA) Dichloroacetic Acid (MCAA) Dichloroacetic Acid (TCAA) Dibromopropionic Acid Dichloroacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (MBAA)	13 10 9.5 10 12 27 <b>EPA 552.2 - Quality</b> 13	1.0 1.0 2.0 1.0 <b>Control</b>	ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	ND ND ND ND	108 104 95 102 119 109 Source	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	<b>6-03</b> 1 4 5	30	01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Frichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A013023-MSD1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C)	13 10 9.5 10 12 27 <b>EPA 552.2 - Quality</b> 13 11	1.0 1.0 2.0 1.0 Control 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	ND ND ND ND	108 104 95 102 119 109 Source 107 108 100	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	6-03 1 4 5 4	30 30	01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11 01/04/11	

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#### **Certificate of Analysis**

01/06/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- · BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Present: 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter NR· Non-Reportable RL Mult: **RL** Multiplier

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www.bsklabs.com

## A0L1608

## **Monterey Bay Analytical**

Monte6227

12222010

David Holland

Turnaround:

Standard

**MPWMD** 

Due Date:

01/07/2011

 Sample ID
 Sample Description
 Date Sampled
 Lab Notes

 A0L1608-01
 Injectate
 12/21/2010

Printed: 12/22/2010 17:44:25

# BSK ANALYTICAL LABORATORIES

Required Fields

1414 Stanislans Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com

TEMP

A0L1608 Monte6227

6227

12/22/2010 10

Shipping Method: 100 UPS GSO WALK-I	Secretive (for Lab by Signature and Principle (suppl)	Relinguished by: (Signature and Printed Name)	Relinquished by: (Signature and Egiped Name)  David Holland										12/21/10 16:00 Injectate	Sample Sample O	Types: RSW = Raw Surface Water RGW = Raw Ground Water	Lear, J.	Sampler Name Printed / Signature	ed results sent?		Project Information:	4 Justin Ct. V	wichierey bay Analytical	Monterey Bay Applytical	Client/Company Name *:
UPS GSO WALK-IN SIVE HID EX OTHER	Date	Company	MBAS (2)				-		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5					Umple Description / Location 5	CFW = Clorinated Finished Water WW = Chorinated Waste Water FW = Finished Water WW = Waste Vater SW = Storm Water	SID Level II SID s Day**	QC Request Result Request ** Surcharge	E-Mail Fax EDD Mail Only	Quote # 464	PO#	* State * Zip * Monterey CA 9	David Holland	The state of the s	Danow A
Cooling Method:	Time (1/4) 73 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Time	7 Time 2( 1600										DW	Matrix	l e l	STD S Day** 2 Day** Day**	Surcharge				93940	E-mail: 4ME	Phone * #: (831)-357-6227	
WET PL	Payment Received at Delivery:  Date: Amount :: Ct	Received by (Signature and frint Name)	Received by (Signature and Print Name)										71943	Comments / Station Code	BW = Bottled Water DW = Drinking Water SO = Solid		Ċ	Regulatory Compliance Electronic Data Transfer: Y N 7		☐ Tulare Co ☐	Carbon Copies:	4MBAS@Sbcglobal.net	1)-357-6227 FAX * #(831)-641-0734	
Packing	igold/Cash/C			<u> </u>	-	+	-	_		_	+	_	4 Alb		TTH							•	_	_
Material	and Plans	Company	Cox-pany												TOC							ANALYSIS REQUESTED		

12/22/2010
10

و ما آم	?g of <u>&lt;</u>	<u>ア</u>	WORK (				
Date Received 1775	tro-						
· · · · · · · · · · · · · · · · · · ·	UPS PMS		BSK-Courier		•		
Samples arrived at lab on same day	y sampled: Yes	N	lo <u> </u>	Temperature	is not ne	eded)	
Coolers/Ice Chests Description/Te	mperature(s): (If i	more-than 4 re	ceived, list information-	in comment section	)		
1)2)2		\\#	N	4)_			<del></del>
Was Temperature In Range	N N/A Re	ceived On	Ice: Wet Blu	e_ Receive	d Ambie	nt: <u>Y</u>	N N
Describe type of packing material	s: Bubble Wraj	Foam	Packing Pear	nuts Paper	Othe	r:	
Initial Receipt: BSK-Visalia	BSK-Bakersfie	ld BSI	K-SAC BSI	K-FDL (	BSK-FA	Ţ	
Were ice chest custody seals prese	nt? Y N	Intact: Y	Ñ				
Section 2- COC Info.	Completed	Info From				npleted	Info From
Was COC Received	Yes No	Container	Analysis Requ	ested	Yes	No_	Container
Date Sampled			Any hold times		<del></del>	_	-
Time Sampled			Client Name			_	
Sample ID		<b></b>	Address			-	
Special Storage/Handling Ins.			Telephone #			•	
Section 3- Bottles / Analysis		<del></del>		Yes	No	N/A	Comment
Did all bottles arrive unbroken and	intact?			<del></del>			
Were bottle custody seals present?							
Were bottle custody seals intact?							
Did all bottle labels agree with COC	2?						
Were correct containers used for the	e tests requeste	d?					
Were correct preservations used for							<del></del>
Was a sufficient amount of sample							
Were bubbles present in VOA Vials			nly)				<u> </u>
Were Ascorbic Acid Bottles receive	d with the VO	<u>As?</u>		<u> </u>			
Section 4- Comments / Discrepancies	<u> </u>					<u> </u>	<del></del>
Sample(s) Split/Preserve: Yes No	Container:		Preservation:		Dt/Ti	ime/Init _	
	Container:		Preservation:		Dt/Ti	me/Init _	
Was Client Service Rep. notified of dis Explanations / Comments	screpancies: (Y	es No		SR: 32 W	Notif	ied By: ₩	4Ch
	26 10 C						
	<u> </u>	<b></b>					
Papart Comment Estand							
Report Comment Entered:			<del></del>				
	Labele	ed by:	(2 /4 /V)	Labels chec	ked by	B 6	1431

A0L1608

12/22/2010 10

Sample Integrity Pg 7 of V WOR Monte6227

BSK Bottles (Yes) No

250ml (A) 500ml (B) 11 iter (C) Ambay Class (AC)

DON DO		7	110				
250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)							
Container(s) Received	72 P. Marine J. V.						
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>				Transcription Constitution Cons			60 S 50 S (\$100 S ) 50 S
None (p) White Cap				<u> </u>	200100000000000000000000000000000000000		
None (p) Bittle Cap w/NH4 + Buffer							
HNO <sub>3</sub> (p) Red Cap			11000				
H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap							
N3OTE (I) in a manufacture of the control of the co			<u> </u>			00 000000000000000000000000000000000000	7.0 26 1031 22 33
Other		-		en bal (i			
Dissolved Oxygen 300ml (g)		anose-andos		15 T. (15, 12, 17, 17, 17)			
Centrifuge Tube FINO:							V 75 (AT 14 18 18 18 18 18 18 18 18 18 18 18 18 18
250ml (AG) None							
250ml (AG) H <sub>2</sub> SO <sub>4</sub> COD Yollow Label	February Incode						
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515 <sub>3</sub> 547 Blue Label 250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label		consumeration (c)	35 (100 - 100	100000000000000000000000000000000000000	377.0		
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 551.1							
250ml (AG) NH <sub>4</sub> Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Label	23 (24. January 1997)	1			**************************************		
250ml (AG) Other:							
		į.					
500ml (AG) None							
500ml (AG) H <sub>2</sub> SO <sub>4</sub> TPH-Diesel Vellow Label					fx =	***   ***	310 1742 000 000
				1/			
1 Liter (AG) None							
Liter (AG) 112SO4 O&G Yellow Label			\	+ $+$ $+$	\ 0	7-	
1 Liter (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 548 / 525 / 521 Blue Label  I Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + H <sub>2</sub> SO <sub>4</sub> 549	COLOR COLOR DE LA PARTICIONA DEL PARTICIONA DE LA PARTICIONA DE LA PARTICIONA DELA PARTICIO			in passage in	1240	ut moduli	con a committee of the
1 Liter (AG) NaOH+ZnAc Sulfide			Ĭ.		/ b /		
1 Liter (AC) Ascorbie/EDTA/Pot Citrate 527 Grey label							
1 I I ton (AC) CuSOA/Trizma 579 Impose 2001	1			12027 (61102)		nies annoander	
ETITIES TATANNESS OF FEHCHES 525 J GMR							
1 Liter (AG) Ammonium Chloride 535 Purple Label	l l						1 TO
						nigh wellsammen	800.1 n- 9000.5
40ml VOA Vial Clear – HCL			u. U. L				
40ml VOA Vial Amber - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			,				and the following the
40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505							
40ml VOA Vial Clear – H <sub>3</sub> PO <sub>4</sub>	<b>-</b> [ ]-		`	J	carAVa novem/Ordrico	page Socientis	SPAWA SSEROUS STREET
Other:		re increaser		ess Sikkapolis			
Ashestos ILiter Plastic/Foil							00.000 40.000 40.00
Radon 200ml Clear (g)							x 750 05 244 00 4
Low Level Hg/Metals Double Baggie							
Bioassay Jug							
250 Clear Glass Jar	gowani yilkin wijirin di	ne taxiita and phon	- Control of the Cont			HORTER HAVANIMEN	ando moderna a
500 Clear Glass Jan							
1 Liter Clear Glass Jar			more than			765498a	90. 70b   00.7% (160.00
Plastic Bag	Call James C. Land Co.						
Soil Tube Brass / Steel / Plastic							76.0
Tedlar Bags					HOLD OF HEREITER VE	<u>45881 (00</u> 0922 13	pertura si katanggaran da ka



#### CHAIN OF CUSTODY AND ANALYSIS REQUEST DOCUMENT

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Client: Monterey Bay Analytic Customer Number: Address: 4 Justin Court, Suite D.				Continue to the continue to th	Printing and the second	E -							• • • • • • • • • • • • • • • • • • •								·		# 1	
	31-641-073		ite e consentencement de la consentencement	described for the tradition of the first state of the sta	Plastic (P) VOA (V) Metal Tube (MT)	r(AgW)	AW) Ground Water (GW) Drinking Water (DW)	(0)	ite (W)	er (OTH) Replace (RPL)	roduce (PRD)	1, (3) HCI ther		756									A CONTRACTOR OF THE CONTRACTOR	
Sampler(s): Lear, J. Sampling Fee: Pickup Fee:		Mariana da M	Composite (C)	lainers		Potable (P) Non-Potable (NP) Ag Water (AgW)	Monitoring Well (N ste Water (WW)	(SLG) Solid (SLD) Oil (O)	Bact: System (Sys) Source (SRC) Waste (W)	Bact. Routine (ROUT) Repeat (RPT) Other (OTH) Replace (RPL) Special (SPL)	Leaf Tissue (LT) Petiole Tissue (PET) Produce (PRD)	NaOH + ZnAc, (2) NaOH, (3) HCI	S Alpha	ווי נגו									competition had to the property of the control of t	
Compositor Setup Date: Ti  Samp   Location Description Num	Date Sampled	Time Sampled	Method of Sampling:	Number of Containers	Type of Containers: Glass (G)	Potable (P) No	Surface Water (SW) Travel Blank (TB) Wa	Soil (S) Sludge (SLG)	act: System (4	lact: Routine (I	eaf Tissue (LT)	Preservative: (1) NaOH (4) H2SO4, (5) HNO3, (	Sons	Rac										
Injectate	10/21/10		G	: 1:::::::::::::::::::::::::::::::::::		P	DW						X	<b>κ</b>				1 a - 12222 (1)		eddin Feb				•
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Corporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93080 TEI : 805/302-3080			2500 9	& Lab Stagect	bach R	oad				1	Lex	50	63 E. Li	Labora indo Ave A 95926	nue	<del></del> -	<u>.</u>				Field Visalia TEL:	a, Calife		

FAX: 805/525-4172 CA NELAP Certification No. 01110CA

TEL: 209/942-0182 FAX: 209/942-0423 CA ELAP Certification No. 1563 TEL: 530/343-5818 FAX: 530/343-3807 CA ELAP Certification No. 2670

Mobile: 559/737-2399 FAX: 559/734-8435

Doc ID: F2REC005.011 Page: 1 of 1

## Santa Paula - Condition Upon Receipt (Attach to COC)

	1
Sam	ole Receipt:
1.	Number of ice chests/packages received:  Note as OTC if received over the counter unpackaged.
2.	Were samples received in a chilled condition? Temps: \
3.	Do the number of bottles received agree with the COC?  No N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)
5.	Were sample custody seals intact?  N/A Yes No
Sign	and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.
	were all requested analyses understood and acceptable?  No
2.	Did bottle labels correspond with the client's ID's?
3.	Were all bottles requiring sample preservation properly preserved? Yes No NA FGI
4.	VOAs checked for Headspace? Yes No NA
5.	Were all analyses within holding times at time of receipt?
6.	Have rush or project due dates been checked and accepted?
Att	ach labels to the containers and include a copy of the COC for lab delivery
San	npie Receipt, Login and Verification completed by (initials):
Dis An l.	repancy Documentation:  y items above which are "No" or do not meet specifications (i.e. temps) must be resolved.  Person Contacted:  Initiated By:  Problem:  Resolution:
	Phone Number:
2.	Person Contacted: Phone Number Initiated By: Date: Problem:
	Resolution:
	Montorey Bay Analysical Bervices
	cp 1013145





Analytical Chemists January 5, 2011

Monterey Bay Analytical ServicesLab ID: SP 10131454 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 4 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### **Case Narrative**

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
Injectate	12/21/2010	12/23/2010	SP 1013145-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	01/01/2011:200068 All analysis quality controls are within established criteria.
	12/29/2010:213415 All preparation quality controls are within established criteria, except: The following note applies to Gross Alpha: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
903.0	12/29/2010:216801 All analysis quality controls are within established criteria.
	12/28/2010:213397 All preparation quality controls are within established criteria.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435 January 5, 2011 Lab ID : SP 1013145 **Monterey Bay Analytical Services** Customer : 2-19144

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.





Analytical Chemists January 5, 2011 Lab ID : SP 1013145-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : December 21, 2010-16:00 Monterey, CA 93940

Sampled By : J. Lear

Received On: December 23, 2010-11:45

Matrix : Drinking Water

Description : Injectate Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Sample Analysis		
Constituent			WICL/AL	Method	Date/ID	Method	Date/ID		
Radio Chemistry <sup>P:1</sup>									
Gross Alpha	$2.14 \pm 1.23$	1.25	pCi/L	15	900.0	12/29/10:213415	900.0	01/01/11:200068	
Total Alpha Radium (226)	$0.000 \pm 0.308$	0.471	pCi/L	3	903.0	12/28/10:213397	903.0	12/29/10:216801	

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: N/A

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435





#### **Analytical Chemists**

January 5, 2011 Lab ID : SP 1013145 **Monterey Bay Analytical Services** : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	01/01/2011:200068	CCV CCB	cpm cpm	10250	41.2 % 0.0600	38 - 47 0.12	
Gross Alpha	900.0	12/29/2010:213415 (SP 1013094-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	149.4 149.4 149.4 149.4	1.73 123 % 183 % 192 % 4.7%	3 75-125 60-140 60-140 ≤30	435 435
Alpha	903.0	12/29/2010:216801	CCV CCB	cpm cpm	10250	38.9 % 0.100	38 - 46 0.15	
Total Alpha Radium (226)	903.0	12/28/2010:213397	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	18.17 18.17 18.17 18.17	0.09 54.9 % 44.6 % 46.1 % 3.2%	2 52-89 43-92 43-92 ≤35.5	

: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria. CCV

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that BSD the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation **BSRPD** 

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation

: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. 435

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

McCampbell Analytical,	Inc.
"When Quality Counts"	

Monterey Bay Analytical	Client Project ID: MPWMD	Date Sampled:	12/21/10
4 Justin Court, Suite D		Date Received:	12/22/10
4 Justin Court, Build B	Client Contact: David Holland	Date Reported:	12/29/10
Monterey, CA 93940	Client P.O.:	Date Completed:	12/29/10

WorkOrder: 1012793

December 29, 2010

<b>D</b>	<b>D</b>	
Dear	110	3710
Dear	120	viu.

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical In

McCampbell Analytical, Inc.

#### McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD PITTSBURG, CA 94565-1701

CHAIN OF CUSTODY RECORD TURN AROUND TIME

RUSH 24 HR

48 HR

Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (877) 252-9262

Fax: (925) 252-9269

☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW)

72 HR 5 DAY

		Marie Control																																Name and the second
Report To: David	l Holland		- I	Bill To	o:															1	\nal	ysis	Re	que	st							O	ther	Comments
Company: Mont	erey Bay Ana	alytical S	Services															0				2												Filter
	tin Ct. Suite l														8015)			B&1				Ben												Samples
Mont	erey, Ca 939	40		E-Mai				_		al.n	et				+			20 E				0							60	6				for Metals
Tele: (831) 641 -	0734			ax: (										_	8021	(21)		1881	-	(S		OIS/		8			0		109	602				analysis:
Project #:			F	rojec	t Na	ne:	MI	PW	MD	)				_	(602/	/ 80		664	418	000	(SS)	rock		icide			N.		010	010				Yes / No
<b>Project Location</b> :															Gas (6	1 602	8015	) se (1	ons (	H	bicid	Y: A	(S)	ferb	(8)	3	ls/P		8/8	9/8	020			
Sampler Signatur	re: Lear, J.					_				_					80	EPA	8) 11	Grea	carb	802	Pes	NI.	sticie	5	000	SVO	PAH		200	200	9/01			
		SAMI	PLING		L'S		MA	TR	XIS		M	ESE	IOI	CD C	TPH	LY (	tor (	180	'dro	010	0	B's	P Pe	cidic	260 (	270 (	310		0.77	0.77	1 601			
SAMPLE ID	LOCATION/ Field Point			5	Type Containers						FRI				BTEX &	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 (CI 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)	Methane		
	Name	Date	Time	# Containe	Type (	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO3	Other	MTBE / BTEX		TPH as	Total Pe	Total Pe	EPA 502	EPA 505			EPA 515	EPA 524	EPA 525	EPA 82		CAM 17	LUFTS	Lead (20			
	Injectate	12/21/10	16:00	1 set	voa	Х				┪	П			$\neg$															T			Χ		71943
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Relinquished By: David Holland	AsllO	Date:	Time:	2	eived E		-	1		1	15	21	21	-	GC	E/t°_ DOD EAD	CON	DIT	ION BSE	NT	-	_							-	CO	ММ	ENTS	S:	
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### McCampbell Analytical, Inc.

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

<b>—</b> // <b>A</b> >	52-9262					Work	Order	1012	793		ClientC	Code: N	<b>IBAS</b>				
		WaterTrax	WriteOn	EDF		Excel		Fax	[	<b>✓</b> Email		Hard	Сору	Thir	dParty	☐ J-	flag
Report to:  David Holla  Monterey Ba  4 Justin Cou  Monterey, C	ay Analytical urt, Suite D	Email: 4 cc: PO: ProjectNo: M	mbas@sbcg IPWMD	global.net			Мс 4 J	nterey Justin C	Payabl Bay An Court, So CA 939	alytical uite D			Date	uested e Rece e Print	ived:	5 ( 12/22/ 12/22/	
831-375-622	7 FAX 831-641-0734				Ī												
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	Req 4	uested 5	Tests 6	(See leg	gend b	elow) 9	10	11	12
1012793-001	Injectate		Water	12/21/2010 16:00		Α											
6	174_W 2 7			3 8				4						5 10			
11	12												Prepa	red by:	Zorai	da Cort	ez

#### **Comments:**

#### **Sample Receipt Checklist**

Client Name:	Monterey Bay Analyt	tical			Date a	and Time Rec	eived: <b>12/22/20</b> 1	0 4:30:48 PM
Project Name:	MPWMD				Check	dist complete	d and reviewed by:	Zoraida Cortez
WorkOrder N°:	<b>1012793</b> Mat	rix <u>Water</u>			Carrie	r: <u>UPS</u>		
		<u>Chain</u>	of Cu	ıstody (C	COC) Informa	ıtion		
Chain of custody	y present?		Yes	<b>V</b>	No 🗆			
Chain of custody	signed when relinquished	and received?	Yes	<b>V</b>	No 🗆			
Chain of custody	y agrees with sample labels	s?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	<b>V</b>	No 🗆			
Date and Time of	f collection noted by Client o	n COC?	Yes	<b>~</b>	No 🗆			
Sampler's name	noted on COC?		Yes	<b>V</b>	No 🗆			
		S	ample	Receipt	t Information	ı		
Custody seals in	tact on shipping container/o		Yes		No 🗆	-	NA 🔽	
Shipping contain	er/cooler in good condition?	•	Yes	<b>V</b>	No 🗆			
Samples in prop	er containers/bottles?		Yes	<b>~</b>	No 🗆			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗆			
Sufficient sample	e volume for indicated test?		Yes	<b>✓</b>	No 🗌			
		Sample Presei	rvatio	n and Ho	old Time (HT)	) Informatio	<u>n</u>	
All samples rece	ived within holding time?		Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:	6.4°C		NA 🗆	
Water - VOA via	ils have zero headspace / n	no bubbles?	Yes	<b>✓</b>	No 🗆	No VOA vial	s submitted $\square$	
Sample labels ch	hecked for correct preserva	tion?	Yes	<b>~</b>	No 🗌			
Metal - pH accep	otable upon receipt (pH<2)?		Yes		No 🗆		NA 🔽	
Samples Receive	ed on Ice?		Yes	✓	No 🗆			
		(Ice Type	e: BLl	JE ICE	)			
* NOTE: If the "I	No" box is checked, see co	mments below.						
=====	=======	=====	===		====		=====	
Client contacted:		Date contact	ted:			Co	ntacted by:	
Comments:								

## McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay	Analytical	Client Project	ID: MPWMD	Date Sampled: 12/21/10								
4 Justin Court,	Suite D			Date Received: 12/22/10								
,		Client Contac	t: David Holland	Date Extracted: 12/23/10								
Monterey, CA	93940	Client P.O.:		Date Ana	lyzed	12/23/10						
		Light G	as Hydrocarbons*									
Extraction method R	SK 174/175	Analy	rtical methods RSK174/175		,	Work Order:	1012793					
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments					
1012793-001A	Injectate	W	0.43		1	N/A	T					
Repor	rting Limit for DF =1;	W	0.4			μg/L						
	eans not detected at or we the reporting limit	S	NA			NA						
	re reported in μg/L.	<u> </u>										
%SS = Percent Re DF = Dilution Fac	ecovery of Surrogate Standard											



QC SUMMARY REPORT FOR RSK174/175

W.O. Sample Matrix: Water	OC Matrix: Water	BatchID: 55204	WorkOrder 1012793

EPA Method RSK174/175	Extra	ction RS	C 174/175	5				s	Spiked San	nple ID	: N/A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Methane	N/A	1.17	N/A	N/A	N/A	96.1	94.9	1.23	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 55204 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1012793-001A	12/21/10 4:00 PM	f 12/23/10	12/23/10 12:11 PM					

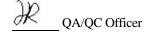
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 2 Thursday, March 10, 2011

Lab Number: AA73667

Collection Date/Time: 2/24/2011 14:00 Sample Collector: LEAR, J

Submittal Date/Time: 2/24/2011 15:56 Sample ID

Sample Description: Injectate							
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed	
Alkalinity, Total (as CaCO3)	2320B	mg/L	131	2		2/26/2011	
Ammonia-N	4500NH3 D	mg/L	Not Detected	0.05		3/8/2011	
Arsenic, Total	EPA200.8	ug/L	Not Detected	1	10	2/25/2011	
Barium, Total	EPA200.8	ug/L	53	10	1000	2/25/2011	
Bicarbonate (as HCO3-)	2320B	mg/L	160	10		2/28/2011	
Boron	EPA200.7	mg/L	Not Detected	0.05		3/2/2011	
Calcium	EPA200.7	mg/L	41	0.5		3/2/2011	
Carbonate as CaCO3	2320B	mg/L	Not Detected	10		2/26/2011	
Chloramines	SM4500-CI G	mg/L	0.05	0.05		2/24/2011	
Chloride	EPA300.0	mg/L	27	1	250	2/24/2011	
Dissolved Organic Carbon	SM5310-C	mg/L	1.1 E	0.2		3/3/2011	
Fluoride	EPA300.0	mg/L	0.22	0.10	2.0	2/24/2011	
Gross Alpha	EPA900.0	pCi/L	1.00 ± 1.57 E		15	2/28/2011	
Haloacetic Acids	EPA552	ug/L	11 E		60	3/8/2011	
Hardness (as CaCO3)	2340B	mg/L	131	10		3/3/2011	
Iron	EPA 200.7	ug/L	Not Detected	10		3/2/2011	
Iron, Dissolved	EPA 200.7	ug/L	Not Detected	10	300	3/2/2011	
Kjehldahl Nitrogen	4500-NH3 B,C.	mg/L	Not Detected	0.5		3/1/2011	
Langlier Index (15 deg. C)	2330B		-0.16			3/7/2011	
Langlier Index ( 60 deg. C)	2330B		0.45			3/7/2011	
Lithium	EPA200.8	ug/L	7	1		2/25/2011	
Magnesium	EPA200.7	mg/L	7	0.5		3/2/2011	
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected	10	50	3/2/2011	
Manganese, Total	EPA 200.7	ug/L	Not Detected	10	50	3/2/2011	
Methane	EPA174/175	ug/L	Not Detected E	5		3/8/2011	
Molybdenum, Total	EPA200.8	ug/L	3	1	1000	2/25/2011	
Nickel, Total	EPA200.8	ug/L	Not Detected	10	100	2/25/2011	
Nitrate as NO3	EPA300.0	mg/L	Not Detected	1	45	2/24/2011	
Nitrate as NO3-N	EPA300.0	mg/L	Not Detected	0.05	10	2/24/2011	
Nitrite as Nitrogen	EPA300.0	mg/L	Not Detected	0.05	1.00	2/24/2011	
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	0.05	1.00	2/24/2011	

mg/L: Milligrams per liter ug/L: Micrograms per liter PQL: Practical Quantitation Limit MCL: Maximum Contamination Level H = Analyzed ouside of hold time E = Analysis performed by External Laboratory; See External Laboratory Report attachments.

Lab Number: AA73667

Collection Date/Time: 2/24/2011 14:00 Sample Collector: LEAR, J

Submittal Date/Time: 2/24/2011 15:56 Sample ID

Sample Description: Injectate									
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed		
o-Phosphate-P	EPA300.0	mg/L	0.17		0.05		2/24/2011		
pH (Laboratory)	4500-H+B	STD. Units	7.6				2/24/2011		
Phosphorus, Total	HACH 8190	mg/L	0.28		0.03		3/1/2011		
Potassium	EPA200.7	mg/L	2.8		0.1		3/2/2011		
QC Anion Sum x 100	Calculattion	%	100%				3/3/2011		
QC Anion-Cation Balance	Calculattion	%	-2				3/3/2011		
QC Cation Sum x 100	Calculattion	%	97%				3/3/2011		
QC Ratio TDS/SEC	Calculation		0.60				3/7/2011		
Selenium, Total	EPA200.8	ug/L	Not Detected		2	50	2/25/2011		
Sodium	EPA200.7	mg/L	42		0.5		3/2/2011		
Specific Conductance (E.C)	2510B	umhos/cm	468		1	900	2/25/2011		
Strontium, Total	EPA200.8	ug/L	206		5		2/25/2011		
Sulfate	EPA300.0	mg/L	62		1	250	2/24/2011		
Total Diss. Solids	2540C	mg/L	283		10	500	3/3/2011		
Total Nitrogen	Calculation	mg/L	Not Detected		0.5		3/1/2011		
Total Organic Carbon	SM5310C	mg/L	1.1	E	0.20		3/3/2011		
Total Radium 226	EPA903.0	pCi/L	0.000 ± 0.148	E		3	3/2/2011		
Trihalomethanes	EPA524.2	ug/L	22	Е		80	3/8/2011		
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected		1	30	2/25/2011		
Vanadium, Total	EPA200.8	ug/L	Not Detected		1	1000	2/25/2011		
Zinc, Total	EPA200.8	ug/L	177		10	5000	2/25/2011		

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A1C0216

03/09/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 03/02/2011 08:45.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



# 03/09/2011

#### **Case Narrative**

#### **Work Order Information**

David Holland **Client Name:** Monterey Bay Analytical Submitted by: **Client Code:** Monte6227 Shipped by: **ONTRAC** 

Work Order: A1C0216 **COC Number:** 

Project: **MPWMD TAT:** 10 PO #:

**Chain of Custody Notes** 

Date: 3/9/11 **Initials: JMM** 

Note: Dissolved Organic Carbon samples arrived in H3PO4 preserved vials. OK to run.

#### **Sample Receipt Conditions**

Cooler: **Default Cooler** Temp. °C: 1

Containers Intact COC/Labels Agree Received On Wet Ice Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager Report Format

David Holland Final.rpt

A1C0216 FINAL 03092011 1444

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#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Lab Sample ID:** A1C0216-01 **Sample Date:** 02/24/2011 14:00

Sample Type: Grab

Sampled by: J Lear

Matrix: Drinking Water

Sample Description: Injectate // 73667

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A102444	03/03/11	03/03/11	
Total Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A102445	03/03/11	03/03/11	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	7.9	0.50	ug/L	1	A102421	03/03/11	03/04/11	
Bromoform	EPA 524.2	0.86	0.50	ug/L	1	A102421	03/03/11	03/04/11	
Chloroform	EPA 524.2	7.6	0.50	ug/L	1	A102421	03/03/11	03/04/11	
Dibromochloromethane	EPA 524.2	5.8	0.50	ug/L	1	A102421	03/03/11	03/04/11	
Surrogate: Bromofluorobenzene	EPA 524.2	94 %		Acceptable ra	nge: 70-130	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	22		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	2.2	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	4.4	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A102438	03/03/11	03/08/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	4.0	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	120 %		Acceptable ra	nge: 70-130	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	11		ug/L					



#### **General Chemistry Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A102444				Analyst:	SAB	Prepared	: 03/03/2	011			
Blank (A102444-BLK1) SM 5310	C - Quality Contro	I									
Dissolved Organic Carbon	ND	0.20	mg/L							03/03/11	
Blank Spike (A102444-BS1) SM	5310 C - Quality Co	ontrol									
Dissolved Organic Carbon	9.9	0.20	mg/L	10		99	80-120			03/03/11	
Blank Spike Dup (A102444-BSD1)	SM 5310 C - Qua	lity Control									
Dissolved Organic Carbon	9.9	0.20	mg/L	10		99	80-120	0	20	03/03/11	
Batch: A102445				Analyst:	SAB	Prepared	: 03/03/2	011			
Blank (A102445-BLK1) SM 5310	C - Quality Contro	I									
Total Organic Carbon	ND	0.20	mg/L							03/03/11	
Blank Spike (A102445-BS1) SM (	5310 C - Quality Co	ontrol									
Total Organic Carbon	10	0.20	mg/L	10		100	80-120			03/03/11	
Blank Spike Dup (A102445-BSD1)	SM 5310 C - Qua	lity Control									
Total Organic Carbon	10	0.20	mg/L	10		101	80-120	0	20	03/03/11	
Matrix Spike (A102445-MS1) SM	5310 C - Quality C	ontrol				Source	: A1C013	3-01			
Total Organic Carbon	13	0.20	mg/L	10	2.9	99	80-120			03/03/11	
Matrix Spike (A102445-MS2) SM	5310 C - Quality C	ontrol				Source	: A1C005	7-02			
Total Organic Carbon	13	0.20	mg/L	10	2.8	98	80-120			03/03/11	
Matrix Spike Dup (A102445-MSD1)	SM 5310 C - Qu	ality Control				Source	: A1C013	3-01			
Total Organic Carbon	13	0.20	mg/L	10	2.9	99	80-120	0	20	03/03/11	
Matrix Spike Dup (A102445-MSD2)	SM 5310 C - Qu	ality Control				Source	: A1C005	7-02			
Total Organic Carbon	13	0.20	mg/L	10	2.8	99	80-120		20	03/03/11	



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A102421				Analyst:	JGB	Prepare	d: 03/03/2	011			
Blank (A102421-BLK1)	.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							03/03/11	
Bromoform	ND	0.50	ug/L							03/03/11	
Chloroform	ND	0.50	ug/L							03/03/11	
Dibromochloromethane	ND	0.50	ug/L							03/03/11	
Surrogate: Bromofluorobenzene	4.9			5.0		99	70-130			03/03/11	
Blank Spike (A102421-BS1) EPA	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.5	0.50	ug/L	5.0		91	70-130			03/03/11	
Bromoform	5.0	0.50	ug/L	5.0		100	70-130			03/03/11	
Chloroform	5.2	0.50	ug/L	5.0		103	70-130			03/03/11	
Dibromochloromethane	4.9	0.50	ug/L	5.0		99	70-130			03/03/11	
Surrogate: Bromofluorobenzene	5.2			5.0		105	70-130			03/03/11	
Blank Spike Dup (A102421-BSD1)	EPA 524.2 - Qu	ality Control									
Bromodichloromethane	4.4	0.50	ug/L	5.0		89	70-130	2	30	03/03/11	
Bromoform	4.6	0.50	ug/L	5.0		91	70-130	9	30	03/03/11	
Chloroform	4.9	0.50	ug/L	5.0		98	70-130	5	30	03/03/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		92	70-130	8	30	03/03/11	
Surrogate: Bromofluorobenzene	5.1			5.0		101	70-130			03/03/11	
Batch: A102438				Analyst:	KHH	Prepare	d: 03/03/2	011			
Blank (A102438-BLK1)	.2 - Quality Contro	ol									
	ND	1.0	ua/L							03/08/11	
Dibromoacetic Acid (DBAA)	ND ND	1.0 1.0	ug/L ug/L							03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA)	ND ND	1.0 1.0	ug/L ug/L							03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C)	ND ND ND	1.0 1.0 1.0	ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	ND ND ND ND	1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C)	ND ND ND ND ND	1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C)	ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C) Frichloroacetic Acid (TCAA)	ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C)	ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L	25		103	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)	ND	1.0 1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 25		103 108	70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND ND ND ND ND ND ND ND 26	1.0 1.0 1.0 1.0 2.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Crichloroacetic Acid (TCAA)	ND ND ND ND ND ND ND ND 26 27	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25		108	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102438-BS1) EPA Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND ND 26 27	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10		108	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) EPA Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10		108 113 113	70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DCAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 0ntrol	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10		108 113 113 106	70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		113 113 116 103	70-130 70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10		113 113 106 103 104	70-130 70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		113 113 116 103	70-130 70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	

A1C0216 FINAL 03092011 1444

FAX (559) 485-6935



#### **Organics Quality Control Report**

9	•	rganic			-						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
atch: A102438				Analyst:	KHH	Prepared	l: 03/03/2	011			
Blank Spike (A102438-BS1) EPA	552.2 - Quality Contr	ol									
Trichloroacetic Acid (TCAA)	11	1.0	ug/L	10		110	70-130			03/08/11	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		109	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	29			25		117	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	29			25		115	70-130			03/08/11	
Blank Spike Dup (A102438-BSD1)	EPA 552.2 - Quality	Control									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		111	70-130	1	30	03/08/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		115	70-130	1	30	03/08/11	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		104	70-130	2	30	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	10	1.0	ug/L	10		104	70-130	1	30	03/08/11	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		101	70-130	3	30	03/08/11	
Monobromoacetic Acid (MBAA) (2C)	10	1.0	ug/L	10		101	70-130	0	30	03/08/11	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		109	70-130	2	30	03/08/11	
Monochloroacetic Acid (MCAA) (2C)	10	2.0	ug/L	10		101	70-130	6	30	03/08/11	
Trichloroacetic Acid (TCAA)	11	1.0	ug/L	10		110	70-130	0	30	03/08/11	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		112	70-130	2	30	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	29			25		116	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		119	70-130			03/08/11	
Duplicate (A102438-DUP1) EPA 5	52.2 - Quality Contro	ol				Source	: A1C021	6-01			
Dibromoacetic Acid (DBAA)	2.2	1.0	ug/L		2.2			0	30	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	4.4	1.0	ug/L		4.4			1	30	03/08/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	03/08/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	03/08/11	
Trichloroacetic Acid (TCAA)	3.9	1.0	ug/L		4.0			3	30	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		111	70-130			03/08/11	
Matrix Spike (A102438-MS1) EPA	552.2 - Quality Cont	rol				Source	: A1B196	8-03			
	11	1.0	ug/L	10	ND	115	70-130			03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C)			ug/L ug/L	10 10	ND 20					03/08/11 03/08/11	
Dibromoacetic Acid (DBAA)	11	1.0	-			115	70-130				
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	11 29 11 13	1.0	ug/L ug/L ug/L	10 10 10	20	115 88 107 109	70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA)	11 29 11	1.0 1.0 1.0	ug/L ug/L	10 10	20 ND	115 88 107	70-130 70-130 70-130			03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)	11 29 11 13	1.0 1.0 1.0 2.0	ug/L ug/L ug/L	10 10 10	20 ND ND	115 88 107 109	70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (MBAA) Dichloroacetic Acid (MCAA) Dichloroacetic Acid (MCAA) Dichloroacetic Acid (TCAA) District Carrogate: 2,3-Dibromopropionic Acid	11 29 11 13 39	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10	20 ND ND	115 88 107 109 112	70-130 70-130 70-130 70-130 70-130	8-03		03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A102438-MSD1)	11 29 11 13 39 28	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10	20 ND ND	115 88 107 109 112	70-130 70-130 70-130 70-130 70-130 70-130		30	03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike Dup (A102438-MSD1) Dibromoacetic Acid (DBAA)	11 29 11 13 39 28 EPA 552.2 - Quality	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10 10 10 10 25	20 ND ND 28	115 88 107 109 112 113 Source	70-130 70-130 70-130 70-130 70-130 70-130	2	30 30	03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Frichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A102438-MSD1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C)	11 29 11 13 39 28 EPA 552.2 - Quality	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	20 ND ND 28	115 88 107 109 112 113 <b>Source</b>	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2		03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Frichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Matrix Spike Dup (A102438-MSD1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	11 29 11 13 39 28 EPA 552.2 - Quality	1.0 1.0 1.0 2.0 1.0 <b>y Control</b> 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	20 ND ND 28	115 88 107 109 112 113 Source 113 93	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2 2	30	03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) (2C)	11 29 11 13 39 28 EPA 552.2 - Quality 11 29 11	1.0 1.0 2.0 1.0 <b>y Control</b> 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 25	20 ND ND 28 ND 20 ND	115 88 107 109 112 113 <b>Source</b> 113 93 106	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	2 2 1	30 30	03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	

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#### **Certificate of Analysis**

03/09/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Present: 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter NR· Non-Reportable RL Mult: **RL** Multiplier

...

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# A1C0216

# **Monterey Bay Analytical**

**Monte6227** 

03022011

Turnaround:

Standard

Due Date:

03/16/2011

BSK ANALYTICAL LABORATORIES

\* Required Fields

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

TEMP:

Shipping Method: Relinquished by: (Signature and Printed Name) Relinquished by: (Signature and Printed Name) Sample Matrix Types: David Holland How would you like your completed results sent? E-Mail Fax EDD Sampler Name Printed / Signature Lear, J. Project Information 4 Justin Ct. Chent/Company Name \*: Monterey Bay Analytical MPWMD for Lab by: (Signature and Brin Bottles RSW = Raw Surface Water RGW = Raw Ground Water 2/24/11 Date tagyips gso walk-in sivc fedex other Sampled 14:00 Time similative Cari-Injectate Sample Description / Location \* CFW - Clorinated Finished Water FW = Finished Water WW = Wa Monterey **David Holland** Report Attention \*: STD Level II QC Request Company MBAS WW = Waste Water State \* S STD S Day\*\* 2 Day\*\* 1 Day\* CWW = Chormated Waste Water BW = Bottled Water ste Water SW = Storm Water DW = Drinking Water #O Mail Only Result Request \*\* Surcharge Quote # 464 Zip \* Date 3/1/11 93940 Phone \* #:(831)-357-6227 Cooling Method: ST C Time 16:00 ₽ Matrix \* 4MBAS@Sbcglobal.net Date Payment Received at Delivery: Received by (Signature and Print Name) Received by (Signature and Print Name) 73667 Comments / Station Code Regulatory Compliance Electronic Data Transfer: System No. \* Merced Co 🔲 Tulare Co 🔲 CDHS Fresno Co Carbon Copies: Other: WED SO = Solid**HUL** FAX \* #(831)-641-0734 NONE ă EPA 🗌 × N Check/Cash/Card Packing Material: **TTHM** ٠, 4 HAA5 ANALYSIS REQUESTED Company Company 4 TOC PIA # DOC Init

Notice: Psyment for services rendered as noted become are the in full within 30 days from when invoiced. There so paid account balances are defined in recover on delinquent accounts, costs of collections, including attorneys fees occurred prior to or in highests whether concluded by judgement, sentences, compromise or otherwise. The person signing for the cheryCompany expressing actionwheldings that they are either the Client or authorized agont to the Client or authorized agont to the Client or authorized agont to the Client and the Client or authorized agont to the Client or authorized agont to the Client and the Client of the managed agont to the client of the managed after 1.00 pm will hego the next besiness day.

SPIC.COM OF Annaged.

A1C0216 Monte6227

03/03 Page 9 of 11 Sample Integrity Pg. 1 of 2 WORK



Date Received 32111				#11 1## 11##		A NUBIL BUIL EU	
Section 1- Receiving Information							
The state of the s			BSK-Courier				
Samples arrived at lab on same day	/ sampled: Yes _	No	Has Chilli	ng Process Be	egun: Yes_	<u> </u>	
Coolers/Ice Chests Description/Ter	mperature(s): (If	more than 4 rec	eived, list information in	comment section)	)		
1) \ \ \ \ \ ' \ \ 2)		3)		4)			
· ·							$\overline{}$
Was Temperature In Range: (Ŷ)	N N/A Re	ceived On	Ice: <u>Wet Blue</u>	e Received	d Ambient:	Y (V	ジー
Describe type of packing materials	s: Bubble Wra	D Foam	Packing Pean	uts Paper	Other.		
Initial Receipt: BSK-Visalia	BSK-Bakersfie	eld BSF	K-SAC BSk	K-FDL	BSK-FAL	>	
Were ice chest custody seals prese	ent? Y	Intact: Y	<u>&amp;</u>				
Section 2- COC Info.	Completed	Info From			Comple		Info From
Was COC Received	Yes No	Container	Analysis Reque	estad	Yes	No _	Container
Date Sampled		ļ	Any hold times		-		
Time Sampled		<u> </u>	Client Name				
Sample ID			Address				
Special Storage/Handling Ins.			Telephone #				
Special States							
Section 3- Bottles / Analysis				Yes	No ]	N/A	Comment
Did all bottles arrive unbroken and	intact?						
Were bottle custody seals present?							
Were bottle custody seals intact?							
Did all bottle labels agree with CO		10				-	
Were correct containers used for th	<del></del>						
Were correct preservations used for							
Was a sufficient amount of sample Were bubbles present in VOA Vial			n lv)				
Were Ascorbic Acid Bottles receiv			my)				
Wele Ascorbic Acid Bottles receiv	ed with the ve	/дз:					
Section 4- Comments / Discrepancie	:S						
Sample(s) Split/Preserve: Yes (No)	Container:		Preservation:		Dt/Tim	e/Init _	
	O		Preservation:		Dt/Tim	a/Init	
	Container:	$\overline{}$	Preservation.		D// I IIII	C/11111	
Was Client Service Rep. notified of di	screpancies: Ye	es No (N/	A) CSR:	Notified	By/Dt/Tim	ie:	
Explanations / Comments	<u> </u>	-	<del>)</del>				
			<u> </u>				
Report Comment Entered:							

03/02/2011

Monte6227

# Sample Integrity Pg 2 of 2

BSK Bottles (Yes)



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap ¥ | *[*L None (p) Blue Cap w/NH4 + Buffer HNO<sub>3</sub> (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap Dissolved Oxygen 300ml (g) Centrifuge Tube HNO3 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 <sup>Blue Label</sup> 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH4Cl 552 Piirple Label 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Labe 1 Liter (AG) None 1 Liter (AG) H<sub>2</sub>SO<sub>4</sub> = 0&G = Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 1 Liter (P) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>± H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide Litter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 LLiter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neon Orsen Label 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear - HCL 40ml VOA Vial-Amber – Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>... 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>1</sub> 504, 505 40ml VOA Vial Clear - H-PO4 Motor I Other: Asbestos | ILiter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic edlar Bags



# ENVIRONMENTAL WWW.FGLinc.com

# CHAIN OF CUSTODY

	Analytical Chemis	ste				,										480.42	VAI 3 SE	SREQUE	EST TR	COM
									TEST DI	SCRIPTION	ON - S∞	Reverse six	Se for Cont	ainer, Pre	ervalive at	d Samelin	e informat	ion		
Clien	1: Monterey Bay Analytical Service	es Inc.		T		Τ	Τ				T							<u> </u>		
Addre	ess: 4 Justin Court Ste D							EZE		8	E	15	26,							
	Monterey, CA 93940							May Wat		5	9	Tiesue	52							
Phone	e: 831-375-6227 Fax: 831	1-641-07	34	0		BEST (V)VOA	0	S S		(Src)Sou	Repeat(RP 9(RPL)	1 .	(1)NGOH+ZnAc (4)H2804(6)HN03, Other							
	ect Person: David Holland			Grab(G)		E	table	523	Solid	[ [S	22	(PET)Petiole	IŽ							
Projec	ri Name: MPWMD			E	80	量	8		2	99	Rep 9(R	6	8 B		]					
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Samp Num	Lacation Description	Date Sampled	Time Sampled	Type	Number		Ē	<b>868</b>	(S)Sail (O)OII	<b>8 8</b>	Bact: Other	(LT)Leaf Tissu (PRD)Produce	7 (S) (S) (S) (S) (S)	Gross A	Radium					
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				1	<u> </u>	<b>—</b>				<del></del>	<del></del>				<b></b>			<del> </del>	<del> </del>	

Corporate Offices & Laboratory P.O. Sex 272 / 253 Corporation Street Surfax Paula. CA SERS-10272 TEL: 882/352-2018 FAX: 885/525-4172 CA NELAP Certification No. D1119CA CA ELAP Certification No. 1573

Renzirks:

73667

Office & Laboratory 2500 Stagement Read staction, CA 95215 Tgl.: 209942-0162 FAI: 209842-0623 CA GLAP Certification No. 1553

Date:

Date:

Relinquished

Received By:

David Holland 2/24/11

Office & Laboratory 563 C. Lindo Atemie China. CA 55505 Tel.: 5310343-5818 FAX: 530/343-3807 CA ELAP Certification No. 1562

Relinquished

Received By:

Time:

Time:

1700

1015 Time:

Relinquished

Received By:

Date:

Date:

1015

FIELD OFFICE Vestia Cattornia Tet: (558)734-9473 Mothe: (559)737-2388 FAX: (558)734-9435

Date:

Date:

Time:

Time:

Doc D: F	ZREC1005.011
Page: 1 of	1

# Santa Paula - Condition Upon Receipt (Attach to COC)

	Santa Paula - Condition Opon Recess	- V.			
Samol	le Receipt:		1		
1. 1	Number of ice chests/packages received: Note as OTC if received over the counter unpackaged.	Dp-7		1	
2.	Were samples received in a chilled condition? Temps:	le for tests/H. I	. S/RISHCH La	54.5 (III)	room
3	Do the number of bottles received agree with the COC?	٠.	VES N	•	
4.	Were samples received intact? (i.e. no broken bottles, le	. SIKP Cro.)	ATIA Y	es No	
5.	Were sample custody seals intact?		- کس		
Sign	and date the COC, obtain LIMS sample numbers, select	methods/tes	its and prin		
Sam	ple Verification, Labeling and Distribution:  Were all requested analyses understood and acceptable?		(es) l	40 40	• .
2.	Did bottle labels correspond with the client's ID's?			6	FGL
3.	Were all bottles requiring sample preservation properly	preserved?		No (N/A	10.2
4,	VOAs checked for Headspace?		Yes I	No (NA	
5.	Were all analyses within holding times at time of recei	ipt? pted?	<b>9</b> 3	No Yes No	
6.	ach labels to the containers and include a copy of the CC	C for lab de	livery.	$\boldsymbol{\Lambda}$	
San	npie Receipt, Login and Verification completed by (initi	als):	U		
Dis An	screpancy Documentation:  ny items above which are "No" or do not meet specificati  Person Contacted:  Initiated By:  Problem:  Resolution:	ions (i.e. tem Phone l Date:	nps) must b Yumber:	e resolved.	
	•				
2.	. Person Contacted:		Mumber:_ e:		
	Resolution:		ey Bay Ana	19144) alytical S	_
		(	SP 11	10205	7
	$d_{i}^{2}$	I	V-02/28/2	2011-10:18	:24



Analytical Chemists March 7, 2011

Monterey Bay Analytical ServicesLab ID: SP 11020574 Justin CourtCustomer: 2-19144

Monterey, CA 93940

#### **Laboratory Report**

**Introduction:** This report package contains total of 3 pages divided into 3 sections:

Case Narrative (1 pages): An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
Injectate	02/24/2011	02/28/2011	SP 1102057-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at room temperature. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio QC

900.0	03/02/2011:203248 All analysis quality controls are within established criteria
	02/28/2011:202245 All preparation quality controls are within established criteria
903.0	03/04/2011:203336 All analysis quality controls are within established criteria
	03/02/2011:202330 All preparation quality controls are within established criteria

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.



Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435





Analytical Chemists
March 7, 2011

Lab ID : SP 1102057-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : February 24, 2011-14:00

Monterey, CA 93940 Sampled By : Lear. J.

Received On : February 28, 2011-10:15

Matrix : Drinking Water

Description : Injectate Project : MPWMD

#### Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample	Preparation	Samp	le Analysis
	Result ± Effor	MDA	Omts	WICL/AL	Method	Date/ID	Method	Date/ID
Radio Chemistry <sup>P:1'5</sup>								
Gross Alpha	$1.00 \pm 1.57$	2.14	pCi/L	15	900.0	02/28/11:202245	900.0	03/02/11:203248
Total Alpha Radium (226)	$0.000 \pm 0.148$	0.471	pCi/L	3	903.0	03/02/11:202330	903.0	03/04/11:203336

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: HNO3 pH < 2 \* PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





#### **Analytical Chemists**

March 7, 2011 Lab ID : SP 1102057 **Monterey Bay Analytical Services** : 2-19144 Customer

#### **Quality Control - Radio**

Constituent	Method	Date/ID	Туре	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	03/02/2011:203248	CCV CCB	cpm cpm	10190	43.8 % 0.0400	38 - 47 0.15	
Gross Alpha	900.0	02/28/2011:202245 (SP 1101938-001)	Blank LCS MS MSD MSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	149.4 149.4 149.4 149.4	0.17 112 % 83.3 % 62.6 % 28.3%	3 75-125 60-140 60-140 ≤30	
Alpha	903.0	03/04/2011:203336	CCV CCB	cpm cpm	10190	40.0 % 0.100	38 - 46 0.15	
Total Alpha Radium (226)	903.0	03/02/2011:202330	RgBlk LCS BS BSD BSRPD	pCi/L pCi/L pCi/L pCi/L pCi/L	18.16 18.16 18.16 18.16	0.02 60.8 % 53.9 % 55.3 % 2.4%	2 52-89 43-92 43-92 ≤35.5	

-		• .	
I)	etn	nıt	ion

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS

matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that

BSD the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD

and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation BSRPD

and analysis.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Field Office Visalia, California TEL: 559/734-9473 Mobile: 559/737-2399 FAX: 559/734-8435

	Analytical, Inc.	1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269							
Monterey Bay Analytical	Client Project ID: MPWMD		Date Sampled:	02/24/11					
4 Justin Court, Suite D			Date Received:	03/01/11					
Trustin Court, Suite B	Client Contact: David Holla	Client Contact: David Holland							
Monterey, CA 93940	Client P.O.:		Date Completed:	03/08/11					

WorkOrder: 1103002

March 08, 2011

T .	D		1
Dear	1 10	716	4.

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

### McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD PITTSBURG, CA 94565-1701

Website: www.mccampbell.com Email: main@mccampbell.com Telephone: (877) 252-9262 Fav. (925) 252-0260

CHAIN OF CUSTODY RECORD TURN AROUND TIME

☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW)

RUSH 24 HR

72 HR 5 DAY 48 HR

						a.	1	20)		720	,,						-										1	ALC	CI	_	- **	ine o	II (DW)
Report To: Davi				Bill T	0:															A	nal	ysis	Re	que	st							Other	Comments
Company: Mon			Services															6				2								Т			
	tin Ct. Suite														8015)			B&F				gene											Filter
	terey, Ca 939	40		-Mai			_	_		l.ne	et			_	+			20 E/				S						6	6				Samples for Metals
Tele: (831) 641 -	0734			Fax:										_	Gas (602 / 8021	(21)		1883	=	8		ors/		8			_	602	602				analysis:
Project #:				Projec	et Nar	me:	M	PW	MD					_	905 /	7.80	_	999	418	000	8	rock		icide			NAS	010	010				Yes / No
Project Location								-						_	as (	09 \	8015	lse ()	ons	E	ticid	V: A	(sap	lerb	8	3	s/P	9/8	9/8	020)			
Sampler Signatu	re: Lear, J.			_	_	_				_			OB	_	38 (	(EP)	OH (	Gres	carh	/ 802	l Pes	ONE	stici	0	VO	SVC	PAH	200	200.	9/01			
		SAM	PLING		ers		MA	ATR	XI		M PRE	ETH	OD	D	TPH	NLY.	otor	S II	lydro	8010	0) 18	B's	P Pe	cidio	150	1270	310 (	00.7	0.77	09/			
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	-		Air	Sludge	Other	ICE	1		$\neg$	MTBE/BTEX &	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 (CI 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)	Methane		
	Injectate	2/24/11	14:00	3	NOA.	X					X																				X		73667
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Relinquished By: David Holland	9	Date: 2/28/11	Time: 16:00	Rece	ved By	V: \(()	e a	2 .	3/1	111	1	0.2	Oa	1	CE	OD C	ON	DITI	ON	<b>V</b>	-/							-	COM	IME	NTS:		
Relinquished By:		Date:	Time:	Recei	ived By	y:								ICE/t° COMMENTS: GOOD CONDITION HEAD SPACE ABSENT DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB																			
Relinquished By:		Date:	Time:	Recei	ived By	y:								1'	KE	SER	VEL	IN	LAB		_		4										
												y.:		P	RE	SER	VAT	TION	VO.	AS	0&		ME'		s (	отн	ER						

# McCampbell Analytical, Inc.

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

	illow Pass Rd rg, CA 94565-1701				O.			)									
—// A >	52-9262					Work	Order	:: 1103	8002	(	ClientC	ode: N	<b>IBAS</b>				
		WaterTrax	WriteOn	☐ EDF		Excel		Fax	I	<b>✓</b> Email		Hard	Сору	Thir	rdParty	☐ J-	-flag
Report to: David Holla	nd	Email: 4	mbas@sbcg	lobal.net				ccounts					Req	uested	TAT:	5	days
Monterey Bar 4 Justin Con Monterey, C 831-375-622	CA 93940	cc: PO: ProjectNo: M	IPWMD				4	onterey Justin C onterey	Court, S	uite D				e Rece e Prin		03/01/	
									Req	uested	Tests	(See le	gend b	elow)			
Lab ID	Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1103002-001	Injectate		Water	2/24/2011 14:00		Α											
<u>Test Legend</u> :  1	174_W 2 7 7 12			3 8					4					5 10			
													Prepa	red by:	Melis	sa Valle	es

#### **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.

#### Sample Receipt Checklist

Client Name:	Monterey Bay Analytic	al		Date a	and Time Received:	3/1/2011 1	10:58:59 AM
Project Name:	MPWMD			Check	list completed and	d reviewed by:	Melissa Valles
WorkOrder N°:	<b>1103002</b> Matrix	<u>Water</u>		Carrie	r: <u>UPS</u>		
		Chain of C	ustody (0	COC) Informa	<u>ition</u>		
Chain of custody	present?	Yes	· 🗸	No 🗆			
Chain of custody	signed when relinquished an	d received? Yes	, <b>V</b>	No 🗆			
Chain of custody	agrees with sample labels?	Yes	, <b>V</b>	No 🗆			
Sample IDs noted	by Client on COC?	Yes	, <b>V</b>	No 🗆			
Date and Time of	collection noted by Client on C	OC? Yes	· 🗸	No 🗆			
Sampler's name r	noted on COC?	Yes	, <b>v</b>	No 🗆			
		<u>Sampl</u>	e Receip	t Information	l		
Custody seals in	tact on shipping container/coo	ler? Yes	; 🗆	No 🗆		NA 🔽	
Shipping contain	er/cooler in good condition?	Yes	, <b>V</b>	No 🗆			
Samples in prope	er containers/bottles?	Yes	, <b>v</b>	No 🗆			
Sample containe	rs intact?	Yes	· 🗸	No 🗆			
Sufficient sample	e volume for indicated test?	Yes	· 🗸	No 🗌			
	<u>Sa</u>	ımple Preservatio	on and He	old Time (HT)	Information		
All samples recei	ived within holding time?	Yes	· 🗸	No 🗌			
Container/Temp I	Blank temperature	Coo	ler Temp:	4.4°C		NA $\square$	
Water - VOA via	ls have zero headspace / no b	oubbles? Yes	, <b>v</b>	No 🗆	No VOA vials sub	mitted $\square$	
Sample labels ch	necked for correct preservation	n? Yes	· 🗸	No 🗌			
Metal - pH accep	table upon receipt (pH<2)?	Yes	; 🗆	No 🗆		NA 🔽	
Samples Receive	ed on Ice?	Yes		No 🗆			
		(Ice Type: B	LUE ICE	)			
* NOTE: If the "N	No" box is checked, see comn	nents below.					
	=======						
Client contacted:		Date contacted:			Contacte	ed by:	
Comments:							

Monterey Bay Analytical		Client Project II	D: MPWMD	Date Sampled: 02/24/11							
				Date Receive							
4 Justin Cou	rt, Suite D	Client Contact:	David Holland	Date Extracte							
Monterey, C.	A 93940	Client P.O.:	David Hondid								
Wiontercy, C.	A 73740		TT 1 1 4	Date Analyzed 03/08/11							
Extraction method	RSK 174/175		Hydrocarbons* al methods RSK174/175		1103002						
Lab ID	Client ID	Matrix	Methane		DF	rk Order: % SS	Comments				
001A	Injectate	W	ND		1	N/A					
	eporting Limit for DF =1;  D means not detected at or	W	0.4			μg/L					
	above the reporting limit	S	NA			NA					
	are reported in µg/L.  Recovery of Surrogate Standard  actor										

Angela Rydelius, Lab Manager

#### QC SUMMARY REPORT FOR RSK174/175

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 56459 WorkOrder 1103002

EPA Method RSK174/175	Extra	Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	ptance Criteria (%)		
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
Methane	N/A	1.17	N/A	N/A	N/A	97.6	109	11.1	N/A	N/A	80 - 120	20	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 56459 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1103002-001A	02/24/11 2:00 PM	f 03/08/11	03/08/11 12:50 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

**DHS ELAP Certification 1644** 

QA/QC Officer



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

David Holland, Laboratory Director

Page 1 of 1 Thursday, March 31, 2011

Lab Number: AA74346

Collection Date/Time: 3/21/2011 12:30 Sample Collector: LINDBERG T

Submittal Date/Time: 3/21/2011 13:20 Sample ID

	Sample D	escription	: SMTIW Inje	ctate			
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Chloramines	SM4500-CI G	mg/L	0.07		0.05		3/21/2011
Chloride	EPA300.0	mg/L	27		1	250	3/23/2011
Haloacetic Acids	EPA552	ug/L	12	E		60	3/25/2011
Trihalomethanes	EPA524.2	ua/L	15	Е		80	3/25/2011

Sample Comments:

H = Analyzed ouside of hold time

Report Approved by:

E = Analysis performed by External Laboratory; See External Laboratory Report attachments.



A1C1646

03/30/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 03/22/2011 08:25.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



03/30/2011

#### **Case Narrative**

#### **Work Order Information**

Monterey Bay Analytical David Holland **Client Name:** Submitted by: **Client Code:** Monte6227 Shipped by: **ONTRAC** 

**COC Number:** Work Order: A1C1646

Project: **MPWMD TAT:** 10 PO #:

**Sample Receipt Conditions** 

Cooler: **Default Cooler** Temp. °C: 5

Containers Intact COC/Labels Agree Received On Wet Ice Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager Report Format David Holland Final.rpt



#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Report Issue Date:** 03/30/2011 16:57 **Received Date:** 03/22/2011 **Received Time:** 08:25

**Lab Sample ID:** A1C1646-01 **Sample Date:** 03/21/2011 12:30

Sample Type: Grab

Sampled by: T Lindberg
Matrix: Drinking Water

Sample Description: SMTIW-Injectate // 74346

**Organics** 

Analyte	Mother	Dogult	DI	l Init-	RL	Dotah	Dropored	A not:	0!
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	4.9	0.50	ug/L	1	A103260	03/25/11	03/25/11	
Bromoform	EPA 524.2	0.80	0.50	ug/L	1	A103260	03/25/11	03/25/11	
Chloroform	EPA 524.2	5.9	0.50	ug/L	1	A103260	03/25/11	03/25/11	
Dibromochloromethane	EPA 524.2	3.4	0.50	ug/L	1	A103260	03/25/11	03/25/11	
Surrogate: Bromofluorobenzene	EPA 524.2	95 %		Acceptable ra	ange: 70-130 %	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	15		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	2.1	1.0	ug/L	1	A103159	03/23/11	03/25/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	5.0	1.0	ug/L	1	A103159	03/23/11	03/25/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A103159	03/23/11	03/25/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A103159	03/23/11	03/25/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	4.5	1.0	ug/L	1	A103159	03/23/11	03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	112 %		Acceptable ra	ange: 70-130 %	%			
Surrogate: 2,3-Dibromopropionic Acid (2C)	EPA 552.2	122 %		Acceptable ra	ange: 70-130 %	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	12		ug/L					



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A103159				Analyst:	KHH	Prepared	d: 03/23/2	011			
Blank (A103159-BLK1) EPA 552.2	- Quality Control										
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							03/25/11	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L							03/25/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							03/25/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							03/25/11	
Frichloroacetic Acid (TCAA)	ND	1.0	ug/L							03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		111	70-130			03/25/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		121	70-130			03/25/11	
Blank Spike (A103159-BS1) EPA 5	552.2 - Quality Cont	rol									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		105	70-130			03/25/11	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10		106	70-130			03/25/11	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		105	70-130			03/25/11	
Monochloroacetic Acid (MCAA)	12	2.0	ug/L	10		116	70-130			03/25/11	
Trichloroacetic Acid (TCAA)	11	1.0	ug/L	10		107	70-130			03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	27			25		110	70-130			03/25/11	
Surrogate: 2,3-Dibromopropionic Acid '2C)	30			25		120	70-130			03/25/11	
Blank Spike Dup (A103159-BSD1)	EPA 552.2 - Quality	/ Control	1								
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		106	70-130	1	30	03/25/11	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10		108	70-130	1	30	03/25/11	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		104	70-130	1	30	03/25/11	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		112	70-130	3	30	03/25/11	
richloroacetic Acid (TCAA)	11	1.0	ug/L	10		107	70-130	1	30	03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		111	70-130			03/25/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		119	70-130			03/25/11	
Duplicate (A103159-DUP1) EPA 5	52.2 - Quality Contr	ol				Source	e: A1C166	7-02			
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L		ND				30	03/25/11	
Dichloroacetic Acid (DCAA) (2C)	32	1.0	ug/L		34			6	30	03/25/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	03/25/11	
Monochloroacetic Acid (MCAA)	3.8	2.0	ug/L		3.9			3	30	03/25/11	
Trichloroacetic Acid (TCAA)	36	1.0	ug/L		35			2	30	03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		111	70-130			03/25/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		118	70-130			03/25/11	
Matrix Spike (A103159-MS1) EPA	552.2 - Quality Con	trol				Source	e: A1C145	5-01			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	112	70-130			03/25/11	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10	ND	107	70-130			03/25/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	109	70-130			03/25/11	
Monochloroacetic Acid (MCAA)	12	2.0	ug/L	10	ND	118	70-130			03/25/11	
Frichloroacetic Acid (TCAA)	11	1.0	ug/L	10	ND	115	70-130			03/25/11	
	31			25		123	70-130			03/25/11	

A1C1646 FINAL 03302011 1657



#### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A103159				Analyst:	KHH	Prepare	d: 03/23/2	011			
Matrix Spike (A103159-MS1) EPA	. 552.2 - Quality C	ontrol				Source	e: A1C14	55-01			
Surrogate: 2,3-Dibromopropionic Acid (2C)	32			25		126	70-130			03/25/11	
Matrix Spike Dup (A103159-MSD1)	EPA 552.2 - Qua	ality Control				Source	e: A1C145	55-01			
Dibromoacetic Acid (DBAA)	12	1.0	ug/L	10	ND	117	70-130	4	30	03/25/11	
Dichloroacetic Acid (DCAA) (2C)	11	1.0	ug/L	10	ND	114	70-130	6	30	03/25/11	
Monobromoacetic Acid (MBAA)	12	1.0	ug/L	10	ND	115	70-130	5	30	03/25/11	
Monochloroacetic Acid (MCAA)	13	2.0	ug/L	10	ND	127	70-130	7	30	03/25/11	
Trichloroacetic Acid (TCAA)	12	1.0	ug/L	10	ND	121	70-130	6	30	03/25/11	
Surrogate: 2,3-Dibromopropionic Acid	33			25		131	70-130			03/25/11	SR01
Surrogate: 2,3-Dibromopropionic Acid (2C)	34			25		137	70-130			03/25/11	SR01
Batch: A103260				Analyst:	JGB	Prepare	d: 03/25/2	011			
Blank (A103260-BLK1)	2 - Quality Control										
Bromodichloromethane	ND	0.50	ug/L							03/25/11	
Bromoform	ND	0.50	ug/L							03/25/11	
Chloroform	ND	0.50	ug/L							03/25/11	
Dibromochloromethane	ND	0.50	ug/L							03/25/11	
Surrogate: Bromofluorobenzene	4.6			5.0		91	70-130			03/25/11	
Blank Spike (A103260-BS1) EPA	524.2 - Quality Co	ntrol									
Bromodichloromethane	5.2	0.50	ug/L	5.0		103	70-130			03/25/11	
Bromoform	5.4	0.50	ug/L	5.0		108	70-130			03/25/11	
Chloroform	5.6	0.50	ug/L	5.0		111	70-130			03/25/11	
Dibromochloromethane	4.9	0.50	ug/L	5.0		99	70-130			03/25/11	
Surrogate: Bromofluorobenzene	5.3			5.0		106	70-130			03/25/11	
	EPA 524.2 - Qua	lity Control									
Blank Spike Dup (A103260-BSD1)			,,	5.0		72	70-130	36	30	03/25/11	BS03
· · · · · · · · · · · · · · · · · · ·	3.6	0.50	ug/L	5.0							
Bromodichloromethane	3.6 3.8	0.50 0.50	ug/L ug/L	5.0		76	70-130	35	30	03/25/11	BS03
Blank Spike Dup (A103260-BSD1)  Bromodichloromethane  Bromoform  Chloroform			-			76 79	70-130 70-130	35 35	30 30	03/25/11 03/25/11	BS03 BS03
Bromodichloromethane Bromoform	3.8	0.50	ug/L	5.0							BS03

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#### **Certificate of Analysis**

03/30/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Percent Recovered (surrogates) Present: 1 or more CFU/100mLs %: pCi/L: Picocuries per Liter Non-Reportable RL Mult: **RL** Multiplier

SR01 Surrogate recovery was above acceptance limits.

BS03 BS/BSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.

A1C1646 FINAL 03302011 1657

www.bsklabs.com

# A1C1646

# **Monterey Bay Analytical**

Monte6227

03222011

Turnaround:

Standard

Due Date:

04/05/2011

Printed: 03/22/2011 17:55:16

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# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com

A1C1646 Monte6227

Shipping Method: (CAO Urs GSO WA	With that	Received for Labby: (Mignature on Printed Name)	)	Relinquished lw: (Signature and Printed Name)	Relinquished by: (Signature and Printed Name)  David Holland  David Holland						3/21/11 12:30 SMTI	Sample # Sampled Samp # Bottles Date Time	Matrix Types: RSW = Raw Surface Water RGW = Raw Ground Water	Lindberg, T.	Sampler Name Printed / Signature	How would you like your completed results sent? FeMail Fax	MPWMD	Project Information:	4 Justin Ct.	iterey Bay Analyti	Client/Company Name *:	Required Fields	BSK ANALYTICAL LABORATORIES
CAO UPS GSO WALK-IN SIVC FED EX OTHER	BSK W	Day.		Company	MBAS D						SMTIW-Injectate	Sample Description / Location *	CFW - Clorinated Finished Water CWW = Chorinated Waste Water FW - Finished Water WW = Waste Water SW = Storm Water	STD Level II STD s Day*	QC Request Result Request ** Surcharge	E-Mail Fax EDD Mail Only	Quote # 464	# OG	Monterey CA	David Holland			S (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com
Cooling Method:	11 825 D	Time	r Line	Time	Dato Time R 3/21/11 <b>16:00</b>						DW 7.	Matrix * (	d Waste Water BW = Bottled Water Storm Water DW = Drinking Water	✓STD					93940	E-mail:	Phone * #:(831)-357-6227	_	A 93706-1623 -2893 • www.bsklabs
WET BLUE NONE	Date: Amount:	Payment Received at Delivery:	event of (organites and control	Received by (Signature and Drint Name)	Received by (Signature and Print Name)						74346	Comments / Station Code	itled Water SO = Solid			Regulatory Compliance Electronic Data Transfer: Y   N	Other:	Merced Co  Tulare Co	CDHS Fresno Co EPA	4MBAS@Sbcglobal.net	357-6227 FAX * #(831)-641-0734	TEMP: 5	.com
Packin	Check/Cash/Card										_ ′ _		TTI									.: .:	e transfer
Packing Material:  **Example 1: The control of the	h/Card PIA# (nit.		company	Company	Company								HA	A5						ANALYSIS REQUESTED			A1C1646 03/22/2 O Monte6227 10 of
																					Pa	age 8	of 10

Notice Payment for services rendered as mosed herein are due in full within 30 days from when invoiced. Error opaid, account balances are deemed delinquent. Delinquent balances are steject to monthly service feebiling changes and interest calculated at 1.12 % per month. 18% per assuming. Sex Associates shall be entired to recover on delinquent accounts, costs of collections, including alterneys lies incurred prior to or in frigation whether concluded by judgement, settlement, compounds or otherwise. The person signing for the delentCompany expressley acknowledges that they are either the Chert or administration of the analysis requested person by the control of the property of the chert of the property of the chert of the person signing for the delentCompany expressley acknowledges that they are either the Chert or administration of the analysis requested person by the rest of the person signing for the delentCompany expressley acknowledges that they are either the Chert or administration of the analysis requested person before the person signing for the delentCompany expressley acknowledges that they are either the Chert or administration of the analysis requested person before the person signing for the delentCompany expressley acknowledges that they are either the Chert or administration of the analysis requested person between the chert Chert or administration of the analysis requested person before the chert of the person significant that the person significant the person significant that the person significant the person significant the person significant that the person significa SR-FL-0012-00 (Analytical)

# Sample Integrity Pg. of O WORK ORI



Date Received 3/22/11	<u>0</u>	<u></u>	,, , , , , , , , , , , , , , , , , , , ,	_		, ; <b>, , , , , ,</b> ,		
Section 1- Receiving Information				_				
Sample Transport: ONTRAC	LIDG DIVIC	Walk In	BSK-Courier	CSO	End E	'ava C	\+b.a	
-								
Samples arrived at lab on same da						ın: Yes		No
Coolers/Ice Chests Description/To	emperature(s): (If	more than 4 re	ceived, list information it	comment se	ction)			
1)5, 2)_		3)			4)			
Was Temperature In Range: (Y					eived A	Ambien	t: <u>Y</u> (	<u>N</u>
Describe type of packing materia	ls: Bubble Wra	p Foam	Packing Pean	uts 🔏	aper	Other:		
Initial Receipt: BSK-Visalia	BSK-Bakersfie	eld BSI	K-SAC BSK	K-FDL	ÐŞ	K-FAL	>	
Were ice chest custody seals pres	sent? Y	નેntact: Y	$\langle \langle \rangle \rangle$					
Section 2- COC Info.	Completed Yes No	Info From Container				Comp Yes	oleted No	Info From Container
Was COC Received			Analysis Reque					
Date Sampled			Any hold times l	ess than 7	2hr			
Time Sampled			Client Name			_		
Sample ID			Address			ب		
Special Storage/Handling Ins.			Telephone #			<u> </u>		
Section 3- Bottles / Analysis			······································	Yes	N	lo	N/A	Comment
Did all bottles arrive unbroken and	l intact?			163			TWEE	Comment
Were bottle custody seals present?								
Were bottle custody seals intact?								
Did all bottle labels agree with CO	C?							
Were correct containers used for the		ed?		<u></u>				
Were correct preservations used for			· · · ·	~				
Was a sufficient amount of sample								
Were bubbles present in VOA Via	ls? (Volatile M	ethods Or	ıly)					
Were Ascorbic Acid Bottles receive	ed with the VO	As?				-		
Section 4- Comments / Discrepancio	28							
Sample(s) Split/Preserve: Yes No	Container:	****	Preservation: _			Dt/Tin	ne/Init _	
	Container;	$\overline{}$	Preservation: _			Dt/Tin	ne/Init _	<del></del>
Was Client Service Rep. notified of d Explanations / Comments	iscrepancies: Ye	s No NA	A CSR:	Notif	ied By	//Dt/Tin	ne:	
						<del></del>		

Labeled by: 3 @ 1041 Labels checked by: Juh @ 12:36

Report Comment Entered:

Sample Integrity Pg Of Of BSK Bottles (Yes

Yes WORK



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer HNO; (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap Other: Dissolved Oxygen 300ml (g) Centrifuge Tube HNO: 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD <sup>Yellow Laber</sup> 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515 547 Blue Eabel 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH₄€l 552 Purple Cabel 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Label 1 Liter (AG) None I Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G Yellow Labell 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 I Liter (P)  $Na_2S_2O_3+ H_2SO_4 = 549$ 1 Liter (AG) NaOH+ZnAc Sulfide Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 Turquoise Labe 1 Liter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neon Green Label 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear - HCL 40ml VOA Vial Amber – Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jan Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1 Tuesday, May 17, 2011

Lab Number: AA75474

Collection Date/Time: 4/27/2011 11:30 Sample Collector: CINDBERG, T

Submittal Date/Time: 4/27/2011 12:05 Sample ID

	Samp	le Descrip	tion: Injectat	e			
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Chloramines	SM4500-Cl G	mg/L	0.15		0.05		4/27/2011
Chloride	EPA300.0	mg/L	27		1	250	4/28/2011
Haloacetic Acids	EPA552	ug/L	14	E		60	5/5/2011
Trihalomethanes	EPA524.2	ug/L	14	Е		80	5/6/2011

Sample Comments:

Report Approved by:



A1D2221

05/11/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 04/29/2011 08:00.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



05/11/2011

#### **Case Narrative**

## **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1D2221 COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact
COC/Labels Agree
Packing Material - Bubble Wrap
Packing Material - Paper
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Report Manager
David Holland
Final.rpt
Report Format

A1D2221 FINAL 05112011 0859

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#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Report Issue Date:** 05/11/2011 8:59 **Received Date:** 04/29/2011 **Received Time:** 08:00

**Lab Sample ID:** A1D2221-01 **Sample Date:** 04/28/2011 11:30

Sample Type: Grab

Sampled by: T Lindberg
Matrix: Water

Sample Description: Injectate // 75474

**Organics** 

					DI				
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	5.2	0.50	ug/L	1	A105141	05/05/11	05/06/11	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A105141	05/05/11	05/06/11	
Chloroform	EPA 524.2	5.8	0.50	ug/L	1	A105141	05/05/11	05/06/11	
Dibromochloromethane	EPA 524.2	3.1	0.50	ug/L	1	A105141	05/05/11	05/06/11	
Surrogate: Bromofluorobenzene	EPA 524.2	70 %		Acceptable ra	nge: 70-130 %	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	14		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	3.0	1.0	ug/L	1	A104992	05/02/11	05/05/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	6.2	1.0	ug/L	1	A104992	05/02/11	05/05/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A104992	05/02/11	05/05/11	
Monochloroacetic Acid (MCAA) (2C)	EPA 552.2	ND	2.0	ug/L	1	A104992	05/02/11	05/05/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	4.9	1.0	ug/L	1	A104992	05/02/11	05/05/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	104 %		Acceptable ra	nge: 70-130 %	%			
Surrogate: 2,3-Dibromopropionic Acid (2C)	EPA 552.2	102 %		Acceptable ra	nge: 70-130 %	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	14		ug/L					



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A104992				Analyst:	KHH	Prepared	d: 05/02/2	011			
Blank (A104992-BLK1) EPA 552.2	- Quality Control										
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							05/04/11	
Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							05/04/11	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L							05/04/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							05/04/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							05/04/11	
Monochloroacetic Acid (MCAA) (2C)	ND	2.0	ug/L							05/04/11	
Trichloroacetic Acid (TCAA) (2C)	ND	1.0	ug/L							05/04/11	
Surrogate: 2,3-Dibromopropionic Acid	25			25		101	70-130			05/04/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	25			25		101	70-130			05/04/11	
Blank Spike (A104992-BS1) EPA 5	52.2 - Quality Con	trol									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		107	70-130			05/04/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		113	70-130			05/04/11	
Dichloroacetic Acid (DCAA) (2C)	10	1.0	ug/L	10		101	70-130			05/04/11	
Monobromoacetic Acid (MBAA)	9.5	1.0	ug/L	10		95	70-130			05/04/11	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10		104	70-130			05/04/11	
Monochloroacetic Acid (MCAA) (2C)	9.8	2.0	ug/L	10		98	70-130			05/04/11	
Trichloroacetic Acid (TCAA)	9.3	1.0	ug/L	10		93	70-130			05/04/11	
Surrogate: 2,3-Dibromopropionic Acid	27			25		109	70-130			05/04/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	27			25		108	70-130			05/04/11	
Blank Spike Dup (A104992-BSD1)	EPA 552.2 - Quali	ty Control									
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		103	70-130	4	30	05/05/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		107	70-130	5	30	05/05/11	
Dichloroacetic Acid (DCAA) (2C)	9.6	1.0	ug/L	10		96	70-130		30	05/05/11	
Monobromoacetic Acid (MBAA)	8.9	1.0	ug/L	10		89	70-130	6	30	05/05/11	
Monochloroacetic Acid (MCAA)	9.4	2.0	ug/L	10		94	70-130	10	30	05/05/11	
Monochloroacetic Acid (MCAA) (2C)	10	2.0	ug/L	10		100	70-130	2	30	05/05/11	
Trichloroacetic Acid (TCAA)	9.6	1.0	ug/L	10		96	70-130		30	05/05/11	
Surrogate: 2,3-Dibromopropionic Acid	21			25		84	70-130		-	05/05/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	22			25		89	70-130			05/05/11	
	52.2 - Quality Cont	rol				Source	e: A1D222	1-01			
Dibromoacetic Acid (DBAA)	2.5	1.0	ug/L		3.0			17	30	05/05/11	
Dichloroacetic Acid (DCAA) (2C)	5.9	1.0	ug/L		6.2			5	30	05/05/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	05/05/11	
Monochloroacetic Acid (MCAA) (2C)	ND	2.0	ug/L		ND				30	05/05/11	
Trichloroacetic Acid (TCAA)	4.9	1.0	ug/L		4.9			1	30	05/05/11	
Surrogate: 2,3-Dibromopropionic Acid	21			25		85	70-130			05/05/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	22			25		87	70-130			05/05/11	
Matrix Spike (A104992-MS1) EPA	552.2 - Quality Co	ntrol				Source	e: A1D214	5-01			
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10	ND	105	70-130			05/05/11	

A1D2221 FINAL 05112011 0859



# **Organics Quality Control Report**

<u> </u>											
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A104992				Analyst:	KHH	Prepared	d: 05/02/2	011			
Matrix Spike (A104992-MS1) EPA	A 552.2 - Quality (	Control				Source	e: A1D214	5-01			
Dichloroacetic Acid (DCAA) (2C)	14	1.0	ug/L	10	5.9	82	70-130			05/05/11	
Monobromoacetic Acid (MBAA)	8.5	1.0	ug/L	10	ND	85	70-130			05/05/11	
Monochloroacetic Acid (MCAA)	9.6	2.0	ug/L	10	ND	80	70-130			05/05/11	
Trichloroacetic Acid (TCAA)	14	1.0	ug/L	10	5.3	86	70-130			05/05/11	
Surrogate: 2,3-Dibromopropionic Acid	21			25		85	70-130			05/05/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	22			25		89	70-130			05/05/11	
Matrix Spike Dup (A104992-MSD1)	EPA 552.2 - Qu	uality Contro	I			Source	e: A1D214	5-01			
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10	ND	105	70-130	1	30	05/05/11	
Dichloroacetic Acid (DCAA) (2C)	15	1.0	ug/L	10	5.9	92	70-130	7	30	05/05/11	
Monobromoacetic Acid (MBAA)	9.1	1.0	ug/L	10	ND	91	70-130	7	30	05/05/11	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10	ND	85	70-130	5	30	05/05/11	
Trichloroacetic Acid (TCAA)	14	1.0	ug/L	10	5.3	88	70-130	1	30	05/05/11	
Surrogate: 2,3-Dibromopropionic Acid	22			25		89	70-130			05/05/11	
Currentes 0.2 Dibromaniania Asid	00			25		94	70-130			05/05/11	
	23			25		94	70-730			00/00/11	
(2C)	23			Analyst:	JGB		d: 05/05/2	011		00/00/11	
(2C) Batch: A105141	23 2 - Quality Contro	ol			JGB			011		30,00,11	
(2C) Batch: A105141 Blank (A105141-BLK1) EPA 524.		ol 0.50	ug/L		JGB			011		05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.3  Bromodichloromethane	2 - Quality Contro		ug/L ug/L		JGB			011			
Batch: A105141  Blank (A105141-BLK1) EPA 524.3  Bromodichloromethane  Bromoform	2 - Quality Contro	0.50	-		JGB			011		05/06/11	
Blank (A105141  Blank (A105141-BLK1) EPA 524.:  Bromodichloromethane  Bromoform  Chloroform	<b>2 - Quality Contro</b> ND ND	0.50 0.50	ug/L		JGB			011		05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane	<b>2 - Quality Contro</b> ND ND ND	0.50 0.50 0.50	ug/L ug/L		JGB			011		05/06/11 05/06/11 05/06/11	
Blank (A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene	<b>2 - Quality Contro</b> ND ND ND ND	0.50 0.50 0.50 0.50	ug/L ug/L	Analyst:	JGB	Prepared	d: 05/05/2	011		05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.  Bromodichloromethane  Bromoform  Chloroform  Dibromochloromethane  Surrogate: Bromofluorobenzene  Blank Spike (A105141-BS1) EPA	2 - Quality Contro ND ND ND ND ND	0.50 0.50 0.50 0.50	ug/L ug/L	Analyst:	JGB	Prepared	d: 05/05/2	011		05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene Blank Spike (A105141-BS1) EPA Bromodichloromethane	2 - Quality Contro ND ND ND ND 5.1 524.2 - Quality C	0.50 0.50 0.50 0.50	ug/L ug/L ug/L	Analyst:	JGB	Prepared	70-130	011		05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene  Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform	2 - Quality Contro ND ND ND ND 5.1 524.2 - Quality C 4.5	0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L	Analyst: 5.0	JGB	Prepared 101	70-130	011		05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromochloromethane Chloroform Chloroform Chloromethane Surrogate: Bromofluorobenzene Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform	2 - Quality Control ND ND ND ND 5.1  524.2 - Quality C 4.5 4.7	0.50 0.50 0.50 0.50 0.50 <b>ontrol</b> 0.50 0.50	ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0	JGB	101 90 94	70-130 70-130	011		05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane  Surrogate: Bromofluorobenzene  Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform Dibromochloromethane	2 - Quality Control ND ND ND ND 5.1  524.2 - Quality C 4.5 4.7 5.2	0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0	JGB	101 90 94 103	70-130 70-130 70-130 70-130	011		05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform Dibromochloromethane Bromoform Chloroform Chloroform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene	2 - Quality Control ND ND ND 5.1  524.2 - Quality C 4.5 4.7 5.2 4.3	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0 5.0	JGB	101 90 94 103 86	70-130 70-130 70-130 70-130 70-130	011		05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.  Bromodichloromethane Bromoform Chloroform Dibromochloromethane  Surrogate: Bromofluorobenzene  Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform Dibromochloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene  Surrogate: Bromofluorobenzene	2 - Quality Control ND ND ND 5.1  524.2 - Quality C 4.5 4.7 5.2 4.3 5.6	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0 5.0	JGB	101 90 94 103 86	70-130 70-130 70-130 70-130 70-130		30	05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Batch: A105141  Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene  Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform Dibromochloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene  Blank Spike Dup (A105141-BSD1) Bromodichloromethane	2 - Quality Control ND ND ND S.1  524.2 - Quality C 4.5 4.7 5.2 4.3 5.6  EPA 524.2 - Qu	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0 5.0 5.0	JGB	90 94 103 86 112	70-130 70-130 70-130 70-130 70-130 70-130		30 30	05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Blank (A105141-BLK1) EPA 524.: Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene Blank Spike (A105141-BS1) EPA Bromodichloromethane Bromoform Chloroform Dibromochloromethane Bromoform Chloroform Dibromochloromethane Bromoform Dibromochloromethane Bromoform Dibromochloromethane Bromoform Dibromochloromethane Bromofluorobenzene Blank Spike Dup (A105141-BSD1) Bromodichloromethane Bromoform	2 - Quality Control ND ND ND S.1  524.2 - Quality C 4.5 4.7 5.2 4.3 5.6  EPA 524.2 - Qu 4.3	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0 5.0 5.0	JGB	90 94 103 86 112	70-130 70-130 70-130 70-130 70-130 70-130	5		05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	
Bromodichloromethane Bromoform Chloroform Dibromochloromethane Surrogate: Bromofluorobenzene	2 - Quality Control ND ND ND 5.1  524.2 - Quality C 4.5 4.7 5.2 4.3 5.6  EPA 524.2 - Qu 4.3 4.4	0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	ug/L ug/L ug/L ug/L ug/L ug/L	5.0 5.0 5.0 5.0 5.0 5.0 5.0	JGB	90 94 103 86 112	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	5 7 14	30	05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11 05/06/11	

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## **Certificate of Analysis**

05/11/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- · All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

#### Certifications:

State of California - CDPH - ELAP 1
State of California - CDPH - NELAP 0
State of New Mexico - NMED-DWB

1180 04227CA

State of Nevada - NDEP

CA000792009A

### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) MPN: Most Probable Number mg/Kg: RL: Reporting Limit Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Percent Recovered (surrogates) 1 or more CFU/100mLs %: pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

...

A1D2221 FINAL 05112011 0859

# A1D2221

# Monterey Bay Analytical Monte6227

04292011

Turnaround:

Standard

Due Date:

05/13/2011

Printed: 04/29/2011 14:07:58

# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

terial:	Packin	MET BLUE NONE	Cooling Method:		AO) JPS GSO WALK-IN SJYC FED EX OTHER	GSO WALK-R	(AO)JPS	fethod:	Shipping Method:	50
b/Card Pf∧ # Init.	Check/Cash/Card	Payment Received at Delivery:  Date: Amount Ct	CNB.	Melh UR	Menty Bir HISM		(Signature and Printed N.		Recorded By Lago by	-
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Company		Received by (Signature and Print Name)	Time 16:00	Date 4/28/11	MBAS	NA CO	Relinquished by: (Signature and Printed Nama David Holland	David Holland	elinquished David	
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HAA	TTH	BW - Bottled Water DW = Druking Water SO = Solid	e Water BW – i /ater DW = Dri	CWW = Chorinated Waste Water to Water SW = Storm Water	CFW = Ctorinated Finished Water CWW = FW = Finished Water WW = Waste Water		RSW = Raw Surface Water RGW = Raw Ground Water	i	Matrix Types:	T
<b>\</b> 5	IM		)ay**∏l Day**	✓STD ☐5 Day** ☐2 Day**☐1 Day**	STD Level 11			rg, T	Lindberg, T.	
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		. Co		PO#				nemation:	Project Information	
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ANALYSIS KEQUESTED		4MBAS@Sbcglobal.net	E-mail: 4MB/		David Holland	Monterey Bay Analytical	Bay Ar	terey	Mon	1
		)-357-6227 FAX * #(831)-641-0734	Phone * #: (831)-357-6227		Report Attention *:		.*	Client/Company Name *	Client/Cor	
		TEMP: (0 >						Fields	Required Fields	*
Monte6227										

Notice Psyment for services rendered as noted herein are due in full virtim 30 keys from when invoiced. If not so part, account beliences are desinguent. Delimpent behaves are subject to morelly service re-billing charges and invests racidated as noted herein are due in full virtim 30 keys from when invoiced. If not so part, accounts for the person subject to morelly service re-billing charges and invests racidated at 1.12% per more in 80% per anoma. If 80% per more in 80% SR-FL-0012-00 (Analytical)

04/29/2 10 Page 8 of 10

A1D2221

Sample Integrity Pg. 1 of 2



Date Received 41241

Section 1- Receiving Information	า				
Sample Transport: ONTRAG U	JPS PMS Walk-In	BSK-Courier GS	SO Fed Exp.	Other:	<u> </u>
Samples arrived at lab on same da		_			
Coolers/Ice Chests Description/Te	mperature(s): (If more th	an 5 received, list informat	ion in comment secti	on)	
1) 2) 3	3) 4)	5)			
Was Temperature In Range: (Y)	N N/A Receive	d On Ice: Wet	<u>Blue</u> Recei	ved Ambient:	<u> </u>
Describe type of packing materials:	Bubble Wrap Fe	ram Packing Pea	muts daper	Other:	
Initial Receipt: BSK-Visalia	BSK-Bakersfield	BSK-SAC	BSK-FA	2	
Were ice chest custody seals pres	ent? Y 🕪 Inta	ct: YAP	-90 -		
Section 2- COC Info.	Completed Info Fr	OM		Completed	Info From
	Yes No Contai			Yes No	Container
Was COC Received		Analysis Reque			
Date Sampled		Hold times less	s than 72hr		
Time Sampled		Client Name			
Sample ID	ا سا	Address	_	- <b>-</b>	
Special Storage/Handling Ins.		Telephone #			
Section 3- Bottles / Analysis			Yes No	N/A	Comment
Did all bottles arrive unbroken a	nd intact?				
Were bottle custody seals prese		<u>-, </u>		_	
Were bottle custody seals intact				_ † †	
Did all bottle labels agree with C					
Were correct containers used for		d2			
Were correct preservations used			-5+		
Was a sufficient amount of sam					
Were bubbles present in VOA V			<del>                                     </del>		
Were Ascorbic Acid Bottles rece				ا ح	
Section 4- Comments / Discrepa	ncies				
Sample(s) Split/Preserve: Yes	No Container:	Preservatio	on:	_Dt/Time/Init _	
	Container:	Preservation	on:	_ Dt/Time/Init _	
Was Client Service Rep. notified of	f discrepancies: Yes	No N/A CSR:	No	tified By/Time	
Explanations / Comments					
	<del></del>				
		<del></del>			
				<u></u>	
D- 10 151					
Report Comment Entered:					
Labeled by: @	_abels checked by:	@150)	RUSH Paged	l by:	.@
	$\mathcal{T}$				

Sample Integrity Pg Of D SK Bottles Yes No



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)	_			. 1	ı		ı l
Container(s) Received				un in madalation	eribboa: Z <del>-W</del> -Ero	oon garaa i	
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		rem Transi Hillor	Parameter ( Parameter ) ( Para			A MANAGEMENT TO SERVICE TO SERVIC	
						50000000000000000000000000000000000000	A TOTAL A LINGUISTICS
None (p) White Cap			The second of th			have recommended to the second	
None (n) Bille Cap w/NH4 + Buffer				\		man a saladaya a dangan	201000000000000000000000000000000000000
LINE ON Red Cap							
H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap					1		
NaOH (p) Green Cap	200020 00000 00000 00000 00000 00000 00000 0000			i i			A CONTRACTOR OF THE PARTY OF TH
EDA (p) Brown Cap/Label							
	Committee Commit				A CONTRACTOR	Total Control	
Other:	1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mena	,,,,,,,		ž		
Dissolved Oxygen 300ml (g)	A CONTRACTOR OF THE CONTRACTOR				turni (lineris	<u> </u>	
INDISSUIVEO OXYGETEOOOTIII(9) IIG.			The parties of the pa		1		
	8100625770.57	A. (	Parties of the Control of the Contro	gramour com			
250ml (AG) None			/common personal:		V		
250ml (AG) H <sub>2</sub> SO <sub>4</sub> COD Yellow Label		occide Sugar					
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515,547 Blue Label	APROPRIESSESSES	99991155555	0483353309310660	State Continue	Pagationnicol (Proceedings		
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 <sup>Crange Label</sup> 250ml (AG) NH <sub>4</sub> Cl 552 <sup>Purple Label</sup>							
ZOUMI (AG) NHAUI DOZ			<u> </u>	programment E	uoosaastiggestiiseksi	esessones///	Caracan Control of the Control
250ml (AG) EDA DBPs Brown Label		Sincell (1866) Sec. No.			Transport	1	Part of the control o
250ml (AG) Other:							M GOV- ANNAMA
	T 1000m to 2 9886 8 289	565488555988955			Files II		The first read of the control of the
500ml (AG) None			-	Y			100000000000000000000000000000000000000
500ml (AG) H <sub>2</sub> SO <sub>4</sub> Yellow Label	Verm Indoors	#8500 #8600018 000			42.0000000		: Minister Rigio
The state of the s	Towns on the control of the control	4 T (COOK) 2 TO (1914)	Section 2 1 Transport Transport 2 1 Transp			1377	
1 Liter (AG) None			nations comany	A	4	10 W	
1 Liter (AG) H <sub>2</sub> SO <sub>4</sub> O&G / TPH-Diesel Yellow Label		arennel Translition	The same of the sa			hę hi	
1 Liter (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 548 / 525 / 521 Blue Label				$\perp \lambda$		<u> </u>	4
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + H <sub>2</sub> SO <sub>4</sub> 549	OLDON TOTAL COM	1, 100000	To recommend the control of the cont	THE PROPERTY OF THE PARTY OF TH	CONDUCT CONTROL	will the second	e mooil day
1 Liter (AG) NaOH+ZnAc Sulfide			and the second second		2 000000000000000000000000000000000000	Taylor and Comments of the Com	14 0000 mileteleoo
				Y	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		toggogg 's
40ml VOA Vial Clear – HCL							
40ml VOA Vial Clear – Buffer pH 4	70003,7000						
40ml VOA Vial Clear – None					1	n namadoli saasa	1:0 American (1) (1) (0) (0) (1)
40ml VOA Vial Amber - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	- 5						
40ml VOA Vial Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505							
40ml VOA Vial Clear — H <sub>3</sub> PO <sub>4</sub>		10020.00000			777071111111111111111111111111111111111	Averes Comment	
						\	
Other:	M J Coppa - Price						
½ Gallon (p)							
Aspestos 1Liter Plastic/Foil		TOOL TANKS INDO			1.01		
Radon 200ml Clear (g)	1, 48.32.						
Low Level Hg/Metals Double Baggie		Y1611 (*)000086	Transaction of the control of the co		Tagoniogia	7 market 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Bioassay Jug	N N N N N N N N N N N N N N N N N N N	21 1300pp					
Ampule			Two at the contract		1777001.1531111		
PT Sample Bottle	17 18 18 18 18 18 18 18 18 18 18 18 18 18	is the first of the second	2,0000	1			
TOTAL SERVICE			TEL INTERNAL				
250 Clear Glass Jar	-ce						
500 Clear Glass Jar				72 7777 999	7		
1 Liter Clear Glass Jar	31- [179-60] 	x pangor (noppid)	**************************************				
200000000000000000000000000000000000000					d Company challes	10000 Y 10000	
Plastic Bag Soil Tube Brass / Steel / Plastic	1981 - De (91688)", "568	040-490 <u>9000-49000</u>	98. P00000057187000	901,000 J. 3000 V.F	er Maddistance (10)	or Signification of the Commerce	1 1000000000000000000000000000000000000
Tedlar Bags		e <b>t</b> ik 1469 - 4888	iu <b>(</b> <u>1988)</u> in 1989)	<u> </u>	2188 co. 25567550	<u>m‡qqoci-65666</u> 6.	en Transmit en



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 2 Tuesday, June 14, 2011

Lab Number: AA76467

Collection Date/Time: 5/20/2011 11:15 Sample Collector: LEAR J

Submittal Date/Time: 5/20/2011 12:30 Sample ID

	Sampl	e Descripti					
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Alkalinity, Total (as CaCO3)	2320B	mg/L	127		2		5/24/2011
Ammonia-N	4500NH3 D	mg/L	Not Detected	l	0.05		5/27/2011
Arsenic, Total	EPA200.8	ug/L	Not Detected	ı	1	10	5/25/2011
Barium, Total	EPA200.8	ug/L	49		10	1000	5/25/2011
Boron	EPA200.7	mg/L	Not Detected	l	0.05		5/24/2011
Calcium	EPA200.7	mg/L	39		0.5		5/24/2011
Chloramines	SM4500-CI G	mg/L	Not Detected	ł	0.05		5/20/2011
Chloride	EPA300.0	mg/L	26		1	250	5/19/2011
Dissolved Organic Carbon	SM5310-C	mg/L	1.2	Е	0.2		5/26/2011
Gross Alpha	EPA900.0	pCi/L	0.388+/-1.31	Е		15	5/25/2011
Haloacetic Acids	EPA552	ug/L	13	Е		60	6/2/2011
Iron	EPA 200.7	ug/L	Not Detected	I	10		5/24/2011
Iron, Dissolved	EPA 200.7	ug/L	Not Detected	ı	10	300	5/24/2011
Kjehldahl Nitrogen	4500-NH3 B,C.E	mg/L	0.6		0.2		5/24/2011
Magnesium	EPA200.7	mg/L	12		0.5		5/24/2011
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected	ı	10	50	5/24/2011
Manganese, Total	EPA 200.7	ug/L	Not Detected	ı	10	50	5/24/2011
Methane	EPA174/175	ug/L	Not Detected	ΙE	0.4		5/26/2011
Molybdenum, Total	EPA200.8	ug/L	3		1	1000	5/25/2011
Nitrate as NO3	EPA300.0	mg/L	Not Detected	ı	1	45	5/24/2011
Nitrate as NO3-N	EPA300.0	mg/L	0.09		0.05	10	5/19/2011
Nitrite as Nitrogen	EPA300.0	mg/L	Not Detected	ı	0.05	1.00	5/19/2011
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	ł	0.05	1.00	5/19/2011
o-Phosphate-P	EPA300.0	mg/L	0.17		0.05		5/19/2011
pH (Laboratory)	4500-H+B	STD. Units	7.7				5/23/2011
Phosphorus, Total	HACH 8190	mg/L	0.35		0.03		5/26/2011
Potassium	EPA200.7	mg/L	2.8		0.1		5/24/2011
QC Anion Sum x 100	Calculattion	%	99%				5/25/2011
QC Anion-Cation Balance	Calculaltion	%	2				5/25/2011
QC Cation Sum x 100	Calculaltion	%	103%				5/25/2011
QC Ratio TDS/SEC	Calculation		0.66				6/14/2011
Selenium, Total	EPA200.8	ug/L	2		2	50	5/25/2011
Sodium	EPA200.7	mg/L	42		0.5		5/24/2011
Specific Conductance (E.C)	2510B	umhos/cm	468		1	900	5/20/2011
Strontium, Total	EPA200.8	ug/L	198		5		5/25/2011
Sulfate	EPA300.0	mg/L	65		1	250	5/19/2011
Total Diss. Solids	2540C	mg/L	308		10	500	5/31/2011

Page 2 of 2 Tuesday, June 14, 2011

Lab Number: AA76467

Collection Date/Time: 5/20/2011 11:15 Sample Collector: LEAR J

Submittal Date/Time: 5/20/2011 12:30 Sample ID

	Sam	ple Descri	ption: Injectate	•			
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Total Nitrogen	Calculation	mg/L	0.7		0.2		5/25/2011
Total Organic Carbon	SM5310C	mg/L	1.3	Е	0.20		5/25/2011
Total Radium 226	EPA903.0	pCi/L	0.000+/-0.152	: E		3	6/7/2011
Trihalomethanes	EPA524.2	ug/L	27	E		80	5/28/2011
Uranium by ICP/MS	EPA200.8	ug/L	Not Detected		1	30	5/25/2011
Vanadium, Total	EPA200.8	ug/L	Not Detected		1	1000	5/25/2011
Zinc, Total	EPA200.8	ug/L	167		10	5000	5/25/2011

Sample Comments:

Report Approved by:

David Holland, Laboratory Director

	Analytical, Inc.	1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269						
Monterey Bay Analytical	Client Project ID: MPWMI	D	Date Sampled:	05/20/11				
4 Justin Court, Suite D		Date Received:	05/24/11					
Trustin Court, Build B	Client Contact: David Holl	and	Date Reported:	05/31/11				
Monterey, CA 93940	Client P.O.:		Date Completed:	05/31/11				

WorkOrder: 1105689

May 31, 2011

ear Davi	u.

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: MPWMD,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

1105689

#### CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 WILLOW PASS ROAD TURN AROUND TIME PITTSBURG, CA 94565-1701 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com ☐ GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW) Fax: (925) 252-9269 Telephone: (877) 252-9262 Other Comments Report To: David Holland **Analysis Request** Bill To: Company: Monterey Bay Analytical Services Filter Fotal Petroleum Oil & Grease (1664 / 5520 E/B&F) 8015) 4 Justin Ct. Suite D Samples Monterey, Ca 93940 E-Mail: 4mbas@sbcglobal.net for Metals Fax: (831) 375 - 6227 Tele: (831) 641 - 0734 MTBE / BTEX ONLY (EPA 602 / 8021) EPA 608 / 8082 PCB's ONLY; Aroclors analysis: Fotal Petroleum Hydrocarbons (418.1) EPA 502.2 / 601 / 8010 / 8021 (HVOCs) EPA 515 / 8151 (Acidic CI Herbicides) Project Name: MPWMD Yes / No Project #: TPH as Diesel / Motor Oil (8015) **Project Location:** Sampler Signature: Lear, J. METHOD MATRIX SAMPLING Type Containers PRESERVED Containers LOCATION SAMPLE ID Field Point Methane Sludge Water HNO3 Other Name Time Date ICE X 76467 5/20/11 11:15 Injectate VO A REC'D SEALED & INTACT VIA ICE/ 10.2 8102168 COMMENTS: Relinquished By: Time: Received By: Date: GOOD CONDITION David Holland/ 5/23/11 HEAD SPACE ABSENT Relinquished By: Time: Received By: DECHLORINATED IN LAB Date: APPROPRIATE CONTAINERS 1335 3/24 PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WaterTrax   WriteOn   EDF   Excel   Fax   Fax   HardCopy   ThirdParty   J-fi   Report to:	Pittsbu	rg, CA 94565-1701 52-9262				Wor	kOrder	:: 1105	689	(	Client(	Code: N	/BAS				
David Holland   Monterey Bay Analytical   Accounts Payable   Monterey Bay Analytical   A Justin Court, Suite D   Date Received: 05/24/2	<u> </u>		WaterTrax	WriteOn	☐ EDF	Exce	·I	Fax		✓ Email		Hard	Сору	Thir	dParty	□J	-flag
Lab ID         Client ID         Matrix         Collection Date         Hold         1         2         3         4         5         6         7         8         9         10         11           1105689-001         Injectate         Water         5/20/2011 11:15         □         A         □         Injectate         Injectate	David Holla Monterey Ba 4 Justin Cou Monterey, C	ay Analytical urt, Suite D CA 93940	cc: PO:	_	global.net		Ad M 4	ccounts onterey Justin C	Bay An Court, S	alytical uite D			Dat	e Rece	rived:	05/24	
Test Legend:  1 RSK174_W 2 3 4 5 5 6 7 8 9 10 10 11 12	Lab ID	Client ID		Matrix	Collection Date	Hold 1	2	3							10	11	12
Test Legend:  1 RSK174_W 2 3 4 5 5 6 7 8 9 10 10 11 12	1105689-001	Injectate		Water											T	T	T
Prepared by: Ana Venegas	1 RSK	7											-				
													Prep	ared by	: Ana	Venega	IS

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.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

# Sample Receipt Checklist

Client Name:	Monterey Ba	y Analytical					Date a	and Time Red	ceived:	5/24/2011	1:42:33 PM
Project Name:	MPWMD						Check	klist complete	ed and re	viewed by:	Ana Venegas
WorkOrder N°:	1105689	Matrix W	<u>ater</u>				Carrie	er: <u>UPS</u>			
			Chain o	f Cus	stody (C	COC) In	forma	ation			
Chain of custody	y present?		,	Yes	V	No	o 🗆				
Chain of custody	y signed when rel	inquished and re	ceived?	Yes	<b>V</b>	No	o 🗆				
Chain of custody	y agrees with san	nple labels?	,	Yes	<b>✓</b>	No	o 🗌				
Sample IDs noted	d by Client on CO	C?	,	Yes	<b>V</b>	No	o 🗆				
Date and Time of	f collection noted	by Client on COC	?	Yes	<b>✓</b>	No	o 🗆				
Sampler's name	noted on COC?		`	Yes	<b>~</b>	No	o 🗆				
			San	nple	Receipt	t Inforn	natior	<u>1</u>			
Custody seals in	ntact on shipping	container/cooler?	,	Yes	<b>V</b>	No	o 🗆		ı	NA 🗆	
Shipping contain	ner/cooler in good	condition?	,	Yes	<b>V</b>	No	o 🗆				
Samples in prop	er containers/bot	tles?	,	Yes	<b>V</b>	No	o 🗆				
Sample containe	ers intact?		`	Yes	<b>✓</b>	No	o 🗆				
Sufficient sample	e volume for indic	ated test?	,	Yes	<b>✓</b>	No	o 🗌				
		<u>Samp</u>	ole Preserva	ation	and Ho	old Tim	e (HT	') Informatio	<u>on</u>		
All samples rece	eived within holdin	g time?	,	Yes	<b>✓</b>	No	o 🗌				
Container/Temp	Blank temperature	Э	C	Coole	r Temp:	10.2°C				NA 🗆	
Water - VOA via	ıls have zero hea	dspace / no bubb	oles?	Yes	✓	No	o 🗌	No VOA via	ls submit	ted 🗆	
Sample labels cl	hecked for correc	t preservation?	,	Yes	<b>✓</b>	No	o 🗌				
Metal - pH accep	otable upon receip	ot (pH<2)?	,	Yes		No	o 🗆			NA 🗹	
Samples Receive	ed on Ice?			Yes	<b>✓</b>	No	o 🗆				
			(Ice Type:	BLU	JE ICE	)					
* NOTE: If the "I	No" box is checke	ed, see comment	ts below.								
=====	=====	=====	====		===		:		===	====	======
Client contacted:	:	Da	ite contacted	l:				Co	ntacted b	oy:	
Comments:											

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Ba	y Analytical	Client Project I	D: MPWMD	Date Sampl	ed: 05	/20/11	
4 Justin Cour	t. Suite D			Date Receiv	ved: 05	/24/11	
, vastiii Coai	t, Baile B	Client Contact	: David Holland	Date Extrac	ted: 05	/26/11	
Monterey, Ca	A 93940	Client P.O.:		Date Analy	zed 05	/26/11	
		Light Ga	s Hydrocarbons*				
Extraction method		Analyti	ical methods RSK174/175		Wo	ork Order:	1105689
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments
001A	Injectate	W	ND		1	N/A	ļ
					1		
	Li iii DE 1	<u> </u>					
ND	porting Limit for DF =1; means not detected at or	W S	0.4 NA			μg/L NA	
	bove the reporting limit		1111			1111	
* water samples	are reported in $\mu g/L$ .						
%SS = Percent I DF = Dilution F	Recovery of Surrogate Standard actor						

Angela Rydelius, Lab Manager

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

## **QC SUMMARY REPORT FOR RSK174/175**

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58566 WorkOrder 1105689

EPA Method RSK174/175	Extrac	ction RS	< 174/17 <u></u>	5				s	Spiked San	nple ID	: N/A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Methane	N/A	1.17	N/A	N/A	N/A	94	99.9	6.09	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 58566 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1105689-001A	05/20/11 11:15 AM	I 05/26/11	05/26/11 11:24 AM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

A QA/QC Officer



A1E1735

06/03/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 05/24/2011 08:15.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



06/03/2011

#### **Case Narrative**

## **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1E1735 COC Number:

Project: MPWMD TAT: 10

PO #:

## **Sample Receipt Conditions**

Cooler: Default Cooler Temp. °C: 6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap

 $Sample(s) \ were \ received \ in \ temperature \ range.$ 

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

Final.rpt

A1E1735 FINAL 06032011 1638



#### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 Report Issue Date: 06/03/2011 16:38 Received Date: 05/24/2011 Received Time: 08:15

**Lab Sample ID:** A1E1735-01 **Sample Date:** 05/20/2011 11:15

Sample Type: Grab

Sampled by: Lear, J. Matrix: Water

Sample Description: Injectate // 76467

**General Chemistry** 

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.2	0.20	mg/L	1	A106303	05/26/11	05/26/11	
Total Organic Carbon	SM 5310 C	1.3	0.20	mg/L	1	A106244	05/25/11	05/25/11	
Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	9.3	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Bromoform	EPA 524.2	1.0	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Chloroform	EPA 524.2	10	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Dibromochloromethane	EPA 524.2	6.7	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Surrogate: Bromofluorobenzene	EPA 524.2	95 %		Acceptable re	ange: 70-130 9	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	27		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	2.2	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	5.8	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A106427	05/31/11	06/02/11	
Total Haloacetic Acids	EPA 552.2	13	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	4.5	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	105 %		Acceptable ra	ange: 70-130 9	%			

A1E1735 FINAL 06032011 1638



# **General Chemistry Quality Control Report**

					Course						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106244				Analyst:	SAB	Prepared	I: 05/25/2	011			
Blank (A106244-BLK1) SM 531	0 C - Quality Contro	ol									
Total Organic Carbon	ND	0.20	mg/L							05/25/11	
Blank Spike (A106244-BS1) SM	/I 5310 C - Quality C	ontrol									
Total Organic Carbon	10	0.20	mg/L	10		102	80-120			05/25/11	
Blank Spike Dup (A106244-BSD1	) SM 5310 C - Qu	ality Control									
Total Organic Carbon	10	0.20	mg/L	10		102	80-120	0	20	05/25/11	
Matrix Spike (A106244-MS1) S	M 5310 C - Quality (	Control				Source	: A1E173	5-01			
Total Organic Carbon	11	0.20	mg/L	10	1.3	100	80-120			05/26/11	
Matrix Spike (A106244-MS2) S	M 5310 C - Quality (	Control				Source	: A1E173	5-02			
Total Organic Carbon	11	0.20	mg/L	10	1.2	100	80-120			05/26/11	
Matrix Spike Dup (A106244-MSD	1) SM 5310 C - Qi	uality Contro	İ			Source	: A1E173	5-01			
Total Organic Carbon	11	0.20	mg/L	10	1.3	100	80-120	1	20	05/26/11	
Matrix Spike Dup (A106244-MSD	2) SM 5310 C - Qı	uality Contro	I			Source	: A1E173	5-02			
Total Organic Carbon	11	0.20	mg/L	10	1.2	100	80-120	0	20	05/26/11	
Batch: A106303				Analyst:	SAB	Prepared	I: 05/26/2	011			
Blank (A106303-BLK1) SM 531	0 C - Quality Contro	ol									
Dissolved Organic Carbon	ND	0.20	mg/L							05/26/11	
Blank Spike (A106303-BS1) SM	/ 5310 C - Quality C	ontrol									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120			05/26/11	
Blank Spike Dup (A106303-BSD1	) SM 5310 C - Qu	ality Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120	0	20	05/26/11	



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106330				Analyst: .	JGB	Prepared	d: 05/27/2	011			
Blank (A106330-BLK1)	2 - Quality Control										
Bromodichloromethane	ND	0.50	ug/L							05/27/11	
Bromoform	ND	0.50	ug/L							05/27/11	
Chloroform	ND	0.50	ug/L							05/27/11	
Dibromochloromethane	ND	0.50	ug/L							05/27/11	
Surrogate: Bromofluorobenzene	4.9			5.0		98	70-130			05/27/11	
Blank Spike (A106330-BS1) EPA	524.2 - Quality Con	trol									
Bromodichloromethane	4.4	0.50	ug/L	5.0		87	70-130			05/27/11	
Bromoform	4.8	0.50	ug/L	5.0		96	70-130			05/27/11	
Chloroform	5.3	0.50	ug/L	5.0		106	70-130			05/27/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		93	70-130			05/27/11	
Surrogate: Bromofluorobenzene	5.2			5.0		105	70-130			05/27/11	
Blank Spike Dup (A106330-BSD1)	EPA 524.2 - Qualit	y Control									
Bromodichloromethane	4.6	0.50	ug/L	5.0		91	70-130	4	30	05/27/11	
Bromoform	5.2	0.50	ug/L	5.0		103	70-130	7	30	05/27/11	
Chloroform	5.2	0.50	ug/L	5.0		104	70-130	2	30	05/27/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		91	70-130	2	30	05/27/11	
Surrogate: Bromofluorobenzene	5.3			5.0		106	70-130			05/27/11	
Batch: A106427				Analyst:	KHH	Prepared	d: 05/31/2	011			
	2 - Quality Control										
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							06/02/11	
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							06/02/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							06/02/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							06/02/11	
Fotal Haloacetic Acids	ND	1.0	ug/L							06/02/11	
Frichloroacetic Acid (TCAA)	ND	1.0	ug/L							06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	24		~9/-	25		98	70-130			06/02/11	
Blank Spike (A106427-BS1) EPA	552.2 - Quality Cont	trol									
Dibromoacetic Acid (DBAA)	9.1	1.0	ug/L	10		91	70-130			06/02/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L	10		85	70-130			06/02/11	
Monobromoacetic Acid (MBAA)	8.8	1.0	ug/L	10		88	70-130			06/02/11	
Monochloroacetic Acid (MCAA)	9.5	2.0	ug/L	10		95	70-130			06/02/11	
Fotal Haloacetic Acids	44	1.0	ug/L	50		88	70-130			06/02/11	
Frichloroacetic Acid (TCAA)	7.9	1.0	ug/L	10		79	70-130			06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	24		<del>-</del>	25		98	70-130			06/02/11	
Blank Spike Dup (A106427-BSD1)	EPA 552.2 - Qualit	y Control									
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		101	70-130	11	30	06/03/11	
Dichloroacetic Acid (DCAA)	9.5	1.0	ug/L	10		95	70-130	11	30	06/03/11	
Monobromoacetic Acid (MBAA)	9.7	1.0	ug/L	10		97	70-130	10	30	06/03/11	
, ,	10	2.0	ug/L	10		102	70-130	8	30	06/03/11	
Monochloroacetic Acid (MCAA)	10										
Monochloroacetic Acid (MCAA) Total Haloacetic Acids	49	1.0	ug/L	50		98	70-130		30	06/03/11	

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# **Organics Quality Control Report**

				Spike	Source		0/ DEC		DDD	Date	
Anaka	D 14	DI	1.1	•		0/ DEC	%REC	DDC	RPD		01
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106427				Analyst:	KHH	Prepare	d: 05/31/2	011			
Blank Spike Dup (A106427-BSD1)	EPA 552.2 - Qu	ality Control									
Trichloroacetic Acid (TCAA)	9.5	1.0	ug/L	10		95	70-130	18	30	06/03/11	
Surrogate: 2,3-Dibromopropionic Acid	26			25		104	70-130			06/03/11	
Duplicate (A106427-DUP1) EPA 5	52.2 - Quality Co	ontrol				Source	e: A1E177	1-02			
Dibromoacetic Acid (DBAA)	10	1.0	ug/L		10			1	30	06/03/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L		8.3			1	30	06/03/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	06/03/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	06/03/11	
Total Haloacetic Acids	24	1.0	ug/L		24			1	30	06/03/11	
Trichloroacetic Acid (TCAA)	5.3	1.0	ug/L		5.2			2	30	06/03/11	
Surrogate: 2,3-Dibromopropionic Acid	26			25		103	70-130			06/03/11	
Matrix Spike (A106427-MS1) EPA	552.2 - Quality (	Control				Source	e: A1E165	7-01			
Dibromoacetic Acid (DBAA)	9.8	1.0	ug/L	10	ND	98	70-130	7-01		06/02/11	
Dichloroacetic Acid (DCAA)	9.6	1.0	ug/L	10	ND	96	70-130			06/02/11	
Monobromoacetic Acid (MBAA)	9.8	1.0	ug/L	10	ND	98	70-130			06/02/11	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10	ND	108	70-130			06/02/11	
Total Haloacetic Acids	49	1.0	ug/L	50	ND	98	70-130			06/02/11	
Trichloroacetic Acid (TCAA)	9.0	1.0	ug/L	10	ND	90	70-130			06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	26		- 3	25		105	70-130			06/02/11	
Matrix Spike Dup (A106427-MSD1)	EPA 552.2 - Q	uality Control				Source	e: A1E165	7-01			
Dibromoacetic Acid (DBAA)	9.1	1.0	ug/L	10	ND	91	70-130		30	06/02/11	
Dichloroacetic Acid (DCAA)	8.8	1.0	ug/L	10	ND	88	70-130	9	30	06/02/11	
Monobromoacetic Acid (MBAA)	9.1	1.0	ug/L	10	ND	91	70-130	8	30	06/02/11	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L ug/L	10	ND	101	70-130	7	30	06/02/11	
Total Haloacetic Acids	46	1.0	ug/L ug/L	50	ND	91	70-130	8	30	06/02/11	
Trichloroacetic Acid (TCAA)	8.5	1.0	ug/L ug/L	10	ND	85	70-130		30	06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	23	1.0	49, L	25		94	70-130			06/02/11	
g =, o = o o p. o p. o o / told						• .				3 <b>3. 3</b> 1 1	



# **Certificate of Analysis**

06/03/2011

#### 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 one month from the final report date unless other arrangements are made in
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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
- Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating **Procedures**
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- (2C) Result reported from secondary analytical column.
- 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.

#### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

#### **Definitions and Flags for Data Qualifiers**

mg/L: Milligrams/Liter (ppm) M: Method Detection Limit MDA: Min. Detected Activity Milligrams/Kilogram (ppm) MPN: Most Probable Number mg/Kg: RL: Reporting Limit Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

A1E1735 FINAL 06032011 1638

Page 8 of 12

# A1E1735

# **Monterey Bay Analytical**

**Monte6227** 

05242011

Turnaround:

Standard

Due Date:

06/08/2011

Printed: 05/24/2011 18:19:32

# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com

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A1E1735 Monte6227

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	Shipping Method:	8	or Lab by		Relinquished by: (Signature and Printed Name)	Relinquished by: (Signature and Printed Nam  David Holland								ļ				# Bottles	Types:	۔ ا	Sample: Name Printed / Signature	How would you like your completed results sent?   E-Mail   Fax	MPWMD	Project Information:	4 Justin Ct.	*	Monterey Bay Analytical	Client/Company Name *:	Required Fields
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CAO UPS GSO WALK-IN SIVC FED EX OTHER			:		Company	Com M		:										Sample Description / Location *	CFW = Clorinated Finished Water CWW = FW = Finished Water WW = Waste Water	GIS	2 2 2 3	fail j			erey		Davi	Report A	
DEX O		0/	>		pany	Company MBAS				'								cation *	inished W	ZSTD Level II	QC Request	- 3				State *	David Holland	Report Attention *:	
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		7																	wwcho Water S	STD []S	tesult Req	Mail Only	Quote # 4	PO#					
		Survention Care of States	Date		Date	Date 5/23/11													CWW = Chorinated Waste Water te Water SW = Storm Water E	ZSTD	Result Request ** Surcharge		464		93940	Zip*			
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Notice Psyment for services rendered as noted herein are due in full within 30 days from when invoiced. If not so paid, account belongest defin, sent. Definyees; belongest each subject to morally service re-billing chappes and interest calculated at 1.42% per moral. 18% per moral for moral per moral per moral for moral per m SR-FL-6612-00 (Analytical)

A1E1735 Monte6227 05/24/2011 10



Date Received 5/aulin	16 (16) Weed lid like Albed that had been account
Section 1- Receiving Information	
Sample Transport: ONTRAC UPS PMS Walk-In BSK-Courier	GSO Fed Exp. Other:
Samples arrived at lab on same day sampled: Yes No V Has C	hilling Process Begun: Yes 🔼 No
Coolers/Ice Chests Description/Temperature(s): (If more than 5 received, list info	
1) 2) 3) 4) 5)	
1)	Blue Received Ambient: Y
Describe type of packing materials: Bubble Wrap Feam Packing	Peanuts Paper Other:
Initial Receipt: BSK-Visalia BSK-Bakersfield BSK-SAC	BSK-FAL
Were ice chest custody seals present? Y N Intact: Y N	
Section 2- COC Info.  Completed Info From	Completed Info From Yes No Container
Was COC Received Analysis Re	
	less than 72hr
Time Sampled Client Nam	ie —
Sample ID — Address	
Special Storage/Handling Ins Telephone	# -
Section 3- Bottles / Analysis	Yes No N/A Comment
Did all bottles arrive unbroken and intact?	
Were bottle custody seals present?	
Were bottle custody seals intact?	
Did all bottle labels agree with COC?	
Were correct containers used for the tests requested?	
Were correct preservations used for the tests requested?	
Was a sufficient amount of sample sent for tests indicated?	
Trade at definition to the control t	
Were bubbles present in VOA Vials? (Volatile Methods Only)	
Were bubbles present in VOA Vials? (Volatile Methods Only)	
Were bubbles present in VOA Vials? (Volatile Methods Only) Were Ascorbic Acid Bottles received with the VOAs?	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only) Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve.  Container: Preserve.	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserves  Container: Preserves  Was Client Service Rep. notified of discrepancies: Yes No N/A CS	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserves  Container: Preserves  Was Client Service Rep. notified of discrepancies: Yes No N/A CS	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	vation: Dt/Time/Init

05/24/2011 10

Monte6227



Sample Integrity Pg 2 of 2 BSK Bottles Yes 4N 250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)

250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)			<del></del>		an inai 118818 (181 1181)		4/8/ 1/2
Container(s) Received	1-2	j		]		J	]
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			777.51.7950				
None (p) White Cap	*1.6-					2000 - 724 - 3	
None (p) Blue Cap w/NH4 + Buffer							
HNO <sub>3</sub> (p) Red Cap							
H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap				1			
NaOH (p) Seen Cap				The Control		1000-	
EDA (p) Brown Cap/Label					Ì		
		Approx Territoria				1000 Janobil	
Other:					\		
Dissolved Oxygen 300ml (g)							
					\		
250ml (AG) None					1 1		
250ml (AG) H <sub>2</sub> SO <sub>4</sub> ,COD Yellow Label	WARE INVARY AND			waniiini van	$\perp$	Cast Carlotte	a comment designs
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515 <sub>i</sub> 547 Blue Label							
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label	No of Street, and a state of the state of th	- 12	TO SEE THE PROPERTY OF		900ap00a	- 1 (£55, 10000)	a della crossar e
250ml (AG) NH <sub>4</sub> Cl 552 Purple Label					<u> </u>	00.000	100000000000
250ml (AG) EDA DBPs Brown Label	B 520 Habada 00 669	100 a parent mine "ni	Statistics, 100007-5	Banico Joon J	/_	9888 peer 1779	o p/ 149884 reso
250ml (AG) Other:	Property Control of the Control of t			999 1999 1999		1000 G	1000
	Control Control Control	1984 - 1986 - 1986 - 1	865 - 1 W.S. (1970)	<b>7</b>	Maria Janasa Masar	188865578888578	
500ml (AG) None 500ml (AG) H <sub>2</sub> SO <sub>4</sub> <sup>Yellow Label</sup>				/	1980, 1986, 1986		
500Mi (AG)	100000000000000000000000000000000000000	2395 - 7m - 1005	1986 a Segue 1988	886. Test 766	(*************************************	Contractor Contractor	194-7965000
1 Liter (AG) None					8 Tana 1920		. 190556. 7788
1 Liter (AG) None 1 Liter (AG) H <sub>2</sub> SO <sub>4</sub> O&G / TPH-Diesel <sup>Yellow Label</sup>	TOTAL TRANSPORT		4. 9222 Mai - 3		h-Jane Sie. :	31//	
1 Liter (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 548 / 525 / 521 Blue Label					<u> 1969 (1968), (Sap.</u>	3000). ¥(0, 1%	
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + H <sub>2</sub> SO <sub>4</sub> 549						Situation.	
1 Liter (AG) NaOH+ZnAc Sulfide		- 1966 XXX - F.				19"9886.10 <u>00</u> 5	7665 - 7666
			27 0 765 778		X	8 7 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
40ml VOA Vial Clear – HCL	02"11115" (2002-200)	1949 <u>: 100011000.</u>	10000- Mari Indo	1974 (B. 1988)   1988 (B. 1988)		127539 - 1779210,250	120000111200011111111111111111111111111
40ml VOA Vial Clear – Buffer pH 4							
40ml VOA Vial Clear – None	- M. TOTAL TOTAL STREET, 188	E. N. O. F. 1001.	3740 (MS) ROLL 1, 111 / 12				
40ml VOA Vial Amber - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	3						
40ml VOA Vial Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505	3,700						
40ml VOA Vial Clear – H₃PO₄	3						
Other					The state of the s		
½ Gallon (p)							<u> </u>
Asbestos 1Liter Plastic/Foil						1	
Radon 200ml Clear (g)					12-10000-0300		July 1990
Low Level Hg/Metals Double Baggie		00.1 (69 - VI. 0 (78-0-1006: 104)	89 36 75 W	<b>X</b>	كريا		
Bioassay Jug	y	. 1000 000 an			. 170 HT	5575s 1 2688s 740	de ostar no
Ampule				de Til. Tiller		State Time	
PT Sample Bottle	5 54 74986-ts 50006574	587 (\$166) (1006, 100	in State Tolling	35: lideu, 1981a C	in Jakon, Sibo	room - Month	1555.0000
<u>agunara, nugar, rep., nug- rep. Sag- trat, nuggo, region habbaranggos, arakta</u>	1666 POGE 1006.5	18, 77, 30	60g 196, 720g.	P881-1985p; 1985-			1750 706.
250 Clear Glass Jar	9000 1000 1000E						
500 Clear Glass Jar				10 99974			
1 Liter Clear Glass Jar Plastic Bag			72/388.7		Ne Fauc 1855		166. 76.
	<b>(</b> 5. 18						
	SPECIAL SERVICE					100 100	From Late
Tedlar Bags						L	1 1999





June 13, 2011

Monterey Bay Analytical Services
4 Justin Court

Monterey, CA 93940

**Laboratory Report** 

Lab ID

Customer

: SP 1105142

: 2-19144

**Introduction:** This report package contains total of 4 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.

Sample Results (1 page): Results for each sample submitted.

Quality Control (1 page) : Supporting Quality Control (QC) results.

#### **Case Narrative**

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID#	Matrix
Injectate	05/20/2011	05/25/2011	SP 1105142-001	DW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived at 17 °C. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Radio OC

900.0	05/27/2011:207716 All analysis quality controls are within established criteria.
	05/25/2011:205665 All preparation quality controls are within established criteria.
903.0	06/09/2011:208324 All analysis quality controls are within established criteria.
	06/07/2011:206077 All preparation quality controls are within established criteria, except: The following note applies to Total Alpha Radium (226): 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

June 13, 2011 Lab ID : SP 1105142 Monterey Bay Analytical Services Customer : 2-19144

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By Kelly A. Dunnahoo, B.S.





June 13, 2011 Lab ID : SP 1105142-001

Customer ID: 2-19144

**Monterey Bay Analytical Services** 

4 Justin Court Sampled On : May 20, 2011-11:15

Monterey, CA 93940 Sampled By: R. Schmidt

Received On : May 25, 2011-09:30 Matrix : Drinking Water

Description : Injectate Project : MPWMD

## Sample Result - Radio

Constituent	Result ± Error	MDA	Units	MCL/AL	Sample Preparation		Sample Analysis	
Constituent	Result - Elloi				Method	Date/ID	Method	Date/ID
Radio Chemistry <sup>P</sup>								
Gross Alpha	$0.388 \pm 1.31$	2.00	pCi/L	15	900.0	05/25/11:205665	900.0	05/27/11:207716
Total Alpha Radium (226)	$0.000 \pm 0.152$	0.412	pCi/L	3	903.0	06/07/11:206077	903.0	06/09/11:208324

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: N/A \* PQL adjusted for dilution.

MDA = Minimum Detectable Activity (Calculated at the 95% confidence level) = Data utilized by DHS to determine matrix interference. MCL / AL = Maximum Contamination Level / Action Level. Alpha's Action Level of 5 pCi/L is based on the Assigned Value (AV). AV = (Gross Alpha Result + (0.84 x Error)). CCR Section 64442: Drinking Water Compliance Note: Do the following If Gross Alpha's (AV) exceeds 5 pCi/L run Uranium. If Gross Alpha's (AV) minus Uranium exceeds 5 pCi/L run Radium 226.

Drinking Water Compliance:

Gross Alpha (AV) minus Uranium is less than or equal to 15 pCi/L Uranium is less than or equal to 20 pCi/L Radium 226 + Radium 228 is less than or equal to 5 pCi/L

Note: Samples are held for 3-6 months prior to disposal.





June 13, 2011 Lab ID : SP 1105142 **Monterey Bay Analytical Services** Customer : 2-19144

## **Quality Control - Radio**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Radio								
Alpha	900.0	05/27/2011:207716	CCV	cpm	10120	42.5 %	40 - 49	
			CCB	cpm		0.100	0.17	
Gross Alpha	900.0	05/25/2011:205665	Blank	pCi/L		0.32	3	
-			LCS	pCi/L	150.4	100 %	75-125	
			MS	pCi/L	150.4	82.4 %	60-140	
		(SP 1105142-001)	MSD	pCi/L	150.4	81.3 %	60-140	
			MSRPD	pCi/L	150.4	1.3%	≤30	
Alpha	903.0	06/09/2011:208324	CCV	cpm	10110	37.9 %	38 - 47	
			CCB	cpm		0.0500	0.15	
Total Alpha Radium (226)	903.0	06/07/2011:206077	RgBlk	pCi/L		0.02	2	
•			LCS	pCi/L	17.85	52.1 %	52-89	
			BS	pCi/L	17.85	44.1 %	43-92	
			BSD	pCi/L	17.85	40.6 %	43-92	435
			BSRPD	pCi/L	17.85	8.2%	≤35.5	

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CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

RgBlk : Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

LČS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample MS matrix affects analyte recovery.

: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries MSD

are an indication of how that sample matrix affects analyte recovery.

: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not BS affecting analyte recovery.

: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that BSD

the preparation process is not affecting analyte recovery.

: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation MSRPD and analysis.

: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation **BSRPD** 

and analysis.

: Data Quality Objective - This is the criteria against which the quality control data is compared. DQO

Explanation

: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. 435



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1 Wednesday, March 02, 2011

Lab Number: AA73335

Collection Date/Time: 2/14/2011 0:00 Sample Collector: Submittal Date/Time: 2/14/2011 15:51 Sample ID

Sample Description: MW #1 Unit PQL MCL Analyte Method Qual Date Analyzed Result Chloramines SM4500-CI G mg/L **Not Detected** 0.05 2/14/2011 Chloride EPA300.0 250 2/24/2011 mg/L Haloacetic Acids EPA552 ug/L Attached Ε 60 2/25/2011 Trihalomethanes EPA524.2 38 Е 80 2/17/2011 ug/L

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A1B1169

02/28/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 02/16/2011 08:10.

If additional clarification of any information is required, please contact your Client Services Representative, Joni Blankfield at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

John Montierth For Joni Blankfield

Client Services Representative



02/28/2011

#### **Case Narrative**

# **Work Order Information**

Client Name: Monterey Bay Analytical Submitted by: David Holland

Client Code:Monte6227Shipped by:ONTRACWork Order:A1B1169COC Number:

Project: MPWMD TAT: 10
PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

Final.rpt



## **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Lab Sample ID:** A1B1169-01 **Sample Date:** 02/14/2011 13:00

Sample Type: Grab

Sampled by: J Lear

Matrix: Drinking Water

Sample Description: MW #1 // 73335

## **Organics**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	12	0.50	ug/L	1	A101885	02/17/11	02/17/11	
Bromoform	EPA 524.2	0.89	0.50	ug/L	1	A101885	02/17/11	02/17/11	
Chloroform	EPA 524.2	19	0.50	ug/L	1	A101885	02/17/11	02/17/11	
Dibromochloromethane	EPA 524.2	6.4	0.50	ug/L	1	A101885	02/17/11	02/17/11	
Surrogate: Bromofluorobenzene	EPA 524.2	88 %		Acceptable ra	ange: 70-130 9	%			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	38		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A102064	02/23/11	02/25/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	1.5	1.0	ug/L	1	A102064	02/23/11	02/25/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A102064	02/23/11	02/25/11	
Monochloroacetic Acid (MCAA) (2C)	EPA 552.2	ND	2.0	ug/L	1	A102064	02/23/11	02/25/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	5.6	1.0	ug/L	1	A102064	02/23/11	02/25/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	109 %		Acceptable ra	ange: 70-130 9	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	FPA 552 2	7 1		ua/l					

Total Haloacetic Acids (HAA) EPA 552.2 7.1 ug/L



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A101885				Analyst:	JGB	Prepared	d: 02/17/2	011			
Blank (A101885-BLK1)	4.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							02/17/11	
Bromoform	ND	0.50	ug/L							02/17/11	
Chloroform	ND	0.50	ug/L							02/17/11	
Dibromochloromethane	ND	0.50	ug/L							02/17/11	
Surrogate: Bromofluorobenzene	4.3			5.0		86	70-130			02/17/11	
Blank Spike (A101885-BS1) EP	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.1	0.50	ug/L	5.0		82	70-130			02/17/11	
Bromoform	4.2	0.50	ug/L	5.0		84	70-130			02/17/11	
Chloroform	4.6	0.50	ug/L	5.0		93	70-130			02/17/11	
Dibromochloromethane	4.0	0.50	ug/L	5.0		81	70-130			02/17/11	
Surrogate: Bromofluorobenzene	4.6			5.0		91	70-130			02/17/11	
Blank Spike Dup (A101885-BSD1)	) EPA 524.2 - Qu	ality Control									
Bromodichloromethane	3.9	0.50	ug/L	5.0		78	70-130	5	30	02/17/11	
Bromoform	3.8	0.50	ug/L	5.0		76	70-130	10	30	02/17/11	
Chloroform	4.5	0.50	ug/L	5.0		90	70-130	4	30	02/17/11	
Dibromochloromethane	3.9	0.50	ug/L	5.0		78	70-130	4	30	02/17/11	
Surrogate: Bromofluorobenzene	4.4			5.0		88	70-130			02/17/11	
Batch: A102064				Analyst:	KHH	Prepared	d: 02/23/2	011			
Blank (A102064-BLK1)	2.2 - Quality Contro	ol									
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							02/24/11	
			3								
• ,	ND	1.0	ua/l							02/24/11	
Dibromoacetic Acid (DBAA) (2C)	ND ND	1.0 1.0	ug/L ug/l							02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C)	ND ND	1.0 1.0	ug/L ug/L								
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	ND ND ND	1.0	ug/L ug/L ug/L							02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C)	ND ND	1.0 1.0 1.0	ug/L ug/L							02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C)	ND ND ND ND	1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L							02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA)	ND ND ND ND ND	1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L							02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C)	ND ND ND ND ND	1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L							02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C) Frichloroacetic Acid (TCAA)	ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L	25		88	70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)	ND ND ND ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L	25 25		88 88	70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND ND ND ND ND ND ND 22 22	1.0 1.0 1.0 2.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L							02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102064-BS1) EP	ND ND ND ND ND ND 22 22 22	1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25		88	70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102064-BS1) EP	ND ND ND ND ND ND 22 22 22	1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10		105	70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102064-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND 22 22 22 <b>A 552.2 - Quality C</b>	1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10		105 108	70-130 70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102064-BS1) EP Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND 22 22 22 A 552.2 - Quality C	1.0 1.0 1.0 2.0 2.0 1.0 1.0 0ntrol	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10		105 108 103	70-130 70-130 70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102064-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND 22 22 22 A 552.2 - Quality C	1.0 1.0 1.0 2.0 2.0 1.0 1.0 0ntrol	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		105 108 103 100	70-130 70-130 70-130 70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102064-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)	ND ND ND ND ND ND 22 22 22 A 552.2 - Quality C	1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10		105 108 103 100 99	70-130 70-130 70-130 70-130 70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	
Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102064-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND 22 22 22 A 552.2 - Quality C	1.0 1.0 1.0 2.0 2.0 1.0 1.0 0ntrol	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		105 108 103 100	70-130 70-130 70-130 70-130 70-130			02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11 02/24/11	



# **Organics Quality Control Report**

9	Or	gamic	S Quai	ity Contro	oi Kepoi	ι					
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
atch: A102064				Analyst:	KHH	Prepared	d: 02/23/2	011			
Blank Spike (A102064-BS1) EPA	552.2 - Quality Control										
Frichloroacetic Acid (TCAA)	9.7	1.0	ug/L	10		97	70-130			02/24/11	
Frichloroacetic Acid (TCAA) (2C)	9.6	1.0	ug/L	10		96	70-130			02/24/11	
Surrogate: 2,3-Dibromopropionic Acid	24			25		97	70-130			02/24/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	25			25		98	70-130			02/24/11	
Blank Spike Dup (A102064-BSD1)	EPA 552.2 - Quality C	ontrol									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		108	70-130	2	30	02/25/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		108	70-130	0	30	02/25/11	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		102	70-130	1	30	02/25/11	
Dichloroacetic Acid (DCAA) (2C)	9.6	1.0	ug/L	10		96	70-130	3	30	02/25/11	
Monobromoacetic Acid (MBAA)	9.7	1.0	ug/L	10		97	70-130	2	30	02/25/11	
Monobromoacetic Acid (MBAA) (2C)	9.5	1.0	ug/L	10		95	70-130	3	30	02/25/11	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L	10		102	70-130	5	30	02/25/11	
Monochloroacetic Acid (MCAA) (2C)	11	2.0	ug/L	10		114	70-130	8	30	02/25/11	
Trichloroacetic Acid (TCAA)	9.7	1.0	ug/L	10		97	70-130	0	30	02/25/11	
richloroacetic Acid (TCAA) (2C)	9.4	1.0	ug/L	10		94	70-130	2	30	02/25/11	
Surrogate: 2,3-Dibromopropionic Acid	22			25		88	70-130			02/25/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	22			25		88	70-130			02/25/11	
Duplicate (A102064-DUP1) EPA 5	552.2 - Quality Control					Source	e: A1B121	2-01			
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L		ND				30	02/25/11	
Dichloroacetic Acid (DCAA) (2C)	ND	1.0	ug/L		ND				30	02/25/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	02/25/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	02/25/11	
Trichloroacetic Acid (TCAA)	ND	1.0	ug/L		ND				30	02/25/11	
Surrogate: 2,3-Dibromopropionic Acid	20			25		79	70-130			02/25/11	
Matrix Spike (A102064-MS1) EPA	552.2 - Quality Contro	ı				Source	e: A1B113	84-06			
Dibromoacetic Acid (DBAA)	12	1.0	ug/L	10	ND	117	70-130			02/24/11	
Dichloroacetic Acid (DCAA) (2C)	30	1.0	ug/L	10	20	100	70-130			02/24/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	107	70-130			02/24/11	
Monochloroacetic Acid (MCAA)	12	2.0	ug/L	10	ND	118	70-130			02/24/11	
Trichloroacetic Acid (TCAA)	31	1.0	ug/L	10	23	82	70-130			02/24/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		112	70-130			02/24/11	
Matrix Spike Dup (A102064-MSD1)	EPA 552.2 - Quality (	Contro	l			Source	e: A1B113	84-06			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	108	70-130	9	30	02/24/11	
Dichloroacetic Acid (DCAA) (2C)	28	1.0	ug/L	10	20	85	70-130		30	02/24/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	107	70-130	0	30	02/24/11	
Monochloroacetic Acid (MCAA)	12	2.0	ug/L	10	ND	117		1	30	02/24/11	
Trichloroacetic Acid (TCAA)	31	1.0	ug/L	10	23	77	70-130	2	30	02/24/11	
Surrogate: 2,3-Dibromopropionic Acid	24			25		97	70-130			02/24/11	



## **Certificate of Analysis**

02/28/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- · Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

## Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

## **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Present: 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter NR· Non-Reportable RL Mult: **RL** Multiplier

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# A1B1169

# **Monterey Bay Analytical**

**Monte6227** 

02162011

Turnaround:

Standard

Due Date:

03/03/2011

Printed: 02/16/2011 18:02:50

BSK ANALYTICAL LABORATORIES

\* Required Fields

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

TEMP:

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	Monte6227	A1B1169
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02/16/ 1c Page 8 of 10

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(CA) OPS GSO WALK-IN SIVE FED EX OTHER	Shipping Method:	ACO CONTRA	Received for Lab by: (Signature and Printed Name)	Relinquished by: (Signahure and Printed Nume)	Reinquistred by (Signature and Pointed Nagge) Holland, D. Sove M. D. Holland						i 4 2/14/11 13:00 MW #1	Bottles Date Time	Sampled	Matrix Types: RSW - Raw Surface Water CFW = C RGW = Raw Ground Water FW - F1	Lear, J.	Sampler Name Printed / Signature	How would you like your completed results sent?	MPWMD	Project Information:	4 Justin Ct. Mont	Address * City *	Monterey Bay Analytical	Chent/Company Name *:
SJVC FED EX OTHER		DIVIOLETATOR COM COLOR		Company	Company D MBAS 2				)			•	Sample Description / Location *	CFW = Clorinated Finished Water CWW = Chorinated Waste Water Finished Water WW = Waste Water SW = Storm Water I	SID Level II SID SDay** 2 Day** 1 Day**	QC Request Result Request ** Surcharge	Mail Fax EDD Mail Only	Quote # 464	PO#	Ä	State * Zip *	David Holland	Report Attention *:
:	C			Date	Date 7									ted Waste W Storm Wate	** 🔲 2 Day	** Surchar				93940	*	멸	Pho
	Cooling Method:	\$10	Sime Time	Time	Time 16:00	:	`				DW		Matrix *	ater BW = n DW = D	** 🔲 Day**	ge.						E-mail: 4MB	ык * ≋ (831
ME) BLUE NONE		Date: Amount C	Payment Received at Delivery:	Received by (Signature and Print Name)	Received by (Signature and Print Name)						73335		Comments / Station Code	r BW = Bottled Water  DW = Drinking Water SO = Solid		1	Regulatory Compliance Electronic Data Transfer Y N /	Other.		CDHS Fresno Co EPA	Carbon Copies:	4MBAS@Sbcglobal.net	Phone * #: (831)-357-6227 FAX * #(831)-641-0734
35/ 62	Packir	Check/Cash/Card									<b>,</b>			TTI	-M								
	Packing Material:	h/Card	:	-	-		-		 		<i>'</i>			HAA	<b>45</b>							AN.	
	rial:	PlA# Init.		Company	Company																	ANALYSIS REQUESTED	

Sample Integrity	Sam	ple	Inte	grity
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grity Pg. 1 of 2

WOR



Section 1- Receiving Information
Georgia 1. Meeting Intermetion
Sample Transport: ONTRAC UPS PMS Walk-In BSK-Courier GSO Fed Exp. Other:
Samples arrived at lab on same day sampled: Yes No Has Chilling Process Begun: Yes _X No
Coolers/Ice Chests Description/Temperature(s): (If more than 4 received, list information in comment section)
1)
Was Temperature In Range: N N/A Received On Ice: Wet Blue Received Ambient: Y N
Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other:
Initial Receipt: BSK-Visalia BSK-Bakersfield BSK-SAC BSK-FDL BSK-FAL
Were ice chest custody seals present? Y N Intact: Y N
Section 2- COC Info. Completed Info From Completed Info From
Yes No Container Yes No Container  Was COC Received  Analysis Requested
Date Sampled Any hold times less than 72hr
Time Sampled Client Name Address
Tradition 12
Special Storage/Handling Ins. Telephone #
Section 3- Bottles / Analysis  Yes No N/A Comme
Did all bottles arrive unbroken and intact?
Were bottle custody seals present?
Were bottle custody seals intact?
Did all bottle labels agree with COC?
Were correct containers used for the tests requested?
Were correct preservations used for the tests requested?
Was a sufficient amount of sample sent for tests indicated?
Were bubbles present in VOA Vials? (Volatile Methods Only)
Were Ascorbic Acid Bottles received with the VOAs?
Section 4- Comments / Discrepancies
Sample(s) Split/Preserve: Yes (No) Container: Preservation: Dt/Time/Init
Container: Preservation: Dt/Time/Init
Was Client Service Rep. notified of discrepancies: Yes No (N/A CSR: Notified By/Dt/Time:
Explanations / Comments
Report Comment Entered:

Labeled by: So@ 944 Labels checked by: A @1038

10

Sample Integrity Pg 2 of 7

BSK Bottles (Yes) W

250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap. None (p) Blue Cap w/NH4 + Buffer HNO<sub>2</sub> (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap Dissolved Oxygen 300ml (g) Centrifuge Tube HNO: 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel 1 Liter (AG) None Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 1 Liter (AG) NaOH+ZnAc Sulfide 1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 Turquoise Labo J. Liter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neoff Green label 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear - HCL 40ml VOA Vial Amber - Na<sub>2</sub>S<sub>3</sub>O<sub>3</sub> ౫ 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1 Thursday, March 10, 2011

Lab Number: AA73701

Collection Date/Time: 2/25/2011 10:00 Sample Collector: LINDBERG, T

Submittal Date/Time: 2/25/2011 10:10 Sample ID

	Sam	ple Desc	ription: MW-1			
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05		2/25/2011
Chloride	EPA300.0	mg/L	29	1	250	2/28/2011
Haloacetic Acids	EPA552	ug/L	<b>20</b> E		60	3/8/2011
Trihalomethanes	EPA524.2	ug/L	77 E		80	3/3/2011

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A1C0215

03/09/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 03/02/2011 08:45.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



## 03/09/2011

#### **Case Narrative**

# **Work Order Information**

Monterey Bay Analytical David Holland **Client Name:** Submitted by: **Client Code:** Monte6227 Shipped by: **ONTRAC** 

Work Order: A1C0215 **COC Number:** 

Project: General **TAT:** 10 PO #:

Client Project: Pueblo Water Resources

**Sample Receipt Conditions** 

Temp. °C: Cooler: **Default Cooler** 1

**Containers Intact** COC/Labels Agree Received On Wet Ice

Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager Report Format David Holland Final.rpt

A1C0215 FINAL 03092011 1438



## **Certificate of Analysis**

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

Report Issue Date: 03/09/2011 14:38 Received Date: 03/02/2011 Received Time: 08:45

Lab Sample ID: A1C0215-01 Client Project: Pueblo Water Resources

Sampled by: T Lindberg Sample Date: 02/25/2011 10:00 Matrix: Drinking Water Sample Type: Grab

Sample Description: MW-1 // 73701

## **Organics**

					RL				
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	21	0.50	ug/L	1	A102421	03/03/11	03/03/11	
Bromoform	EPA 524.2	1.2	0.50	ug/L	1	A102421	03/03/11	03/03/11	
Chloroform	EPA 524.2	44	0.50	ug/L	1	A102421	03/03/11	03/03/11	
Dibromochloromethane	EPA 524.2	10	0.50	ug/L	1	A102421	03/03/11	03/03/11	
Surrogate: Bromofluorobenzene	EPA 524.2	91 %		Acceptable ra	ange: 70-130 %	6			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	77		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	2.2	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	EPA 552.2	9.8	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Monochloroacetic Acid (MCAA) (2C)	EPA 552.2	ND	2.0	ug/L	1	A102438	03/03/11	03/08/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	8.4	1.0	ug/L	1	A102438	03/03/11	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	113 %		Acceptable ra	ange: 70-130 %	%			
Haloacetic Acids by GC-ECD									
Total Haloacetic Acids (HAA)	EPA 552.2	20		ug/L					



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A102421				Analyst:	JGB	Prepare	d: 03/03/2	011			
Blank (A102421-BLK1)	.2 - Quality Contro	ol									
Bromodichloromethane	ND	0.50	ug/L							03/03/11	
Bromoform	ND	0.50	ug/L							03/03/11	
Chloroform	ND	0.50	ug/L							03/03/11	
Dibromochloromethane	ND	0.50	ug/L							03/03/11	
Surrogate: Bromofluorobenzene	4.9			5.0		99	70-130			03/03/11	
Blank Spike (A102421-BS1) EPA	A 524.2 - Quality C	ontrol									
Bromodichloromethane	4.5	0.50	ug/L	5.0		91	70-130			03/03/11	
Bromoform	5.0	0.50	ug/L	5.0		100	70-130			03/03/11	
Chloroform	5.2	0.50	ug/L	5.0		103	70-130			03/03/11	
Dibromochloromethane	4.9	0.50	ug/L	5.0		99	70-130			03/03/11	
Surrogate: Bromofluorobenzene	5.2			5.0		105	70-130			03/03/11	
Blank Spike Dup (A102421-BSD1)	EPA 524.2 - Qu	ality Control									
Bromodichloromethane	4.4	0.50	ug/L	5.0		89	70-130	2	30	03/03/11	
Bromoform	4.6	0.50	ug/L	5.0		91	70-130	9	30	03/03/11	
Chloroform	4.9	0.50	ug/L	5.0		98	70-130	5	30	03/03/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		92	70-130	8	30	03/03/11	
Surrogate: Bromofluorobenzene	5.1			5.0		101	70-130			03/03/11	
Batch: A102438				Analyst:	KHH	Prepare	d: 03/03/2	011			
Blank (A102438-BLK1)	.2 - Quality Contro	ol									
	ND	1.0	ua/L							03/08/11	
Dibromoacetic Acid (DBAA)	ND ND	1.0 1.0	ug/L ug/L							03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C)	ND	1.0	ug/L							03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA)	ND ND	1.0 1.0	ug/L ug/L							03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C)	ND ND ND	1.0 1.0 1.0	ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	ND ND ND ND	1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C)	ND ND ND ND ND	1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA)	ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C)	ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C) Frichloroacetic Acid (TCAA)	ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) (2C)	ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L	25		103	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C)	ND ND ND ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 2.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25 25		103 108	70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) (2C) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)	ND ND ND ND ND ND ND ND ND 26	1.0 1.0 1.0 1.0 2.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L							03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Crichloroacetic Acid (TCAA)	ND ND ND ND ND ND ND ND 26 27	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	25		108	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102438-BS1) EPA Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND ND 26 27	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10		108	70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) EPA Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10		108 113 113	70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C) Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 0ntrol	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10		108 113 113 106	70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		113 113 116 103	70-130 70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	
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Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Dichloroacetic Acid (DCAA) (2C) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) (2C) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA) Trichloroacetic Acid (TCAA)  Extragate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid (2C)  Blank Spike (A102438-BS1) Dibromoacetic Acid (DBAA) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Dichloroacetic Acid (DCAA)	ND ND ND ND ND ND ND 26 27 A 552.2 - Quality C	1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10		113 113 116 103	70-130 70-130 70-130 70-130 70-130			03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11 03/08/11	

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# **Organics Quality Control Report**

9		<u> </u>		ity Contro							
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
atch: A102438				Analyst:	KHH	Prepared	d: 03/03/2	011			
Blank Spike (A102438-BS1) EPA	552.2 - Quality Co	ontrol									
Frichloroacetic Acid (TCAA)	11	1.0	ug/L	10		110	70-130			03/08/11	
Γrichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		109	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	29			25		117	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	29			25		115	70-130			03/08/11	
Blank Spike Dup (A102438-BSD1)	EPA 552.2 - Qua	ality Control									
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10		111	70-130	1	30	03/08/11	
Dibromoacetic Acid (DBAA) (2C)	11	1.0	ug/L	10		115	70-130	1	30	03/08/11	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		104	70-130	2	30	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	10	1.0	ug/L	10		104	70-130	1	30	03/08/11	
Monobromoacetic Acid (MBAA)	10	1.0	ug/L	10		101	70-130	3	30	03/08/11	
Monobromoacetic Acid (MBAA) (2C)	10	1.0	ug/L	10		101	70-130	0	30	03/08/11	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		109	70-130	2	30	03/08/11	
Monochloroacetic Acid (MCAA) (2C)	10	2.0	ug/L	10		101	70-130	6	30	03/08/11	
richloroacetic Acid (TCAA)	11	1.0	ug/L	10		110	70-130	0	30	03/08/11	
Trichloroacetic Acid (TCAA) (2C)	11	1.0	ug/L	10		112	70-130	2	30	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	29			25		116	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid (2C)	30			25		119	70-130			03/08/11	
Duplicate (A102438-DUP1) EPA !	552.2 - Quality Co	ntrol				Source	e: A1C021	6-01			
Dibromoacetic Acid (DBAA)	2.2	1.0	ug/L		2.2			0	30	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	4.4	1.0	ug/L		4.4			1	30	03/08/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	03/08/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	03/08/11	
Frichloroacetic Acid (TCAA)	3.9	1.0	ug/L		4.0			3	30	03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		111	70-130			03/08/11	
Matrix Spike (A102438-MS1) EPA	A 552.2 - Quality C	ontrol				Source	e: A1B196	8-03			
Dibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	115	70-130			03/08/11	
Dichloroacetic Acid (DCAA) (2C)	29	1.0	ug/L	10	20	88	70-130			03/08/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	107	70-130			03/08/11	
Monochloroacetic Acid (MCAA)	13	2.0	ug/L	10	ND	109	70-130			03/08/11	
richloroacetic Acid (TCAA)	39	1.0	ug/L	10	28	112	70-130			03/08/11	
Surrogate: 2,3-Dibromopropionic Acid	28			25		113	70-130			03/08/11	
Matrix Spike Dup (A102438-MSD1)	EPA 552.2 - Qu	ality Control				Source	e: A1B196				
bibromoacetic Acid (DBAA)	11	1.0	ug/L	10	ND	113	70-130	2	30	03/08/11	
Dichloroacetic Acid (DCAA) (2C)	29	1.0	ug/L	10	20	93	70-130	2	30	03/08/11	
Monobromoacetic Acid (MBAA)	11	1.0	ug/L	10	ND	106	70-130	1	30	03/08/11	
,					NID	440	70-130	4	30	00/00/44	
,	13	2.0	ug/L	10	ND	110		1	30	03/08/11	
Monochloroacetic Acid (MCAA)  Frichloroacetic Acid (TCAA)	13 38	2.0 1.0	ug/L ug/L	10 10	ND 28	109	70-130		30	03/08/11	

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## **Certificate of Analysis**

03/09/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- · (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- · 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.

## Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

## **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs Present: 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter NR· Non-Reportable RL Mult: **RL** Multiplier

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# A1C0215

# **Monterey Bay Analytical**

Monte6227

03022011

Turnaround: Standard

Due Date: 03/16/2011

Printed: 03/02/2011 14:16:36

	Shipping Method:		Received for I	1 5	Relinquished	David Holland Orbited Name)	· 	_	_	+								+	Sample	Matrix Types:	Lindberg, T.	Sampler Name Printed / Signature	How would	Puebl	Project Information:	4 Justin Ct.	Address *	Mon	Client/Cor	* Required Fields	BS	
	lethod:	$\mathcal{L}$	I for Lab by: (Signature and	oy. (ougusan	R. (Simon	by: (Signati Holland	_		-		+		-	+	<u> </u>	+	12	Бошея	##		≱rg, T.	ame Printec	d you like y	Pueblo Water Resources	ormation:	n Ct.		terey	Client/Company Name *.	Fields	BSK ANALYTICAL LABORATORIES	
(A)	1		) ature	E E E	D 10			_	$\perp$		$ \downarrow \!\!\!\!\! /$						2/25/11	Date	Sampled	W = Rau rW - Rav		1/Signat	our comp	r Resi				Bay	. <del>*</del>		ABC	
JPS GSO		k A	ъ.	anned Nan		d Printed Name)											10:00	Time	led	RSW = Raw Surface Water RGW - Raw Ground Water		ure	ileted resu	ources				Ana			LYTI )RAT(	
WALK-IN SI		antiva.	Name)	<u>.</u>					E								MW-1		Sample Descrip				lts sent?   E-N			Monterey	City *	Monterey Bay Analytical			CAL	
CAO UPS GSO WALK-IN SJYC FED EX OTHER		amonthia loanzi	<b>\</b>	Cumpany	3	MBAS								<b>)</b>					Sample Description / Location *	CFW = Clorinated Finished Water CWW = Finished Water WW = Waste Water	STD Level II	QC Request	How would you like your completed results scut?     E-Mail   Fax   EDD				State *	David Holland	Report Attention *		1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com	
		<u>ن</u> = <u>و</u>	Date	Date		Date 3/1/11														CWW = Chorinated Waste Water ste Water SW = Storm Water	✓STD	Result Request ** Surcharge	Mail Only	Quote # 464	PO#	(0	Zip *	ದ			Street, Fresna, Co FAX (559) 497.	
	္ငါ				1	/11	_	ļ	-	1		_								Waste V	∏2 Day	Surcha				93940	-	μ	-Pi		A 9370	
o	Cooling Method:	ais.	ume	Time		Time 16:00				`	A STATE OF THE STA	N. S. S. S. S. S.					DW		Matrix	Vater BW er DW = I	/** □ Day*	ge					- 1	E-mail: 4M	ione * #: (83		6-1623 www.bsk	
WET) BLUE NONE	73044		Payment Received at Delivery:	Received by (Signature and Print Name)		Received by (Signature and Print Name)				in the second				And the second of the second o			73701	Contracting Contraction	Comments / Station Code	BW = Bottled Water DW = Drinking Water SO = Solid	\$	System No. *	atory Compliance	Other:	Mercod Co Tulana Co	CDHS Fresno Co EPA	Carbon Conies:	gjot	Phone * # (831)-357-6227 FAX * # (831)-641-0734	TEMP:	labs.com	
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i acking matchai.	Mut.	th/Card			_															HAA	.5							Αl				
2121	1	Pj∧ #		Совиралу		Company	-				_	_	_				_		-								-	ANALYSIS REQUESTED			A1C0215 Monte6227	
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Page 8 of 10

Notice Payment for services residence as noted herein are due in full within 30 days from when invoiced. If not so paid, account belances are defensed delinquent solutions are subject to moothly service/reshiling charges and interest calculated at 17.2% per month, 18% per annum. BSK & Associates shall be entitled to recover on delinquent accounts, costs of culterforcs, including attunities for the other facilities or an including attunities or all including attunities are subject to the client of the subject of the distribution of the analysis required at the person signing for the client Continuory convexely action who they are either the Client or authorized agent to the Client and the Client of the analysis of the client of the analysis of the analysis required and approximately for the client of the analysis of the analysis required and approximately for the client of the analysis of the analy SR-FL-6012-00 (Analytical)

# Sample Integrity Pg. 1 of 2 WORK OR

Monte6227

			10

Date Received 3/2/11		,					
Section 1- Receiving Information							
Sample Transport: ONTRAC							
Samples arrived at lab on same	day sampled: Yes	No	A Has Chilli	ing Process E	Begun: Ye	s_X_	No
Coolers/Ice Chests Description	/Temperature(s): (If	f more than 4 re	ccived, list information i	n comment section	n)	•	
1)	)	3)		4)	· <u></u> .		
Was Temperature In Range:	~				ed Ambier	nt: <u>Y</u> (	$\overline{N}$
Describe type of packing mate	rials: Bubble Wra	Foam	Packing Pean	uts Pape	or Other	ŕ:	
Initial Receipt: BSK-Visalia							
Were ice chest custody seals p	_						
Section 2- COC Info.	Completed	Info From			Com	npleted	Info From
Section 2- COC Info.	Yes No	Container			Yes	•	Container
Was COC Received			Analysis Reque	ested			
Date Sampled			Any hold times l	ess than 72h	r	~~~	
Time Sampled			Client Name			-	
Sample ID			Address			_	
Special Storage/Handling Ins.			Telephone #				
Section 3- Bottles / Analysis				Yes	No _	N/A	Comment
Did all bottles arrive unbroken a	and intact?			-/			
Were bottle custody seals preser	nt?						
Were bottle custody seals intact	?						
Did all bottle labels agree with (	COC?					_	
Were correct containers used for	r the tests request	ed?	<u> </u>				•
Were correct preservations used	_ · <u> </u>						
Was a sufficient amount of samp							
Were bubbles present in VOA V	<u> </u>		nlv)				
Were Ascorbic Acid Bottles rec							
Section 4- Comments / Discrepan	icies					<u>.</u>	
Sample(s) Split/Preserve: Yes No	(a) Container:		Preservation:		Dt/Ti	me/Init	
	Container:		Preservation: _		D0/ 11	me/Init _	<del></del> .
Was Client Service Rep. notified o Explanations / Comments	f discrepancies: Ye	es No N/	A) CSR:	Notified	i By/Dt/Ti	ime:	
		· · · · · · · · · · · · · · · · · · ·					
Report Comment Entered:	<u> </u>						
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Sample Integrity Pg <u>3</u> of <u>3</u>

WORJ BSK Bottles Yes



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer  $HNO_3$  (p)  $^{Red Cap}$   $H_2SO_4$  (p)  $^{Yellow Cap}$ NaOH (p) Green Cap Dissolved Oxygen 300ml (g) Centrifuge Tube HNO. 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Labe 250ml (AG) Na<sub>2</sub>S<sub>2</sub>Q<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250mL(AG) NH4CL552 Purple Label 250ml (AG) EDA DBPs Brown Labe 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Label 1 Liter (AG) None LLiter (AG) H-SO<sub>4</sub> - O&G Yellow Laber 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 I Liter (P) Na S.O. H. SO 549 1 Liter (AG) NaOH+ZnAc Sulfide LLiter (AG) Ascorbic/EDTA/Pot Citrate 527 Giey Label. 1 Liter (AG) CuSO4/Trizma 529 Liter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Mcon Green Label 1 Liter (AG) Ammonium Chloride 535 Puple Labe 40ml VOA Vial Clear - HCL 40ml VOA Vial Amber Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1 Tuesday, June 14, 2011

Lab Number: AA76468

Collection Date/Time: 5/20/2011 11:20 Sample Collector: LEAR J

Submittal Date/Time: 5/20/2011 12:30 Sample ID

	Samp	ole Descrip	tion: MW 1				
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Alkalinity, Total (as CaCO3)	2320B	mg/L	133		2		5/24/2011
Ammonia-N	4500NH3 D	mg/L	Not Detected	t	0.05		5/27/2011
Boron	EPA200.7	mg/L	Not Detected	t	0.05		5/24/2011
Calcium	EPA200.7	mg/L	44		0.5		5/24/2011
Chloramines	SM4500-CI G	mg/L	0.05		0.05		5/20/2011
Chloride	EPA300.0	mg/L	26		1	250	5/19/2011
Dissolved Organic Carbon	SM5310-C	mg/L	1.1	E	0.2		5/26/2011
Haloacetic Acids	EPA552	ug/L	19	E		60	6/2/2011
Iron	EPA 200.7	ug/L	Not Detected	k	10		5/24/2011
Iron, Dissolved	EPA 200.7	ug/L	Not Detected	t	10	300	5/24/2011
Kjehldahl Nitrogen	4500-NH3 B,C.E	mg/L	Not Detected	t	0.2		5/24/2011
Magnesium	EPA200.7	mg/L	10		0.5		5/24/2011
Manganese, Dissolved	EPA 200.7	ug/L	Not Detected	t	10	50	5/24/2011
Manganese, Total	EPA 200.7	ug/L	Not Detected	t	10	50	5/24/2011
Nitrate as NO3	EPA300.0	mg/L	Not Detected	t	1	45	5/24/2011
Nitrate as NO3-N	EPA300.0	mg/L	0.09		0.05	10	5/19/2011
Nitrite as Nitrogen	EPA300.0	mg/L	Not Detected	t	0.05	1.00	5/19/2011
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	t	0.05	1.00	5/19/2011
o-Phosphate-P	EPA300.0	mg/L	Not Detected	t	0.05		5/19/2011
oH (Laboratory)	4500-H+B	STD. Units	7.9				5/23/2011
Phosphorus, Total	HACH 8190	mg/L	0.08		0.03		5/26/2011
Potassium	EPA200.7	mg/L	2.6		0.1		5/24/2011
QC Anion Sum x 100	Calculattion	%	98%				5/25/2011
QC Anion-Cation Balance	Calculattion	%	1				5/25/2011
QC Cation Sum x 100	Calculattion	%	101%				5/25/2011
Sodium	EPA200.7	mg/L	41		0.5		5/24/2011
Specific Conductance (E.C)	2510B	umhos/cm	483		1	900	5/20/2011
Gulfate	EPA300.0	mg/L	65		1	250	5/19/2011
Fotal Diss. Solids	2540C	mg/L	310		10	500	5/31/2011
Fotal Nitrogen	Calculation	mg/L	Not Detected	t	0.2		5/25/2011
Fotal Organic Carbon	SM5310C	mg/L	1.2	Е	0.20		5/26/2011
Frihalomethanes	EPA524.2	ug/L	60	E		80	5/28/2011

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A1E1735

06/03/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 05/24/2011 08:15.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



06/03/2011

#### **Case Narrative**

# **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1E1735 COC Number:

Project: MPWMD TAT: 10

PO #:

## **Sample Receipt Conditions**

Cooler: Default Cooler Temp. °C: 6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap

 $Sample(s) \ were \ received \ in \ temperature \ range.$ 

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

Final.rpt

A1E1735 FINAL 06032011 1638



## **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 **Lab Sample ID:** A1E1735-02 **Sample Date:** 05/20/2011 11:20

Sample Type: Grab

Sampled by: Lear, J. Matrix: Water

Sample Description: MW1 // 76468

**General Chemistry** 

General Oneilistry					RL				
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Dissolved Organic Carbon	SM 5310 C	1.1	0.20	mg/L	1	A106303	05/26/11	05/26/11	
Total Organic Carbon	SM 5310 C	1.2	0.20	mg/L	1	A106244	05/26/11	05/26/11	
Organics									
A 1. 4 -	N 4 - 411	D 14	DI	11-4-	RL	Datab	Danasas	A b	01
Analyte	Method	Result	RL	Units	Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	18	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Bromoform	EPA 524.2	1.1	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Chloroform	EPA 524.2	33	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Dibromochloromethane	EPA 524.2	8.2	0.50	ug/L	1	A106330	05/27/11	05/28/11	
Surrogate: Bromofluorobenzene	EPA 524.2	94 %		Acceptable ra	ange: 70-130 %	6			
Trihalomethanes by GC-MS									
Total Trihalomethanes	EPA 524.2	60		ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	2.1	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	9.3	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A106427	05/31/11	06/02/11	
Total Haloacetic Acids	EPA 552.2	19	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	7.5	1.0	ug/L	1	A106427	05/31/11	06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	96 %		Acceptable ra	ange: 70-130 %	6			

A1E1735 FINAL 06032011 1638



# **General Chemistry Quality Control Report**

					Course						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106244				Analyst:	SAB	Prepared	I: 05/25/2	011			
Blank (A106244-BLK1) SM 531	0 C - Quality Contro	ol									
Total Organic Carbon	ND	0.20	mg/L							05/25/11	
Blank Spike (A106244-BS1) SM	/I 5310 C - Quality C	ontrol									
Total Organic Carbon	10	0.20	mg/L	10		102	80-120			05/25/11	
Blank Spike Dup (A106244-BSD1	) SM 5310 C - Qu	ality Control									
Total Organic Carbon	10	0.20	mg/L	10		102	80-120	0	20	05/25/11	
Matrix Spike (A106244-MS1) S	M 5310 C - Quality (	Control				Source	: A1E173	5-01			
Total Organic Carbon	11	0.20	mg/L	10	1.3	100	80-120			05/26/11	
Matrix Spike (A106244-MS2) S	M 5310 C - Quality (	Control				Source	: A1E173	5-02			
Total Organic Carbon	11	0.20	mg/L	10	1.2	100	80-120			05/26/11	
Matrix Spike Dup (A106244-MSD	1) SM 5310 C - Qi	uality Contro	İ			Source	: A1E173	5-01			
Total Organic Carbon	11	0.20	mg/L	10	1.3	100	80-120	1	20	05/26/11	
Matrix Spike Dup (A106244-MSD	2) SM 5310 C - Qı	uality Contro	I			Source	: A1E173	5-02			
Total Organic Carbon	11	0.20	mg/L	10	1.2	100	80-120	0	20	05/26/11	
Batch: A106303				Analyst:	SAB	Prepared	I: 05/26/2	011			
Blank (A106303-BLK1) SM 531	0 C - Quality Contro	ol									
Dissolved Organic Carbon	ND	0.20	mg/L							05/26/11	
Blank Spike (A106303-BS1) SM	/ 5310 C - Quality C	ontrol									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120			05/26/11	
Blank Spike Dup (A106303-BSD1	) SM 5310 C - Qu	ality Control									
Dissolved Organic Carbon	10	0.20	mg/L	10		104	80-120	0	20	05/26/11	



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106330				Analyst: .	JGB	Prepared	d: 05/27/2	011			
Blank (A106330-BLK1)	2 - Quality Control										
Bromodichloromethane	ND	0.50	ug/L							05/27/11	
Bromoform	ND	0.50	ug/L							05/27/11	
Chloroform	ND	0.50	ug/L							05/27/11	
Dibromochloromethane	ND	0.50	ug/L							05/27/11	
Surrogate: Bromofluorobenzene	4.9			5.0		98	70-130			05/27/11	
Blank Spike (A106330-BS1) EPA	524.2 - Quality Con	trol									
Bromodichloromethane	4.4	0.50	ug/L	5.0		87	70-130			05/27/11	
Bromoform	4.8	0.50	ug/L	5.0		96	70-130			05/27/11	
Chloroform	5.3	0.50	ug/L	5.0		106	70-130			05/27/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		93	70-130			05/27/11	
Surrogate: Bromofluorobenzene	5.2			5.0		105	70-130			05/27/11	
Blank Spike Dup (A106330-BSD1)	EPA 524.2 - Qualit	y Control									
Bromodichloromethane	4.6	0.50	ug/L	5.0		91	70-130	4	30	05/27/11	
Bromoform	5.2	0.50	ug/L	5.0		103	70-130	7	30	05/27/11	
Chloroform	5.2	0.50	ug/L	5.0		104	70-130	2	30	05/27/11	
Dibromochloromethane	4.6	0.50	ug/L	5.0		91	70-130	2	30	05/27/11	
Surrogate: Bromofluorobenzene	5.3			5.0		106	70-130			05/27/11	
Batch: A106427				Analyst:	KHH	Prepared	d: 05/31/2	011			
	2 - Quality Control										
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							06/02/11	
Dichloroacetic Acid (DCAA)	ND	1.0	ug/L							06/02/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L							06/02/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L							06/02/11	
Fotal Haloacetic Acids	ND	1.0	ug/L							06/02/11	
Frichloroacetic Acid (TCAA)	ND	1.0	ug/L							06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	24		~9/-	25		98	70-130			06/02/11	
Blank Spike (A106427-BS1) EPA	552.2 - Quality Cont	trol									
Dibromoacetic Acid (DBAA)	9.1	1.0	ug/L	10		91	70-130			06/02/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L	10		85	70-130			06/02/11	
Monobromoacetic Acid (MBAA)	8.8	1.0	ug/L	10		88	70-130			06/02/11	
Monochloroacetic Acid (MCAA)	9.5	2.0	ug/L	10		95	70-130			06/02/11	
Fotal Haloacetic Acids	44	1.0	ug/L	50		88	70-130			06/02/11	
Frichloroacetic Acid (TCAA)	7.9	1.0	ug/L	10		79	70-130			06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	24		<del>-</del>	25		98	70-130			06/02/11	
Blank Spike Dup (A106427-BSD1)	EPA 552.2 - Qualit	y Control									
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		101	70-130	11	30	06/03/11	
Dichloroacetic Acid (DCAA)	9.5	1.0	ug/L	10		95	70-130	11	30	06/03/11	
Monobromoacetic Acid (MBAA)	9.7	1.0	ug/L	10		97	70-130	10	30	06/03/11	
, ,	10	2.0	ug/L	10		102	70-130	8	30	06/03/11	
Monochloroacetic Acid (MCAA)	10										
Monochloroacetic Acid (MCAA) Total Haloacetic Acids	49	1.0	ug/L	50		98	70-130		30	06/03/11	

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# **Organics Quality Control Report**

				Spike	Source		0/ DEC		DDD	Date	
Anaka	D 14	DI	1.1	•		0/ DEC	%REC	DDC	RPD		01
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106427				Analyst:	KHH	Prepare	d: 05/31/2	011			
Blank Spike Dup (A106427-BSD1)	EPA 552.2 - Qu	ality Control									
Trichloroacetic Acid (TCAA)	9.5	1.0	ug/L	10		95	70-130	18	30	06/03/11	
Surrogate: 2,3-Dibromopropionic Acid	26			25		104	70-130			06/03/11	
Duplicate (A106427-DUP1) EPA 5	52.2 - Quality Co	ontrol				Source	e: A1E177	1-02			
Dibromoacetic Acid (DBAA)	10	1.0	ug/L		10			1	30	06/03/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L		8.3			1	30	06/03/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	06/03/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	06/03/11	
Total Haloacetic Acids	24	1.0	ug/L		24			1	30	06/03/11	
Trichloroacetic Acid (TCAA)	5.3	1.0	ug/L		5.2			2	30	06/03/11	
Surrogate: 2,3-Dibromopropionic Acid	26			25		103	70-130			06/03/11	
Matrix Spike (A106427-MS1) EPA	552.2 - Quality (	Control				Source	e: A1E165	7-01			
Dibromoacetic Acid (DBAA)	9.8	1.0	ug/L	10	ND	98	70-130	7-01		06/02/11	
Dichloroacetic Acid (DCAA)	9.6	1.0	ug/L	10	ND	96	70-130			06/02/11	
Monobromoacetic Acid (MBAA)	9.8	1.0	ug/L	10	ND	98	70-130			06/02/11	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10	ND	108	70-130			06/02/11	
Total Haloacetic Acids	49	1.0	ug/L	50	ND	98	70-130			06/02/11	
Trichloroacetic Acid (TCAA)	9.0	1.0	ug/L	10	ND	90	70-130			06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	26		- 3	25		105	70-130			06/02/11	
Matrix Spike Dup (A106427-MSD1)	EPA 552.2 - Q	uality Control				Source	e: A1E165	7-01			
Dibromoacetic Acid (DBAA)	9.1	1.0	ug/L	10	ND	91	70-130		30	06/02/11	
Dichloroacetic Acid (DCAA)	8.8	1.0	ug/L	10	ND	88	70-130	9	30	06/02/11	
Monobromoacetic Acid (MBAA)	9.1	1.0	ug/L	10	ND	91	70-130	8	30	06/02/11	
Monochloroacetic Acid (MCAA)	10	2.0	ug/L ug/L	10	ND	101	70-130	7	30	06/02/11	
Total Haloacetic Acids	46	1.0	ug/L ug/L	50	ND	91	70-130	8	30	06/02/11	
Trichloroacetic Acid (TCAA)	8.5	1.0	ug/L ug/L	10	ND	85	70-130		30	06/02/11	
Surrogate: 2,3-Dibromopropionic Acid	23	1.0	49, L	25		94	70-130			06/02/11	
g =, o = o o p. o p. o o / told						• .				3 <b>3. 3</b> 1 1	



# **Certificate of Analysis**

06/03/2011

#### 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 one month from the final report date unless other arrangements are made in
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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
- Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating **Procedures**
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- (2C) Result reported from secondary analytical column.
- 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.

## Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

## **Definitions and Flags for Data Qualifiers**

mg/L: Milligrams/Liter (ppm) M: Method Detection Limit MDA: Min. Detected Activity Milligrams/Kilogram (ppm) MPN: Most Probable Number mg/Kg: RL: Reporting Limit Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

A1E1735 FINAL 06032011 1638

Page 8 of 12

# A1E1735

# **Monterey Bay Analytical**

**Monte6227** 

05242011

Turnaround:

Standard

Due Date:

06/08/2011

Printed: 05/24/2011 18:19:32

# BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com

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A1E1735 Monte6227

05/24/201

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	Shipping	h,	Received		Relinquish	Relinquis Davi										<b>)</b> -2	-	Sample #	Matrix Types:	Lear, J.	Sample	How wo	  MP	Project	4 Ju	Address *	Mo	Clien/(	* Require
	Shipping Method:	8	or Lab by		Relinquished by: (Signature and Printed Name)	Relinquished by: (Signature and Printed Nam  David Holland								ļ				# Bottles	Types:	ءِ ا	Sample: Name Printed / Signature	How would you like your completed results sent?   E-Mail   Fax	MPWMD	Project Information:	4 Justin Ct.	*	Monterey Bay Analytical	Client/Company Name *:	Required Fields
CAS	()	C	or Lab by: (Signature and Printed Name)		gnature an	gnature an				6		·········				5/20/11	5/20/11	Date	RSW - R RGW = F		nted / Sign	ke your co		Ř			у Ва	vame *:	į
UPS C	1	2	e and Prin	}	d Printed	d Printed										11:20	11.15	Sampled te Time	RSW = Raw Surface Water RGW = Raw Ground Water		rature	mpleted re					y An		
SO WA	ı		Ted Name		Name)	A Part of the second se	<del> </del>		-			7				MW1	Injectate		e Water id Water			sults sent?		ı		0	alytic		
LK-IN S		MARK	) :			0				/							ate	ılı Descri	CFW = C FW = Fi			( €-X			Monterey	City *	<u> </u>	<del></del>	
CAO UPS GSO WALK-IN SIVC FED EX OTHER			:		Company	Com M		:										Sample Description / Location *	CFW = Clorinated Finished Water CWW = FW = Finished Water WW = Waste Water	OLS C	2 2 2 3	fail j			erey		Davi	Report A	
DEX O		0/	>		pany	Company MBAS				'								cation *	inished W	ZSTD Level II	QC Request	- 3				State *	David Holland	Report Attention *:	
THER		3									`								ater CV	<u> </u>	_	EDD			Ω <sub>A</sub>	*	lland		
		7																	wwcho Water S	STD []S	tesult Req	Mail Only	Quote # 4	PO#					
		Survention Care of States	Date		Date	Date 5/23/11													CWW = Chorinated Waste Water te Water SW = Storm Water E	ZSTD	Result Request ** Surcharge		464		93940	Zip*			
	Cooli		1		Time	1 16:40		-	7								₩	Matrix *	stc Water Water	Day**	charge		***************************************		6		E-mail:	Phone *	
	Cooling Method:	875	1														<u> </u>	*	BW = E DW = Drii	Day**							4MB/	#(831)	
<b>∠</b> ¥	od:	Date	Payment Received at Delivery		Received by (Signature and	Received by (Signature and			\							76468	76467	Commen	BW = Bottled Water DW = Drinking Water		System No. *	Regulat	Other:	Merced	CDHS	Carbon Copies:	4MBAS@Sbcglobal.ne	Phone * #: (831)-357-6227	TEMP:
ET) BLUE			Receiv		y (Signati	y (Signatı					]   							Comments / Station Code	ĺ		(b. *	Regulatory Compliance		Merced Co 🔲 Tulare Co 🔲	☐ Fresn	Copies	glok		
		Amount:	ed at De		re and Pri	are and Pri				٠,		,						n Code	SO = Solid			diance		Tulare Co	္ဂိ		al.net	AX * # (8	
NONE			livery:		Print Name)	Print Name)					· will see manual										Ĺ	j			EPA 🗌			FAX * #(831)-641-0734	
<b>™</b>	_ ا	Chr																]		_	É				L.J 			-0734	
300	Packing Material:	Check/Cash/Card									<b></b>					`	`		HA							_			
	Materi				ဂ္ဂ	ა 								_		`	` <del>Z-</del>		TTH	1M <del>1.52</del>	4	2	<u></u>			_	ANA		
	al:	Pla#			Company	Company		<del> -</del> -						-		`	•		DO				<u> </u>				ANALYSIS REQUESTED	_	
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		Init.						ļ										[									ED		
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Notice Psyment for services rendered as noted herein are due in full within 30 days from when invoiced. If not so paid, account belongest defin, sent. Definyees; belongest each subject to morally service re-billing chappes and interest calculated at 1.42% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral. 18% per moral for moral per moral per moral for moral per m SR-FL-6612-00 (Analytical)

A1E1735 Monte6227 05/24/2011 10



Date Received 5/aulin	16 (16) Weed lid like Albed that had been account
Section 1- Receiving Information	
Sample Transport: ONTRAC UPS PMS Walk-In BSK-Courier	GSO Fed Exp. Other:
Samples arrived at lab on same day sampled: Yes No V Has C	hilling Process Begun: Yes 🔼 No
Coolers/Ice Chests Description/Temperature(s): (If more than 5 received, list info	
1) 2) 3) 4) 5)	
1)	Blue Received Ambient: Y
Describe type of packing materials: Bubble Wrap Feam Packing	Peanuts Paper Other:
Initial Receipt: BSK-Visalia BSK-Bakersfield BSK-SAC	BSK-FAL
Were ice chest custody seals present? Y N Intact: Y N	
Section 2- COC Info.  Completed Info From	Completed Info From Yes No Container
Was COC Received Analysis Re	
	less than 72hr
Time Sampled Client Nam	ie —
Sample ID — Address	
Special Storage/Handling Ins Telephone	# -
Section 3- Bottles / Analysis	Yes No N/A Comment
Did all bottles arrive unbroken and intact?	
Were bottle custody seals present?	
Were bottle custody seals intact?	
Did all bottle labels agree with COC?	
Were correct containers used for the tests requested?	
Were correct preservations used for the tests requested?	
Was a sufficient amount of sample sent for tests indicated?	
Trad a dament and	
Were bubbles present in VOA Vials? (Volatile Methods Only)	
Were bubbles present in VOA Vials? (Volatile Methods Only)	
Were bubbles present in VOA Vials? (Volatile Methods Only) Were Ascorbic Acid Bottles received with the VOAs?	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only) Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve.  Container: Preserve.	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserves  Container: Preserves  Was Client Service Rep. notified of discrepancies: Yes No N/A CS	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserves  Container: Preserves  Was Client Service Rep. notified of discrepancies: Yes No N/A CS	vation: Dt/Time/Init
Were bubbles present in VOA Vials? (Volatile Methods Only)  Were Ascorbic Acid Bottles received with the VOAs?  Section 4- Comments / Discrepancies  Sample(s) Split/Preserve: Yes No Container: Preserve Preserve: Pres	vation: Dt/Time/Init

05/24/2011 10

Monte6227



Sample Integrity Pg 2 of 2 BSK Bottles Yes 4N 250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)

250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG)					an inai 118818 (181 1181)		4/8/ 1/2
Container(s) Received	1-2	j		]		J	]
Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			777.51.7950				
None (p) White Cap	*1.6-					2000 - 724 - 1	
None (p) Blue Cap w/NH4 + Buffer							
HNO <sub>3</sub> (p) Red Cap							
H <sub>2</sub> SO <sub>4</sub> (p) Yellow Cap				1			
NaOH (p) Seen Cap				The Control		1000-	
EDA (p) Brown Cap/Label					Ì		
		Approx Territoria				1000 Janobil	
Other:					\		
Dissolved Oxygen 300ml (g)							
					\		
250ml (AG) None					1 1		
250ml (AG) H <sub>2</sub> SO <sub>4</sub> ,COD Yellow Label	WARE INVARY AND			wording vian	$\perp$	Cast Carlotte	a comment designs
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 515 <sub>i</sub> 547 Blue Label							
250ml (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA 531.1 Orange Label	No of Street, and a state of the state of th	- 12	TO SERVE TO CONTRACT		900ap00a	- 1 (£55, 10000)	a della crosses e
250ml (AG) NH <sub>4</sub> Cl 552 Purple Label					<u> </u>	00.000	100000000000
250ml (AG) EDA DBPs Brown Label	B 520 Habada 00 669	100 a parent mine "ni	Statistics, 100007-5	Banico Joon J	/_	9888 peer 1779	o p/ 149884 reso
250ml (AG) Other:	Property Control of the Control of t			999 1999 1999		1000 G	1000
	Control Control Control	1984 - 1986 - 1986 - 1	865 - 1 W.S. (1970)	<b>7</b>	Maria Janasa Masar	188865578888578	
500ml (AG) None 500ml (AG) H <sub>2</sub> SO <sub>4</sub> <sup>Yellow Label</sup>				/	1980, 1986, 1986		
500Mi (AG)	100000000000000000000000000000000000000	2395 - 7m - 1005	1986 a Segue 1988	886. Test 766	(*************************************	36606.4566.0	194-7965000
1 Liter (AG) None					8 Tana 1920		. 190556. 7788
1 Liter (AG) None 1 Liter (AG) H <sub>2</sub> SO <sub>4</sub> O&G / TPH-Diesel <sup>Yellow Label</sup>	TOTAL TRANSPORT		4. 9222 Mai - 1		h-Jane Sie. :	31//	
1 Liter (AG) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 548 / 525 / 521 Blue Label					<u> 1969 (1968), (Sap.</u>	3000). ¥(0, 1%	
1 Liter (P) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + H <sub>2</sub> SO <sub>4</sub> 549						Situation.	
1 Liter (AG) NaOH+ZnAc Sulfide		- 1966 XXX - F.				19"1885a10 <u>08</u> 5	7665 - 7666
			27 0 765 778		X	8 7 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
40ml VOA Vial Clear – HCL	02"1005"1000"000	1949 <u>: 100011000.</u>	10000- Mari Indo	1974 (B. 1988)   1988 (B. 1988)		127539 - 1779210,250	120000111200011111111111111111111111111
40ml VOA Vial Clear – Buffer pH 4							
40ml VOA Vial Clear – None	- M. TOTAL TOTAL SECTION - CAN	E. N. O. F. 1001.	3740 (MS) ROLL 1, 111 / 12				
40ml VOA Vial Amber - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	3						
40ml VOA Vial Clear - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 504, 505	3,700						
40ml VOA Vial Clear – H₃PO₄	3						
Other					The state of the s		1 - 1744 - 186 144 - 186
½ Gallon (p)							<u> </u>
Asbestos 1Liter Plastic/Foil						1	
Radon 200ml Clear (g)					12-10000-0300		July 1990
Low Level Hg/Metals Double Baggie		00.1 (69 - VI. 0 (78-0-1006: 104)	89 36 75 W	<b>X</b>	كريا		
Bioassay Jug	y	. 1000 000 an			. 170 HT	5575s 1 2688s 740	de ostar no
Ampule				de Til. Tiller		State Time	
PT Sample Bottle	5 54 74986-ts 50006574	587 (\$166) (1006, 100	in State Tolling	35: lideu, 1981a C	in Jakon, Sibo	room - Month	1555.0000
<u>agunara, nugar, rep., nug- rep. Sag- trat, nuggo, region habbaranggos, arabar</u>	1666 POGE 1006.5	18, 77, 30	60g 196, 720g.	P881-1985p; 1985-			1770 706s.
250 Clear Glass Jar	9000 1000 1000E						
500 Clear Glass Jar				10 99974			
1 Liter Clear Glass Jar Plastic Bag			7.7.5		Ne Faue Po		166. 76.
	<b>(</b> 5. 18. 18.69						
	SPECIAL SERVICE					100 100	Fronties
Tedlar Bags						L	1 1999



MPWMD Joe Oliver P.O. Box 85 Monterey, CA 93442-0085 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1 Thursday, September 08, 2011

Lab Number: AA79515

Collection Date/Time: 8/24/2011 13:30 Sample Collector: LEAR J

Submittal Date/Time: 8/24/2011 14:30 Sample ID

Sample Description: MW1													
Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL	Date Analyzed							
Chloramines	SM4500-Cl G	mg/L	Not Detected	0.05		8/24/2011							
Chloride	EPA300.0	mg/L	29	1	250	8/24/2011							
Haloacetic Acids	EPA552	ug/L	Not Detected E		60	9/7/2011							
Trihalomethanes	EPA524.2	ua/L	67 E		80	9/1/2011							

Sample Comments:

Report Approved by:



A1H2316

09/08/2011

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 08/26/2011 08:52.

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

**BSK ANALYTICAL LABORATORIES** 

John Montierth

Client Services Representative



09/08/2011

#### **Case Narrative**

# **Work Order Information**

Client Name:Monterey Bay AnalyticalSubmitted by:David HollandClient Code:Monte6227Shipped by:ONTRAC

Work Order: A1H2316 COC Number:

Project: MPWMD TAT: 10
Client Project: MPWMD PO #:

**Sample Receipt Conditions** 

Cooler: Default Cooler Temp. °C: 6

Containers Intact COC/Labels Agree Received On Wet Ice

Packing Material - Bubble Wrap

Sample(s) were received in temperature range.

Initial receipt at BSK-FAL

Report Manager

David Holland

Report Format

Final.rpt

A1H2316 FINAL 09082011 0826



## **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 Report Issue Date: 09/08/2011 8:26
Received Date: 08/26/2011
Received Time: 08:52

**Lab Sample ID:** A1H2316-01 **Sample Date:** 08/24/2011 13:30

Sample Type: Grab

Client Project: MPWMD Sampled by: Lear, J. Matrix: Water

Sample Description: MW 1 // 79515

# **Organics**

Organics									
Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Trihalomethanes by GC-MS									
Bromodichloromethane	EPA 524.2	17	0.50	ug/L	1	A110466	08/31/11	09/01/11	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A110466	08/31/11	09/01/11	
Chloroform	EPA 524.2	45	0.50	ug/L	1	A110466	08/31/11	09/01/11	
Dibromochloromethane	EPA 524.2	5.4	0.50	ug/L	1	A110466	08/31/11	09/01/11	
Surrogate: Bromofluorobenzene	EPA 524.2	99 %	Acceptable range: 70-130 %						
*Total Trihalomethanes, EPA 524.2		67	0.50	ug/L					
Haloacetic Acids by GC-ECD									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A110556	09/01/11	09/07/11	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A110556	09/01/11	09/07/11	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A110556	09/01/11	09/07/11	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A110556	09/01/11	09/07/11	
Trichloroacetic Acid (TCAA)	EPA 552.2	ND	1.0	ug/L	1	A110556	09/01/11	09/07/11	
Surrogate: 2,3-Dibromopropionic Acid	EPA 552.2	94 %		Acceptable ra	ange: 70-130 %	%			
*Total Haloacetic Acids, EPA 552.2		ND	2.0	ug/L					



# **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A110466				Analyst:	JGB	Prepare	d: 08/31/2	011			
Blank (A110466-BLK1) EPA 524.	2 - Quality Control										
Bromodichloromethane	ND	0.50	ug/L							08/31/11	
Bromoform	ND	0.50	ug/L							08/31/11	
Chloroform	ND	0.50	ug/L							08/31/11	
Dibromochloromethane	ND	0.50	ug/L							08/31/11	
Surrogate: Bromofluorobenzene	4.7			5.0		93	70-130			08/31/11	
Blank Spike (A110466-BS1) EPA	524.2 - Quality Con	trol									
romodichloromethane	10	0.50	ug/L	10		102	70-130			08/31/11	
Bromoform	11	0.50	ug/L	10		113	70-130			08/31/11	
Chloroform	11	0.50	ug/L	10		108	70-130			08/31/11	
bibromochloromethane	11	0.50	ug/L	10		105	70-130			08/31/11	
Surrogate: Bromofluorobenzene	5.3			5.0		106	70-130			08/31/11	
Blank Spike Dup (A110466-BSD1)	EPA 524.2 - Quali	ty Control									
romodichloromethane	9.6	0.50	ug/L	10		96	70-130	6	30	08/31/11	
romoform	9.6	0.50	ug/L	10		96	70-130	16	30	08/31/11	
hloroform	10	0.50	ug/L	10		100	70-130	8	30	08/31/11	
ibromochloromethane	9.5	0.50	ug/L	10		95	70-130	10	30	08/31/11	
Currogate: Bromofluorobenzene	4.6			5.0		92	70-130			08/31/11	
atch: A110556				Analyst:	XHX	Prepare	d: 09/01/2	011			
Blank (A110556-BLK1) EPA 552.	2 - Quality Control										
Dibromoacetic Acid (DBAA)	ND	1.0	ug/L							09/07/11	
, ,	ND ND	1.0 1.0	ug/L ug/L							09/07/11 09/07/11	
Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)			-								
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA)	ND	1.0	ug/L							09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA)	ND ND	1.0 1.0	ug/L ug/L							09/07/11 09/07/11	
ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (TCAA)	ND ND ND	1.0 1.0 2.0	ug/L ug/L ug/L	25		100	70-130			09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	ND ND ND ND	1.0 1.0 2.0 1.0	ug/L ug/L ug/L	25		100	70-130			09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) lonobromoacetic Acid (MBAA) lonochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid lank Spike (A110556-BS1) EPA	ND ND ND ND 25	1.0 1.0 2.0 1.0	ug/L ug/L ug/L	25		100	70-130 70-130			09/07/11 09/07/11 09/07/11 09/07/11	
dichloroacetic Acid (DCAA)  donobromoacetic Acid (MBAA)  donochloroacetic Acid (MCAA)  richloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A110556-BS1)  EPA  dibromoacetic Acid (DBAA)	ND ND ND ND 25	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L							09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
Monobromoacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (TCAA)  Monochloroacetic Acid (TCAA)  Monochloroacetic Acid (TCAA)  Monochloroacetic Acid (TCAA)  Monochloroacetic Acid (DBAA)  Monochloroacetic Acid (DCAA)	ND ND ND ND 25 A 552.2 - Quality Con	1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L	10		97	70-130			09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A110556-BS1) EPA Iibromoacetic Acid (DBAA) Ionobromoacetic Acid (MBAA)	ND ND ND ND 25 <b>a 552.2 - Quality Con</b> 9.7 9.7	1.0 1.0 2.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10		97 97	70-130 70-130			09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Ilank Spike (A110556-BS1) Ibromoacetic Acid (DBAA) Iichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA)	ND ND ND 25 <b>a 552.2 - Quality Con</b> 9.7 9.7	1.0 1.0 2.0 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10		97 97 95	70-130 70-130 70-130			09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A110556-BS1) Ichloroacetic Acid (DBAA) Ionobromoacetic Acid (DCAA) Ionochloroacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) richloroacetic Acid (TCAA)	ND ND ND 25 <b>a 552.2 - Quality Con</b> 9.7 9.7 9.5 23	1.0 1.0 2.0 1.0 <b>trol</b> 1.0 1.0 2.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20		97 97 95 116	70-130 70-130 70-130 70-130			09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Idonobromoacetic Acid (MBAA) Idonochloroacetic Acid (MBAA) Idonochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Idonochloroacetic Acid (TCAA) Idonochloroacetic Acid (DBAA) Idonobromoacetic Acid (DCAA) Idonochloroacetic Acid (MBAA) Idonochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Idonochloroacetic Acid (TCAA)	ND ND ND 25 <b>a 552.2 - Quality Con</b> 9.7 9.7 9.5 23 10	1.0 1.0 2.0 1.0 trol 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10		97 97 95 116 101	70-130 70-130 70-130 70-130 70-130			09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Ionobromoacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike (A110556-BS1) Ibromoacetic Acid (DBAA) Ionobromoacetic Acid (DCAA) Ionochloroacetic Acid (MBAA) Ionochloroacetic Acid (MCAA) Irichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid Islank Spike Dup (A110556-BSD1)	ND ND ND 25 4 552.2 - Quality Con 9.7 9.7 9.5 23 10 25	1.0 1.0 2.0 1.0 trol 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10		97 97 95 116 101	70-130 70-130 70-130 70-130 70-130	2	30	09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
ichloroacetic Acid (DCAA) Idonobromoacetic Acid (MBAA) Idonochloroacetic Acid (MCAA) Idonochloroacetic Acid (MCAA) Idonochloroacetic Acid (TCAA) Idonochloroacetic Acid (TCAA) Idonochloroacetic Acid (DBAA) Idonochloroacetic Acid (DCAA) Idonochloroacetic Acid (MCAA) Idonochloroacetic Acid (MCAA) Idonochloroacetic Acid (TCAA) Idonochloroacetic Acid (DBAA)	ND ND ND 25 <b>a 552.2 - Quality Con</b> 9.7 9.7 9.5 23 10 25 <b>EPA 552.2 - Quali</b>	1.0 1.0 2.0 1.0 trol  1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10 25		97 97 95 116 101	70-130 70-130 70-130 70-130 70-130		30 30	09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	
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Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid	ND ND ND 25 <b>3.552.2 - Quality Con</b> 9.7 9.7 9.5 23 10 25 <b>EPA 552.2 - Quali</b> 9.5 9.5	1.0 1.0 2.0 1.0 1.0 1.0 2.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 20 10 25		97 97 95 116 101 100	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130	3	30 30	09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11 09/07/11	

A1H2316 FINAL 09082011 0826



### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A110556				Analyst:	XHX	Prepare	d: 09/01/2	011			
Duplicate (A110556-DUP1)	EPA 552.2 - Quality Contr	rol				Source	e: A1H232	9-08			
Dibromoacetic Acid (DBAA)	3.7	1.0	ug/L		3.5			5	30	09/07/11	
Dichloroacetic Acid (DCAA)	6.0	1.0	ug/L		5.6			7	30	09/07/11	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	09/07/11	
Monochloroacetic Acid (MCAA)	ND	2.0	ug/L		ND				30	09/07/11	
Trichloroacetic Acid (TCAA)	3.1	1.0	ug/L		2.9			6	30	09/07/11	
Surrogate: 2,3-Dibromopropionic	: Acid 24			25		96	70-130			09/07/11	
Matrix Spike (A110556-MS1)	EPA 552.2 - Quality Cor	ntrol				Source	e: A1H230	9-01			
Dibromoacetic Acid (DBAA)	8.4	1.0	ug/L	10	ND	84	70-130			09/07/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L	10	ND	85	70-130			09/07/11	
Monobromoacetic Acid (MBAA)	8.4	1.0	ug/L	10	ND	84	70-130			09/07/11	
Monochloroacetic Acid (MCAA)	21	2.0	ug/L	20	ND	103	70-130			09/07/11	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10	ND	103	70-130			09/07/11	
Surrogate: 2,3-Dibromopropionic	: Acid 22			25		89	70-130			09/07/11	
Matrix Spike Dup (A110556-N	/ISD1) EPA 552.2 - Quali	ity Contro	I			Source	e: A1H230	9-01			
Dibromoacetic Acid (DBAA)	8.3	1.0	ug/L	10	ND	83	70-130	1	30	09/07/11	
Dichloroacetic Acid (DCAA)	8.5	1.0	ug/L	10	ND	85	70-130	1	30	09/07/11	
Monobromoacetic Acid (MBAA)	8.3	1.0	ug/L	10	ND	83	70-130	2	30	09/07/11	
Monochloroacetic Acid (MCAA)	20	2.0	ug/L	20	ND	102	70-130	1	30	09/07/11	
Trichloroacetic Acid (TCAA)	11	1.0	ug/L	10	ND	109	70-130	5	30	09/07/11	
Surrogate: 2,3-Dibromopropionic	: Acid 22			25		87	70-130			09/07/11	



### Certificate of Analysis

09/08/2011

#### 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 one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- · Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- · BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · (2C) Result reported from secondary analytical column.
- 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.

### **Certifications:**

State of California - CDPH - ELAP State of California - CDPH - NELAP

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

### **Definitions and Flags for Data Qualifiers**

Method Detection Limit mg/L: Milligrams/Liter (ppm) M: MDA: Min. Detected Activity Milligrams/Kilogram (ppm) Most Probable Number mg/Kg: RL: Reporting Limit MPN: Micrograms/Liter (ppb) :DL x Dilution CFU: μg/L: Colony Forming Unit μg/Kg: Micrograms/Kilogram (ppb) ND: None Detected at RL Absent: Less than 1 CFU/100mLs 1 or more CFU/100mLs %: Percent Recovered (surrogates) pCi/L: Picocuries per Liter Present: NR· Non-Reportable RL Mult: **RL** Multiplier

A1H2316 FINAL 09082011 0826

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04227CA

# A1H2316

# **Monterey Bay Analytical Monte6227**

08262011

Turnaround: Standard
Due Date: 09/12/2011

Printed: 08/26/2011 16:51:08

BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street, Fresno, CA 93706-1623 (559) 497-2888 + FAX (559) 497-2893 + www.bsklabs.com

A1H2316 Monte6227

08/26/2011

Page 8 of 10

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	Shipping Method:	SON	Received for Lab by		Relinquished by: (Signature and Printed Name)	Relinquished by: (Signature and Printed Name)  David Holland ( )										Sample # Bottles	1 1	Matrix Types:	Lear, J.	Sampler Name Printed / Signature	How would you lil	Monterey f	Project Information	4 Justin Ct.	Address *	Montere	Client/Company Name *:	Required Fields
(CAO UPS		スのメ	" (Signature pro-P		ignature and Print	and Print				\					8/24/11 13:30	Date Time	RGW - Raw Ground Water	RSW = Raw Surf		nted / Signature	ke your completed	⊃eninsula W	ä.			Monterey Bay Analytical	√aime *:	
GSO WALK-II		monto	rinted Name)		ed Name)	a Moll						\			 30 MW 1		1	ı			l results sent? 🕢 1	/ater Manage		Mo	City *	nalytical		
CA) UPS GSO WALK-IN SIVC FED EX OTHER		SO IO SUMBATRIABARC	, ,		Company	MBAS				/		/	/			Sample Description / Location *	FW = Finished Water WW = Waste Water	= Clorinated Finished Wate	SID Level II	QC Request	How would you like your completed results sent? 📝 E-Mail 🔲 Fax 🔲 EDD	Monterey Peninsula Water Management District		Monterey CA	State *	David Holland	Report Attention *:	
IER		Moscin.	Date	<b>1</b>	Date	8/2s											Waste Water SW = Sterm Water		I ✓STD ☐5 Day** ☐2 Day** ☐1 Day**	Result Request ** Surcharge	O Mail Only	Quote # 464	: PO#	, <del>,</del>	7in *	and		
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WET B	hod:	Date:	Payment Received at		Received by (Signat	Received by (Signat									79515	Comments / Station Code	DW = Drinking Water SO =	Bottled Water		System No. *	Regulatory Compliance Electronic Data Transfer:	Other	Merced Co 🔲 Tulare Co 🔲	CDHS Fresno Co	Carbon Conjes:	4MBAS@Sbcglobal.net	Phone * #: (831)-357-6227 I	a Direct
BLUE NONE		Amount:	ved at Delivery:		Received by (Signature and Print Name)	Received by (Signature and Print Name)							)			on Code	SO = Solid				۲ <sub>۲</sub>		Tulare Co 🔲	აი EPA □		al.net	FAX * #(831)-641-0734	
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	Packing Material:				Company	Company	ļ	· · · · · · · · · · · · · · · · · · ·									•									ANALYSIS REQUESTED		
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08/26/2011

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te Received 81001 "	## ### ### ### ### ### ### ### ### ###
tion 1- Peceiving Information	

Date Received 8 1001 11		<b></b>		
Section 1- Receiving Informatio				
Sample Transport: ENTRAG (				
Samples arrived at lab on same d	ay sampled: Yes	No <u>火</u> Has Chilling Proces	ss Begun: Yes <u>V</u> ^	No
Coolers/Ice Chests Description/Te	• •			
1) _6	3) 4)	5)		
1) 6 2)	N N/A Received	On Ice: Wel Blue	Received Ambient:	<u>Y</u> 7
Describe type of packing materials				
Initial Receipt: BSK-Visalia	BSK-Bakersfield	BSK-SAC B	K-FAD	
Were ice chest custody seals pres	sent? Y 🗭 Intact	: Y (P)		
Section 2- COC Info.	Completed Info Fror Yes No Containe		Completed Yes No	Info From Container
Was COC Received		Analysis Requested		
Date Sampled		Hold times less than 72h	nr -	<del>-</del>
Time Sampled		Client Name		
Sample ID		Address		
Special Storage/Handling Ins.		Telephone #		
Section 3- Bottles / Analysis		Yes	No N/A	Comment
Did all bottles arrive unbroken a	and intact?			
Were bottle custody seals pres				
Were bottle custody seals intac				
Did all bottle labels agree with				
Were correct containers used f		?		
Were correct preservations use				
Was a sufficient amount of sam				
Were bubbles present in VOA				
Were Ascorbic Acid Bottles rec	· · · · · · · · · · · · · · · · · · ·			
Section 4- Comments / Discrepa	ancies			
·				
Sample(s) Split/Preserve: Yes	No Container:	Preservation:	Dt/Time/Init	
	Container:	Preservation:	Dt/Time/Init	
Was Client Service Rep. notified of Explanations / Comments	of discrepancies: Yes 1	No (N/A); CSR:	Notified By/Time	<u>)</u> ;
Explanations / Comments				
Danat Commont Entered				
Report Comment Entered:				
Laheled by AA @ 1411	Lahole chacked by: 30	U @ (C.1¢ RUSH	Paged by:	@

08/26/2011 A1H2316 Sample Integrity Pg 2 of 2 10 Monte6227 BSK Bottles (Yes) 250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer HNO<sub>3</sub> (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap EDA (p) Brown Cap/Label Other: Dissolved Oxygen 300ml (g) 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub> COD Yellow Labe 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Label 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Labe 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> Yellow Label 1 Liter (AG) None 1 Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G / TPH-Diesel Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 1 Liter (P) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide 40ml VOA Vial Clear - HCL 40ml VOA Vial Clear – Buffer pH 4 40ml VOA Vial Clear - None 40ml VOA Vial Amber - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear – H₁PO₄ Other: ½ Gallon (p) Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug Ampule PT Sample Bottle 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Plastic Soil Tube Brass / Steel Tedlar Bags



Pueblo Water Resources, Inc Michael Burke 4478 Market St., Suite 705 Ventura, CA 93003 4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 2 Monday, December 06, 2010

Lab Number: AA70533

Collection Date/Time: 10/22/2010 7:00 Sample Collector: MARKS R

Submittal Date/Time: 10/22/2010 9:20 Sample ID

Sample Description: SMSTW													
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed						
Alkalinity, Total (as CaCO3)	2320B	mg/L	249		2		10/22/2010						
Aluminum, Total	EPA200.8	ug/L	Not Detected	d	10	1000	10/27/2010						
Ammonia-N	4500NH3 D	mg/L	Not Detected	d	0.05		11/5/2010						
Arsenic, Total	EPA200.8	ug/L	4		1	10	10/27/2010						
Barium, Total	EPA200.8	ug/L	50		10	1000	10/27/2010						
Bicarbonate (as HCO3-)	2320B	mg/L	304		10		10/22/2010						
Boron	EPA200.7	mg/L	0.08		0.05		10/22/2010						
Bromide	EPA300.0	mg/L	0.18		0.05		10/22/2010						
Calcium	EPA200.7	mg/L	76		0.5		10/22/2010						
Carbonate as CaCO3	2320B	mg/L	Not Detected	d	10		10/22/2010						
Chloride	EPA300.0	mg/L	107		1	250	10/22/2010						
Chromium, Total	EPA200.8	ug/L	5		2	50	10/27/2010						
Copper, Total	EPA200.8	ug/L	Not Detected	d	4	1300	10/27/2010						
Dissolved Organic Carbon	SM5310-C	mg/L	0.71	E	0.2		11/1/2010						
Fluoride	EPA300.0	mg/L	0.14		0.10	2.0	10/22/2010						
Haloacetic Acids	EPA552	ug/L	Not Detected	d E		60	11/2/2010						
Hardness (as CaCO3)	2340B	mg/L	264		10		12/1/2010						
Heterotrophic Plate Count	SimPlate	MPN/mL	270		2		10/22/2010						
Hydrogen Sulfide	SM4500-S2- F	ug/L	4		2		10/28/2010						
odide	EPA9056M	ug/L	52	E	10		11/1/2010						
ron	EPA 200.7	ug/L	21		10		10/22/2010						
ron, Dissolved	EPA 200.7	ug/L	21		10	300	10/22/2010						
Kjehldahl Nitrogen	4500-NH3 B,C.I	E mg/L	Not Detected	d	0.2		11/2/2010						
_anglier Index ( 15 deg. C)	2330B		0.43				11/8/2010						
Langlier Index ( 60 deg. C)	2330B		1.02				11/8/2010						
Lead, Total	EPA200.8	ug/L	Not Detected	d	5	15	10/27/2010						
Lithium	EPA200.8	ug/L	36		1		10/27/2010						
Magnesium	EPA200.7	mg/L	18		0.5		10/22/2010						
Manganese, Dissolved	EPA 200.7	ug/L	27		10	50	10/22/2010						
Manganese, Total	EPA 200.7	ug/L	27		10	50	10/22/2010						
MBAS (Surfactants)	5540C	mg/L	Not Detected	d	0.05	0.50	10/28/2010						
Mercury, Total	EPA200.8	ug/L	Not Detected	d	0.5	2	10/27/2010						
Methane	EPA174/175	ug/L	Not Detected	d E	5		11/1/2010						
Nickel, Total	EPA200.8	ug/L	Not Detected	d	10	100	10/27/2010						
Nitrate as NO3	EPA300.0	mg/L	1		1	45	10/22/2010						
Nitrate as NO3-N	EPA300.0	mg/L	0.16		0.05	10	10/22/2010						
Nitrite as NO2-N	EPA300.0	mg/L	Not Detected	d	0.05	1.00	10/22/2010						

Lab Number: AA70533

Collection Date/Time: 10/22/2010 7:00 Sample Collector: MARKS R

Submittal Date/Time: 10/22/2010 9:20 Sample ID

Sample Description: SMSTW												
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed					
o-Phosphate-P	EPA300.0	mg/L	Not Detected		0.05		10/22/2010					
pH (Laboratory)	4500-H+B	STD. Units	7.7				10/22/2010					
Phosphorus, Total	mg/L	0.03		0.03		11/13/2010						
Potassium	mg/L	4.5		0.1		10/22/2010						
QC Anion Sum x 100	%	96%				12/1/2010						
QC Anion-Cation Balance	Calculaltion	%	3				12/1/2010					
QC Cation Sum x 100	Calculattion	%	103%				12/1/2010					
QC Ratio TDS/SEC	Calculation		0.60				12/1/2010					
SAR (Sodium Adsorption Ratio)	Suarez, 1981		2.7				12/1/2010					
SAR, Adjusted	Suarez, 1981		3.5				12/1/2010					
Selenium, Total	EPA200.8	ug/L	Not Detected		2	50	10/27/2010					
Silica as SiO2, Total	EPA200.7	mg/L	42		0.5		10/22/2010					
Sodium	EPA200.7	mg/L	102		0.5		10/22/2010					
Specific Conductance (E.C)	2510B	umhos/cm	954		1	900	10/22/2010					
Strontium Isotopic analyses by TIMS	TIMS		0.709085	Е			12/2/2010					
Strontium, Total	EPA200.8	ug/L	403		5		10/29/2010					
Sulfate	EPA300.0	mg/L	56		1	250	10/22/2010					
Sulfides	SM4500-S2- D	ug/L	28		2		10/28/2010					
Total Diss. Solids	2540C	mg/L	575		10	500	10/26/2010					
Total Nitrogen	Calculation	mg/L	Not Detected		0.5		12/1/2010					
Total Organic Carbon	mg/L	0.70	E	0.20		11/1/2010						
Trihalomethanes	EPA524.2	ug/L	Not Detected	ΙE		80	10/27/2010					

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



A0J1758

11/04/2010

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

Dear David Holland,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Enclosed are the results of analyses for samples received by the laboratory on 10/26/2010 08:30.

If additional clarification of any information is required, please contact your Client Services Representative, Paul Erickson at (800) 877-8310 or (559) 497-2888.

**BSK ANALYTICAL LABORATORIES** 

Paul Erickson

Client Services Representative

Vanl Esh



11/04/2010

#### **Case Narrative**

### **Work Order Information**

David Holland **Client Name:** Monterey Bay Analytical Submitted by: **Client Code:** Monte6227 Shipped by: **ONTRAC** 

Work Order: A0J1758 **COC Number:** 

Project: **General Chemistry TAT:** 10 Client Project: Pueblo Water Resources, INC. PO #:

**Sample Receipt Conditions** 

Cooler: **Default Cooler** Temp. °C: 5

**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

Report Manager Report Format FAL Final Report.rpt **David Holland** 



### **Certificate of Analysis**

David Holland Monterey Bay Analytical 4 Justin Court Suite D Monterey, CA 93940 Report Issue Date: 11/04/2010 15:16 Received Date: 10/26/2010 Received Time: 08:30

Lab Sample ID: A0J1758-01 Client Project: Pueblo Water Resources, INC.

Sample Date:10/22/2010 07:00Sampled by: Marks, R.Sample Type:GrabMatrix: Water

Sample Description: SMSTW // 70533

### **General Chemistry**

					RL				
Analyte	Method	Result	RL	Units	Mult		Prepared	Analyzed	Qualifiers
Dissolved Organic Carbon	SM 5310 C	0.71	0.20	mg/L	1	A010780	11/01/10	11/01/10	
Total Organic Carbon	SM 5310 C	0.70	0.20	mg/L	1	A010781	11/01/10	11/01/10	
Organics									
Analyta	Method	Result	RL	Units	RL		Droporod	Analyzad	Qualifiers
Analyte	Metriod	Resuit	RL	Units	Mult	Batch	Prepared	Analyzed	Qualifiers
Total Trihalomethanes by EPA	524.2								
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A010615	10/27/10	10/27/10	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A010615	10/27/10	10/27/10	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A010615	10/27/10	10/27/10	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A010615	10/27/10	10/27/10	
Total Trihalomethanes by EPA	<u> 524.2</u>								
Total Trihalomethanes	EPA 524.2	ND		ug/L					
Haloacetic Acids									
Dibromoacetic Acid (DBAA)	EPA 552.2	ND	1.0	ug/L	1	A010736	10/29/10	11/02/10	
Dichloroacetic Acid (DCAA)	EPA 552.2	ND	1.0	ug/L	1	A010736	10/29/10	11/02/10	
Monobromoacetic Acid (MBAA)	EPA 552.2	ND	1.0	ug/L	1	A010736	10/29/10	11/02/10	
Monochloroacetic Acid (MCAA)	EPA 552.2	ND	2.0	ug/L	1	A010736	10/29/10	11/02/10	
Trichloroacetic Acid (TCAA)	EPA 552.2	ND	1.0	ug/L	1	A010736	10/29/10	11/02/10	
Haloacetic Acids									
Total Haloacetic Acids (HAA)	EPA 552.2	ND		ug/L					
		Me	thod	Result					
Surrogate: Bromofluorobenzene		EP.	A 524.2	87 %	Acceptable ra	ange: 70-1	30 %		

Surrogate: Bromotluorobenzene EPA 524.2 87 % Acceptable range: 70-130 % Surrogate: 2,3-Dibromopropionic Acid EPA 552.2 121 % Acceptable range: 70-130 %



## **General Chemistry Quality Control Report**

<u> </u>										
				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: A010780				An	alyst: SAB	i	Prepared 8	& Analyze	d: 11/01/2	010
Blank (A010780-BLK1) SM 53	310 C - Qualit	y Control								
Dissolved Organic Carbon	ND	0.20	mg/L							
Blank Spike (A010780-BS1)	SM 5310 C - G	Quality Cor	ntrol							
Dissolved Organic Carbon	10	0.20	mg/L	10		101	80-120			
Blank Spike Dup (A010780-BSI	D1) SM 531	0 C - Quali	ty Control							
Dissolved Organic Carbon	10	0.20	mg/L	10		101	80-120	0.2	20	
Batch: A010781				An	alyst: SAB		Prepared 8	& Analyze	d: 11/01/2	010
Blank (A010781-BLK1) SM 53	310 C - Qualit	y Control								
Total Organic Carbon	ND	0.20	mg/L							
Blank Spike (A010781-BS1)	SM 5310 C - C	Quality Cor	ntrol							
Total Organic Carbon	10	0.20	mg/L	10		103	80-120			
Blank Spike Dup (A010781-BSI	D1) SM 531	0 C - Quali	ty Control							
Total Organic Carbon	10	0.20	mg/L	10		103	80-120	0	20	
Matrix Spike (A010781-MS1)	SM 5310 C - (	Quality Co	ntrol				Source:	A0J1757-	04	
Total Organic Carbon	13	0.20	mg/L	10	2.8	102	80-120			
Matrix Spike (A010781-MS2)	SM 5310 C - (	Quality Co	ntrol				Source:	A0J1758-	01	
Total Organic Carbon	11	0.20	mg/L	10	0.70	102	80-120			
Matrix Spike Dup (A010781-MS	D1) SM 53	10 C - Qual	lity Control				Source:	A0J1757-	04	
Total Organic Carbon	13	0.20	mg/L	10	2.8	102	80-120	0.1	20	
M-4-1- O-11 - D (1040704 MO	D2) SM 52	10 C Qual	lity Control				Source:	A0J1758-	<b>0</b> 1	
Matrix Spike Dup (A010781-MS	DZ) 3 W 33	i u c - Quai	iity Collinoi				Oource.	AUJ 17 JU-	0 1	



1414 Stanislaus Street

## **Organics Quality Control Report**

Bromodichloromethane 4.5 Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	Ality Control 0.50 0.50 0.50 4.9 - Quality Co 0.50 0.50 0.50 4.6	ug/L ug/L ug/L ug/L	Level Ana	Result %RE alyst: JGB	C Limits  Prepared (	RPD  & Analyze	Limit ed: 10/27/2	Qualifiers 010
Blank (A010615-BLK1) EPA 524.2 - Question Bromodichloromethane ND Bromodichloromethane ND Dibromochloromethane ND Dibromochloromethane ND Surrogate: Bromofluorobenzene  Blank Spike (A010615-BS1) EPA 524.2 Bromodichloromethane 4.5 Bromoform 5.3 Dibromochloromethane 4.4 Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2 Surrogate: Bromofluorobenzene  Blank (A010736-BLK1) EPA 552.2 - Question Dibromocacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50 0.50 4.9 - Quality Co 0.50 0.50	ug/L ug/L ug/L ug/L			Prepared of	& Analyze	ed: 10/27/2	010
Bromodichloromethane Bromoform Chloroform ND Dibromochloromethane ND Surrogate: Bromofluorobenzene  Blank Spike (A010615-BS1) Bromodichloromethane Bromoform 4.6 Chloroform 5.3 Dibromochloromethane Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) Bromodichloromethane Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) Bromodichloromethane S.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane S.2 Surrogate: Bromofluorobenzene  Blank (A010736-BLK1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DBAA) Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (MBAA) ND Dichloroacetic Acid (MBAA) Monobromoacetic Acid (MBAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50 0.50 4.9 - Quality Co 0.50 0.50	ug/L ug/L ug/L ug/L	5.0	98				
Bromoform ND Chloroform ND Dibromochloromethane ND Surrogate: Bromofluorobenzene  Blank Spike (A010615-BS1) EPA 524.2 Bromodichloromethane 4.5 Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4 Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2 Surrogate: Bromofluorobenzene  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50 4.9 - Quality Co 0.50 0.50 0.50	ug/L ug/L ug/L	5.0	98				
Chloroform Dibromochloromethane ND Surrogate: Bromofluorobenzene  Blank Spike (A010615-BS1) EPA 524.2 Bromodichloromethane 4.5 Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4 Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2 Surrogate: Bromofluorobenzene  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (MCAA) ND Monobromoacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 4.9 - Quality Co 0.50 0.50 0.50	ug/L ug/L	5.0	98				
Dibromochloromethane  Surrogate: Bromofluorobenzene  Blank Spike (A010615-BS1) EPA 524.2  Bromodichloromethane 4.5  Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA  Bromodichloromethane 5.1  Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 4.9  - Quality Co 0.50 0.50 0.50	ug/L	5.0	98				
Blank Spike (A010615-BS1) EPA 524.2 Bromodichloromethane 4.5 Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromodichloromethane 5.1 Bromodichloromethane 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	4.9 - Quality Co 0.50 0.50 0.50	ntrol	5.0	98				
Blank Spike (A010615-BS1) EPA 524.2  Bromodichloromethane 4.5  Bromoform 4.6  Chloroform 5.3  Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA  Bromodichloromethane 5.1  Bromoform 5.5  Chloroform 6.0  Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu  Dibromoacetic Acid (DBAA) ND  Dichloroacetic Acid (DCAA) ND  Dichloroacetic Acid (DCAA) ND  Monobromoacetic Acid (MBAA) ND  Monobromoacetic Acid (MBAA) ND  Monochloroacetic Acid (MCAA) ND  Monochloroacetic Acid (MCAA) ND  Trichloroacetic Acid (TCAA) ND  Trichloroacetic Acid (TCAA) ND  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50 0.50		5.0	98				
Bromodichloromethane 4.5 Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50 0.50				70-130			
Bromoform 4.6 Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50 0.50	ug/L						
Chloroform 5.3 Dibromochloromethane 4.4  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50 0.50		5.0	90	70-130			
Dibromochloromethane  Surrogate: Bromofluorobenzene  Blank Spike Dup (A010615-BSD1)  Bromodichloromethane  5.1  Bromoform 5.5  Chloroform 6.0  Dibromochloromethane  Batch: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1)  Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (TCAA)  ND  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	0.50	ug/L	5.0	92	70-130			
Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2 Surrogate: Bromofluorobenzene  Batch: A010736 Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2		ug/L	5.0	105	70-130			
Blank Spike Dup (A010615-BSD1) EPA Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	4.6	ug/L	5.0	87	70-130			
Bromodichloromethane 5.1  Bromoform 5.5  Chloroform 6.0  Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2			5.0	93	70-130			
Bromodichloromethane 5.1 Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	524.2 - Qua	lity Control						
Bromoform 5.5 Chloroform 6.0 Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50	ug/L	5.0	102	70-130	12	30	
Chloroform 6.0  Dibromochloromethane 5.2  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50	ug/L	5.0	110	70-130	17	30	
Dibromochloromethane  Surrogate: Bromofluorobenzene  Batch: A010736  Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50	ug/L	5.0	121	70-130	14	30	
Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	0.50	ug/L	5.0	103	70-130	17	30	
Blank (A010736-BLK1) EPA 552.2 - Qu Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	5.3	ug/L	5.0			.,,		
Blank (A010736-BLK1) EPA 552.2 - Que Dibromoacetic Acid (DBAA) ND Dibromoacetic Acid (DBAA) ND Dichloroacetic Acid (DCAA) ND Dichloroacetic Acid (DCAA) ND Monobromoacetic Acid (MBAA) ND Monobromoacetic Acid (MBAA) ND Monochloroacetic Acid (MCAA) ND Monochloroacetic Acid (MCAA) ND Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	5.3		5.0	106	70-130			
Dibromoacetic Acid (DBAA)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1)  EPA 552.2			Ana	alyst: KHH	Prepared:	10/29/20	10 Analyze	d: 11/02/2010
Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	ality Control							
Dichloroacetic Acid (DCAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  ND  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Monobromoacetic Acid (MBAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  ND  Trichloroacetic Acid (TCAA)  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Monochloroacetic Acid (MCAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  ND  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic  Acid  Surrogate: 2,3-Dibromopropionic  Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  ND  Trichloroacetic Acid (TCAA)  ND  Surrogate: 2,3-Dibromopropionic Acid  Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1)  EPA 552.2	1.0	ug/L						
Trichloroacetic Acid (TCAA) ND Trichloroacetic Acid (TCAA) ND Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	2.0	ug/L						
Trichloroacetic Acid (TCAA) ND  Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1) EPA 552.2	2.0	ug/L						
Surrogate: 2,3-Dibromopropionic Acid Surrogate: 2,3-Dibromopropionic Acid Blank Spike (A010736-BS1) EPA 552.2	1.0	ug/L						
Acid Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1) EPA 552.2	1.0	ug/L						
Surrogate: 2,3-Dibromopropionic Acid  Blank Spike (A010736-BS1) EPA 552.2	25		25	98	70-130			
	25		25	102	70-130			
	- Quality Co	ntrol						
	1.0	ug/L	10	103	70-130			
Dibromoacetic Acid (DBAA) 10	1.0	ug/L	10	104	70-130			
Dichloroacetic Acid (DCAA) 9.5		ug/L	10	95	70-130			
Dichloroacetic Acid (DCAA) 9.6	1.0	ug/L	10	96	70-130			
Monobromoacetic Acid (MBAA) 9.2	1.0 1.0	ug/L	10	92	70-130			
Monobromoacetic Acid (MBAA) 9.5		ug/L	10	95	70-130			
Monochloroacetic Acid (MCAA) 11	1.0	ug/L	10	109	70-130			
	1.0 1.0						A0J	1758 FINAL 11042010 15

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Fresno, CA 93706



## **Organics Quality Control Report**

				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: A010736				An	alyst: KHH		Prepared:	10/29/201	10 Analyze	d: 11/02/2010
Blank Spike (A010736-BS1)	EPA 552.2 -	Quality Cor	ntrol							
Monochloroacetic Acid (MCAA)	13	2.0	ug/L	10		128	70-130			
Trichloroacetic Acid (TCAA)	9.9	1.0	ug/L	10		99	70-130			
Trichloroacetic Acid (TCAA)	9.9	1.0	ug/L	10		99	70-130			
Surrogate: 2,3-Dibromopropionic		30		25		120	70-130			
Acid Surrogate: 2,3-Dibromopropionic Acid		31		25		123	70-130			
Blank Spike Dup (A010736-BS	SD1) EPA (	52.2 - Quali	ty Control							
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		102	70-130	0.5	30	
Dibromoacetic Acid (DBAA)	10	1.0	ug/L	10		104	70-130	0.2	30	
Dichloroacetic Acid (DCAA)	9.7	1.0	ug/L	10		97	70-130	1	30	
Dichloroacetic Acid (DCAA)	10	1.0	ug/L	10		100	70-130	4	30	
Monobromoacetic Acid (MBAA)	9.3	1.0	ug/L	10		93	70-130	0.6	30	
Monobromoacetic Acid (MBAA)	9.6	1.0	ug/L	10		96	70-130	1	30	
Monochloroacetic Acid (MCAA)	11	2.0	ug/L	10		114	70-130	5	30	
Monochloroacetic Acid (MCAA)	13	2.0	ug/L	10		126	70-130	1	30	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		102	70-130	3	30	
Trichloroacetic Acid (TCAA)	10	1.0	ug/L	10		103	70-130	4	30	
Surrogate: 2,3-Dibromopropionic		30		25		121	70-130			
Acid Surrogate: 2,3-Dibromopropionic Acid		30		25		122	70-130			
Duplicate (A010736-DUP1)	EPA 552.2 - 0	Quality Cont	rol				Source:	A0J1777-	01	
Dibromoacetic Acid (DBAA)	2.0	1.0	ug/L		1.9			9	30	
Dichloroacetic Acid (DCAA)	12	1.0	ug/L		12			3	30	
Monobromoacetic Acid (MBAA)	ND	1.0	ug/L		ND				30	
Monochloroacetic Acid (MCAA)	4.5	2.0	ug/L		4.2			6	30	
Frichloroacetic Acid (TCAA)	13	1.0	ug/L		12			7	30	
				25		116	70-130			
		29		25		7.70				
Acid	EPA 552.2 -		ntrol				Source:	A0J1667-	05	
Acid Matrix Spike (A010736-MS1)	<b>EPA 552.2</b> -		<b>ntrol</b> ug/L	10	0.41	97	<b>Source:</b> 70-130	A0J1667-	05	
Acid  Matrix Spike (A010736-MS1)  Dibromoacetic Acid (DBAA)		· Quality Co		10	0.41 ND			A0J1667-	05	
Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA)	10	· <b>Quality Co</b> 1.0	ug/L	10 10		97	70-130	A0J1667-	05	
Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA)	10 12	• <b>Quality Co</b> 1.0 1.0	ug/L ug/L	10 10 10	ND	97 118	70-130 70-130	A0J1667-	05	
Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA)	10 12 9.8	• Quality Co 1.0 1.0 1.0	ug/L ug/L ug/L	10 10 10	ND 0.24	97 118 95	70-130 70-130 70-130	A0J1667-	05	
Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid	10 12 9.8 12	1.0 1.0 1.0 1.0 2.0	ug/L ug/L ug/L ug/L	10 10 10 10	ND 0.24 0.54	97 118 95 115	70-130 70-130 70-130 70-130	A0J1667-	05	
Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid	10 12 9.8 12 11	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10	ND 0.24 0.54	97 118 95 115 90	70-130 70-130 70-130 70-130 70-130 70-130	A0J1667-		
Acid  Matrix Spike (A010736-MS1)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic	10 12 9.8 12 11	1.0 1.0 1.0 2.0 1.0	ug/L ug/L ug/L ug/L ug/L	10 10 10 10	ND 0.24 0.54	97 118 95 115 90	70-130 70-130 70-130 70-130 70-130 70-130			
Acid  Matrix Spike (A010736-MS1)  Dibromoacetic Acid (DBAA)  Dichloroacetic Acid (DCAA)  Monobromoacetic Acid (MBAA)  Monochloroacetic Acid (MCAA)  Trichloroacetic Acid (TCAA)  Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike Dup (A010736-M	10 12 9.8 12 11	1.0 1.0 1.0 2.0 1.0 25	ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10 25	ND 0.24 0.54 1.7	97 118 95 115 90	70-130 70-130 70-130 70-130 70-130 70-130 Source:	A0J1667-		
Matrix Spike (A010736-MS1) Dibromoacetic Acid (DBAA) Dichloroacetic Acid (DCAA) Monobromoacetic Acid (MBAA) Monochloroacetic Acid (MCAA) Trichloroacetic Acid (TCAA) Surrogate: 2,3-Dibromopropionic Acid  Matrix Spike Dup (A010736-M Dibromoacetic Acid (DBAA)	10 12 9.8 12 11 11 ISD1) EPA	1.0 1.0 1.0 2.0 1.0 25 552.2 - Qual	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 10 10 25	ND 0.24 0.54 1.7	97 118 95 115 90 101	70-130 70-130 70-130 70-130 70-130 70-130 Source:	<b>A0J1667-</b> 1		



### **Organics Quality Control Report**

				Spike	Source		%REC		RPD	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers

Batch: A010736		Analyst: KHH	Prepared: 10/29/2010 Analyzed: 11/02/2010
Matrix Spike Dup (A010736-MSD1)	FPA 552 2 - Quality Control		Source: A0.11667-05

 Trichloroacetic Acid (TCAA)
 11
 1.0
 ug/L
 10
 1.7
 94
 70-130

 Surrogate: 2,3-Dibromopropionic
 28
 25
 112
 70-130

Acid

A0J1758 FINAL 11042010 1516

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### Certificate of Analysis

11/04/2010

#### 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 one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, 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.
- Results contained in this analytical report must be reproduced in its entirety.
- · Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- · Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- 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. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- \* This is not a NELAP accredited analyte.
- 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.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- · 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.

### Certifications:

State of California - CDPH - ELAP 1180 State of California - CDPH - NELAP 04227CA

State of New Mexico - NMED-DWB

State of Nevada - NDEP CA000792009A

### **Definitions and Flags for Data Qualifiers**

Milligrams/Liter (ppm) Method Detection Limit MDA: Min. Detected Activity mg/L: Reporting Limit Milligrams/Kilogram (ppm) RL: MPN: Most Probable Number mg/Kg: Micrograms/Liter (ppb) :DL x Dilution CFU: Colony Forming Unit μg/L: ND: None Detected at RL Less than 1 CFU/100mLs Micrograms/Kilogram (ppb) Absent: μg/Kg: Percent Recovered (surrogates) pCi/L: Picocuries per Liter 1 or more CFU/100mLs Present: RL Mult: RL Multiplier

# A0J1758

# **Monterey Bay Analytical**

Monte6227

10262010

Monterey Bay Analytical

No Project

Turnaround:

Standard

Due Date:

11/09/2010

 Sample ID
 Sample Description
 Date Sampled
 Lab Notes

 A0J1758-01
 SMSTW
 10/22/2010

Printed: 10/26/2010 12:02:46

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BSK ANALYTICAL LABORATORIES

\* Required Fields

1414 Stanislaus Street, Fresno. CA 93706-1623 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

TEMP:

Montes

A0J1758 Monte6227

10/26/201₽

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Page 10 of 12

CAO UPS GSO WALK-IN SIVE FED EX OTHER	Shipping Method:	15/11	Received for Lab by: (Signature and Propert Name)	Keunquistico oy: (bignature and rrinted Name) Company	200						- Address	[ <b>&amp;</b> 10/22/10 7:00 SMSTW	Sample Bottles Date Time Sample Description / Location *	c Types: RSW RGW	Marks, R. □STD □ LevelⅡ	Sampler Name Printed / Signature QC Request	How would you like your completed results sent?	Pueblo Water Resources, INC.	Project Information:	tin Ct. Monterey	-	Monterey Bay Analytical David Holland	Chent/Company Name *: Report Attention *:
HER		a Stabeth	Date Time	Date	5/10	┦						WG	Matrix *	Chorinated Waste Water SW = Storm Water	II STD s Day** 2 Day** 1 Day**	Result Request ** Surcharge	3D Mail Only	Quate # 464	₽O#	CA 93940		W	Phone *
WET BLUE NONE	Cooling Method:	Date: Amount:	Payment Received at Delivery:	Received by (Signature and Print Name)	Necessed by (Signature and Print Name)							70533	rix * Comments / Station Code	BW = Bothed Water DW = Drinking Water SO = Solid	Day**		Regulatory Compliance Electronic Data Transfer V V/7	Other:	_	CDHS Fresno Co EPA	1486	alohal ne	Phone * #: (831)-357-6227 FAX * #(831)-641-0734
	Packing Material:	Check/Cash/Card PIA = Init		Company	Сонъраву							\ \ \ \ \		TTH HAA DOO TOO	A5 C						CANADA CA	ANALYSIS REOLIESTED	

Sample Integrity Pg. \(\sum\_{\text{of}}\sum\_{\text{of}}\) wof

	· · · · · · · · · · · · · · · · · · ·		4		-
Date Received 0 20 1 Section 1- Receiving Information					_
Sample Transport: ONTRAG	UPS PMS	Walk-In BSK-Cou	rier GSO Fo	d Exp. Other:	
Samples arrived at lab on same da	ıy sampled: Yes	No <b>X</b> (If	Yes- Temperature	is not needed)	
Coolers/Ice Chests Description/To	emperature(s): (If:	more than 4 geceived, list inform	nation in comment section	1)	
$\frac{1}{5}$			4)		
		$ \sqrt{\sqrt{2}}$			
Was Temperature In Range Y	N N/A Re	ceived On Ice: Wex	Blue Receive	ed Ambient: <u>Y</u>	
Describe type of packing materia	ls: Bubble Wra	<u>p</u> Foam Packing	Peanuts Pape	Other:	
Initial Receipt: BSK-Visalia	BSK-Bakersfie	eld BSK-SAC	BSK-FDL (	BSK-FAL	
Were ice chest custody seals pres	sent? Y N	Intact: Y (N	- <b></b>		
Section 2- COC Info.	Completed		<u> </u>	Completed	Info From
Section 2- COC Into.	Yes No	Info From Container		Yes No	Container
Was COC Received		Analysis F			
Date Sampled		· · · · · · · · · · · · · · · · · · ·	mes less than 72hi	r –	
Time Sampled		Client Nar	ne		
Sample ID		Address			
Special Storage/Handling Ins.		Telephone	:#		<u> </u>
Section 3- Bottles / Analysis		<u> </u>	Yes	No N/A	Comment
Did all bottles arrive unbroken and	1 intact?				
Were bottle custody seals present?					
Were bottle custody seals intact?					
Did all bottle labels agree with CC	)C?	······································			
Were correct containers used for t		ed?			
Were correct preservations used for					<u> </u>
Was a sufficient amount of sample					
Were bubbles present in VOA Via					
Were Ascorbic Acid Bottles receiv		<u> </u>			
Were Assorble Acid Bothes recei	ved with the ve	·Aa:	1		
Section 4- Comments / Discrepanci	es				
Sample(s) Split/Preserve: Yes No	Container:	Preservat	tion:	Dt/Time/Init _	
	Container:	Preservat	rion:	Dt/Time/Init _	
Was Client Service Rep. notified of c		/	CSR:	Notified By:	
Explanations / Comments	nscrepancies:	res No N/A	CSK.	Nothica By.	
¢					
	<u> </u>				
P (2)					
Report Comment Entered					

Sample Integrity Pg 1 of 2 BSK Bottles Yes 4 No



250ml (A) 500ml (B) 1Liter (C) Amber Glass (AG) Container(s) Received Bacti Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None (p) White Cap None (p) Blue Cap w/NH4 + Buffer HNO<sub>3</sub> (p) Red Cap H<sub>2</sub>SO<sub>4</sub> (p) Yellow Cap NaOH (p) Green Cap Other: Dissolved Oxygen 300ml (g) Centrifuge Tube HNO3 250ml (AG) None 250ml (AG) H<sub>2</sub>SO<sub>4</sub>COD Yellow Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 515,547 Blue Label 250ml (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ MCAA 531.1 Orange Lahe 250ml (AG) NH<sub>4</sub>Cl 552 Purple Label 250ml (AG) EDA DBPs Brown Label 250ml (AG) Other: 500ml (AG) None 500ml (AG) H<sub>2</sub>SO<sub>4</sub> TPH-Diesel Yellow Label 1 Liter (AG) None 1 Liter (AG) H<sub>2</sub>SO<sub>4</sub> O&G Yellow Label 1 Liter (AG) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 548 / 525 / 521 Blue Label 1 Liter (P) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>+ H<sub>2</sub>SO<sub>4</sub> 549 1 Liter (AG) NaOH+ZnAc Sulfide 1 Liter (AG) Ascorbic/EDTA/Pot Citrate 527 Grey Label 1 Liter (AG) CuSO4/Trizma 529 furqueise Lahe 1 Liter (AG) Na<sub>2</sub>SO<sub>3</sub> / HCL 525 UCMR Neon Green Label 1 Liter (AG) Ammonium Chloride 535 Purple Label 40ml VOA Vial Clear – HCL 40ml VOA Vial Amber - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 40mł VOA Vial Clear - None 40ml VOA Vial Clear - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 504, 505 40ml VOA Vial Clear - H<sub>3</sub>PO<sub>4</sub> Other: Asbestos 1Liter Plastic/Foil Radon 200ml Clear (g) Low Level Hg/Metals Double Baggie Bioassay Jug 250 Clear Glass Jar 500 Clear Glass Jar 1 Liter Clear Glass Jar Plastic Bag Soil Tube Brass / Steel / Plastic Tedlar Bags

McCampbell Analytical, Inc	
"When Quality Counts"	

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay Analytical	Client Project ID: Pueblo, INC.	Date Sampled: 10/22/10
4 Justin Court, Suite D		Date Received: 10/27/10
4 Justin Court, Suite D	Client Contact: David Holland	Date Reported: 11/02/10
Monterey, CA 93940	Client P.O.:	Date Completed: 11/02/10

WorkOrder: 1010750

November 02, 2010

<b>D</b>	<b>D</b>		1
Dear	1 10	716	4.

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: **Pueblo, INC.,**
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

1010750

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 WILLOW PASS ROAD TURN AROUND TIME PITTSBURG, CA 94565-1701 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com ☐ GeoTracker EDF ☐ PDF □ Excel ☐ Write On (DW) Telephone: (877) 252-9262 Fax: (925) 252-9269 Report To: David Holland Bill To: Analysis Request Other Comments Company: Monterey Bay Analytical Services 'otal Petroleum Oil & Grease (1664 / 5520 E/B&F) 8015) Filter 4 Justin Ct. Suite D Samples Monterey, Ca 93940 E-Mail: 4mbas@sbcglobal.net MTBE / BTEX & TPH as Gas (602 / 8021 + 6020) for Metals CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) Tele: (831) 641 - 0734 Fax: (831) 375 - 6227 MTBE / BTEX ONLY (EPA 602 / 8021) EPA 608 / 8082 PCB's ONLY; Aroclors EPA 502.2 / 601 / 8010 / 8021 (HVOCs) 'otal Petroleum Hydrocarbons (418.1) analysis: EPA 515 / 8151 (Acidic Cl Herbicides) EPA 8270 SIM / 8310 (PAHs / PNAs) Project #: Project Name: Pueblo, INC. LUFT 5 Metals (200.7 / 200.8 / 6010 / EPA 505/608 / 8081 (CI Pesticides) Yes / No 'PH as Diesel / Motor Oil (8015) **Project Location:** Lead (200.7 / 200.8 / 6010 / 6020) EPA 507 / 8141 (NP Pesticides) EPA 524.2 / 624 / 8260 (VOCs) Sampler Signature: Marks, R. METHOD SAMPLING MATRIX Type Containers PRESERVED Containers LOCATION/ SAMPLE ID Field Point Sludge Methane Name Date HNO3 Time Other HCL Soil SMSTW 10/22/1 7:00 X gl 70533 ICE/to 10.00 Relinquished By: 10/27/102:45 Date: Time: Received By: COMMENTS: David Holland/ 10/25/10 16:00 GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Received By: Date: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

1534 Willow Pass Rd

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

	rg, CA 94565-1701					Work	Order	: 1010	750	(	ClientC	ode: M	<b>BAS</b>				
		WaterTrax	WriteOn	EDF		Excel		Fax	[	<b>✓</b> Email		Hard	Сору	Thir	rdParty	☐ J-	-flag
Report to: David Holla Monterey Ba 4 Justin Coo Monterey, C 831-375-622	ay Analytical urt, Suite D CA 93940	Email: 4 cc: PO: ProjectNo: P	mbas@sbcç ⁰ueblo, INC.	global.net			Мо 4 с	counts onterey Justin C onterey,	Bay An ourt, S	alytical uite D			Date		TAT: ived: ted:	10/27/	
Lab ID	Client ID		Motriy	Collection Date	اماط	1	2	3	Req 4		1	(See leg	1		10	11	12
1010750-001	SMSTW		Matrix Water	10/22/2010 7:00	Hola	1 A	2	3	4	5	6		8	9	10	11	12
Test Legend:																	
	174_W 2			3				4	ı				Γ	5			
6	7			8				9						10			
11	12												Prepa	red by:	: Meliss	sa Valle	es

### **Comments:**

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

# **Sample Receipt Checklist**

Client Name:	Monterey Bay Analytic	al		Date a	and Time Received:	10/27/2010	3:35:06 PM
Project Name:	Pueblo, INC.			Check	dist completed and	reviewed by:	Melissa Valles
WorkOrder N°:	<b>1010750</b> Matrix	<u>Water</u>		Carrie	er: <u>UPS</u>		
		Chain of (	Custody (	COC) Informa	ation		
Chain of custody	present?	Ye	es 🗸	No 🗆			
Chain of custody	signed when relinquished ar	nd received? Ye	es 🔽	No 🗆			
Chain of custody	agrees with sample labels?	Ye	es 🗸	No 🗌			
Sample IDs noted	by Client on COC?	Ye	es 🗸	No 🗆			
Date and Time of	collection noted by Client on C	COC? Ye	es 🔽	No 🗆			
Sampler's name r	noted on COC?	Ye	es 🔽	No 🗆			
		Samp	ole Receip	t Information	<u>l</u>		
Custody seals int	tact on shipping container/coo	oler? Ye	es 🗆	No $\square$		NA 🗹	
Shipping containe	er/cooler in good condition?	Ye	es 🔽	No 🗆			
Samples in prope	er containers/bottles?	Ye	es 🔽	No 🗆			
Sample containe	rs intact?	Ye	es 🗸	No 🗆			
Sufficient sample	e volume for indicated test?	Ye	es 🗸	No 🗌			
	<u>S</u> :	ample Preservat	ion and H	old Time (HT	) Information		
All samples recei	ived within holding time?	Ye	es 🗸	No 🗌			
Container/Temp B	Blank temperature	Co	oler Temp:	10.8°C		NA $\square$	
Water - VOA vial	ls have zero headspace / no	bubbles? Ye	es 🔽	No 🗆	No VOA vials subr	mitted $\square$	
Sample labels ch	necked for correct preservation	n? Ye	es 🗸	No 🗌			
Metal - pH accep	table upon receipt (pH<2)?	Ye	es 🗆	No 🗆		NA 🗹	
Samples Receive	ed on Ice?	Ye		No 🗆			
		(Ice Type: I	BLUE ICE	)			
* NOTE: If the "N	No" box is checked, see com	ments below.					
	=======		-===				======
Client contacted:		Date contacted:			Contacte	d by:	
Comments:							

**DHS ELAP Certification 1644** 

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

Monterey Bay	y Analytical	Client Projec	ct ID: Pueblo, INC.	Date Sampled: 10/22/10						
4 Justin Court	Suite D			Date Rece	eived:	10/27/10				
. v usum coun	, 2 4114 2	Client Cont	act: David Holland	Date Extr	acted:	11/01/10				
Monterey, CA	93940	Client P.O.:		Date Ana	lyzed	11/01/10				
			Gas Hydrocarbons*							
Extraction method		T T	alytical methods RSK174/175	1		Work Order:	1010750			
Lab ID	Client ID	Matrix	Methane		DF	% SS	Comments			
1010750-001A	SMSTW	W	ND		1	N/A				
	orting Limit for DF =1; neans not detected at or	W	0.4			μg/L				
abo	ve the reporting limit	S	NA			NA				
	are reported in µg/L. ecovery of Surrogate Standard									



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### QC SUMMARY REPORT FOR RSK174/175

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 53933 WorkOrder 1010750

EPA Method RSK174/175	Spiked Sample ID: N/A											
Analyte	Sample Spiked MS MSD MS-MSD I				LCS	LCSD	LCS-LCSD Acceptance Criteria (%				,	
, way to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Methane	N/A	1.17	N/A	N/A	N/A	94.9	95.2	0.352	N/A	N/A	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 53933 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010750-001A	10/22/10 7:00 AM	1 11/01/10	11/01/10 6:15 PM				

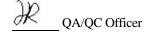
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



# **Geochronology and Isotopic Geochemistry**

Work Order No.: **A10-7796** Date: **December 2, 2010** 

Customer: Monterey Bay Analytical Services

Project name:

Number of samples: 1

Sample type: water

Analytical works: Sr analysis by TIMS

Contact person: **David Holland** 

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### **CERTIFIED BY:**

Dr. Yakov Kapusta

Geochronology and Isotopic Geochemistry

**General Manager** 

# I. Sr Isotope analysis

### II. Sr Isotope analysis

Rb and Sr were separated using conventional cation-exchange techniques. The analysis was performed on multi-collector mass-spectrometer (TIMS) in static mode.

Sample	<sup>87</sup> Sr/ <sup>86</sup> Sr	+/-2s
SMSTW	0.709085	0.000010

Long term reproducibility of NBS-987: 0.710238±0.000018



## AMERICAN WATER WORKS SERVICE COMPANY, INC.

Central Laboratory -1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility ID:

Site ID: 2710004-048

Date of Report: 07/15/10

Drinking Water Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location

PARALTA WELL

Sample Type RAW

Collection Date: 07/08/10

CollectionTime: 13:35

Received Date:

07/09/10

Received Time: 09:00

SDG: 791029

Received Temp:

3°C

**Case Narrative:** 

Results are at or above the reporting limit for the following analytes:

**BROMODICHLOROMETHANE** 

CHLORODIBROMOMETHANE

CHLOROFORM

TOTAL HAA (5) Result: 0 TOTAL THM Result: 8.1

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Technical Director or Designee

703 10070041 **COC and Report Number**  Starting Sample: CP61997

Page 1 of 2

# **Report Details**

				•						
Semple Number: CP61997	A!!e	A b ?	01		Manantina					
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
DIBROMOACETIC ACID	*:	SM6251BMOD	82721		1.0	ND	ug/L	BC	07/14/10	20:34
DICHLOROACETIC ACID	•	SM6251BMOD	77288		1.0	ND	ug/L	BC	07/14/10	20:34
MONOBROMOACETIC ACID		SM6251BMOD	A-041		1.0	ND	ug/L	BC	07/14/10	20:34
MONOCHLOROACETIC ACID		SM6251BMOD			1.0	ND	ug/L	BC	07/14/10	20:34
TRICHLOROACETIC ACID		SM6251BMOD			1.0	ND	ug/L	BC	07/14/10	20:34
HAA5 TOTAL		SM6251BMOD	A-049	60	1.0	ND	ug/L	8C	07/14/10	20:34
Sample Number: CP61997										
Unregulated Haloacetic	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOCHLOROACETIC ACID		SM6251BMOD	A-038		1.0	ND	ug/L	ВС	07/14/10	20:34
Sample Number: CP62000										
Trihalomethanes	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOFORM		502.2R2.1	32104		0.5	ŅD	ug/L	CRK	07/10/10	00:02
BROMODICHLOROMETHANE		502.2R2.1	<b>321</b> 01		0.5	2.5	ug/L	CRK	07/10/10	00:02
CHLORODIBROMOMETHANE	•	502.2R2.1	32105		0.5	0.7	ug/L	CRK	07/10/10	00:02
CHLOROFORM		502.2R2.1	32106		0.5	4.9	ug/L	CRK	07/10/10	00:02
TOTAL TRIHALOMETHANES		502.2R2.1	82080	80	0.5	8.1	ug/L	CRK	07/10/10	00:02



703 CA 10070041 COC and Report Number

Starting Sample: CP61997 Page 2 of 2



### AMERICAN WATER WORKS SERVICE COMPANY, INC.

Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# Inorganic Chemical (IOC)Analysis Report

CALIFORNIA-AMERICAN WATER CO

PWS ID: CA2710004

Date of Report: 07/15/10

MONTEREY DISTRICT

County: MONTEREY

Drinking Water Certification No.: 01161CA

LESLIE JORDAN

Facility:

Federal Lab ID No.: IL00028

PO BOX 951

Site ID: 2710004-048

MONTEREY CA 93942-0951

**Report Summary** 

Location PARALTA WELL

Collection Date: 07/08/10

Received Date: 07/09/10

Sample Type RAW

CollectionTime: 13:35

SDG: 791029

Received Time: 09:00

Received Temp: 3 °C

Case Narrative:

Results are at or above the reporting limit for the following analytes:

**ARSENIC** 

SELENIUM

MOLYBDENUM

MANGANESE

BARIUM

**STRONTIUM** 

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Technical Director or Designee

10040544

**COC and Report Number** 

Starting Sample: CP30349

Page 1 of 2



# **Report Details**

Sample Number:	CP30349										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL.	Reporting Limit	Result	Unit	Analyst	Analysis Date	a / Time
IRON			200.7R4.4	01045	0.3(s)	0.06	ND	mg/L	LG	07/12/10	13:12
STRONTIUM			200.7R4.4			0.050	0.296	mg/L	LG	07/12/10	13:12
Sample Number:	CP30349										
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	a / Time
ARSENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LG	07/13/10	13:28
SELENIUM			200.8R5.4		0.05	0.002	0.003	mg/L	LG	07/13/10	13:28
BARIUM			200.8R5,4	01007	1	0.001	0.051	mg/L	LG	07/12/10	12:35
MANGANESE			200.8R5.4	01055	0.05(s)	0.010	0.023	mg/L	LG	07/12/10	12:35
ZINC			200.8R5.4	01092	5.0(s)	0.050	ND	mg/L	LG	07/12/10	12:35
MOLYBDENUM			200.8R5.4	01062		0.001	0.009	mg/L	LG	07/12/10	12:35
VANADIUM			200.8R5.4	01087		0.050	ND	mg/L	LG	07/12/10	12:35

CA 703

10040544

COC and Report Number

Starting Sample: CP30349

Page 2 of 2



### AMERICAN WATER WORKS SERVICE COMPANY, INC.

Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESUE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility ID:

Site ID: 2710004-048

Date of Report: 12/03/10

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

PARATTA WELL

RAW

Sample Type

Location

Collection Date: 11/09/10

CollectionTime: 13:30

SDG: 11121015

Received Date: 11/12/10

Received Time: 09:00

Received Temp: 6 °C

Case Narrative:

Results are at or above the reporting limit for the following analytes:

MONOCHLOROACETIC ACID

**BROMODICHLOROMETHANE** 

CHLOROFORM

TOTAL HAA (5) Result: 1.2

TOTAL THM Result: 5.2

Revised report to correct DV Code per utility request

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Technical Director or Designee

703

10080215

**COC** and Report Number

**REVISED** 12/3/2010 Starting Sample: CP69671

Page 1 of 2

# **Report Details**

Sample Number: CP69671										
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date /	Time
DIBROMOACETIC ACID	;	SM6251BMOD	82721		1.0	ND	ug/L	KAY	11/18/10	03:21
DICHLOROACETIC ACID	;	SM6251BMOD	77288		1.0	ND	ug/L	KAY	11/18/10	03:21
MONOBROMOACETIC ACID	,	SM6251BMOD	A-041		1.0	ND	ug/L	KAY	11/18/10	03:21
MONOCHLOROACETIC ACI	D :	SM6251BMOD			1.0	1.2	ug/L	KAY	11/18/10	03:21
TRICHLOROACETIC ACID	;	SM6251BMOD			1.0	ND	ug/L	KAY	11/18/10	03:21
HAA5 TOTAL	;	SM6251BMOD	A-049	60	1,0	1.2	ug/L	KAY	11/18/10	03:21
Sample Number: CP69671										
	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	' Time <sup>'</sup>
Unregulated Haloacetic		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		MINE		Nesuit	Ç ilit	, ilianj ot	riidiyolo dato .	
Acids BROMOCHLOROACETIC ACID		SM6251BMOD	A-038	MOL	1.0	ND	ug/L	KAY	11/18/10	03:21
Acids Bromochloroacetic	;			MOL	1.0		-	•	·	
Acids BROMOCHLOROACETIC ACID	;			MCL	1.0  Reporting Limit		-	•	·	03:21
Acids BROMOCHLOROACETIC ACID  Sample Number: CP69674	Qualifier	SM6251BMOD  Analysis	A-038		Reporting	ND	ug/L	KAY	11/18/10	03:21
Acids BROMOCHLOROACETIC ACID  Sample Number: CP69674  Trihalomethanes	Qualifier Code	SM6251BMOD  Analysis Method	A-038 State Code		Reporting Limit	ND Result	ug/L Unit	KAY Analyst	11/18/10 Analysis Date	03:21 Time
Acids BROMOCHLOROACETIC ACID  Sample Number: CP69674  Trihalomethanes BROMOFORM	Qualifier Code	SM6251BMOD  Analysis Method 502.2R2.1	A-038 State Code 32104		Reporting Limit 0.5	ND Result ND	ug/L Unit ug/L	KAY  Analyst TD	11/18/10  Analysis Date / 11/13/10	03:21 Time 02:43
Acids BROMOCHLOROACETIC ACID  Sample Number: CP69674  Trihalomethanes BROMOFORM BROMODICHLOROMETHAN	Qualifier Code	SM6251BMOD  Analysis Method  502.2R2.1	A-038  State Code 32104 32101		Reporting Limit 0.5 0.5	Result ND 1.1	ug/L Unit ug/L ug/L	KAY  Analyst TD TD	11/18/10  Analysis Date / 11/13/10 11/13/10	03:21 Time 02:43 02:43

CA 10080215 CQC and Report Number

Starting Sample: CP69671 Page 2 of 2

**REVISED** 12/3/2010



### AMERICAN WATER WORKS SERVICE COMPANY, INC.

Central Laboratory -1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# Inorganic Chemical (IOC) Analysis Report

CALIFORNIA-AMERICAN WATER CO

PWS ID: CA2710004

Date of Report: 11/19/10

MONTEREY DISTRICT

Drinking Water Certification No.: 01161CA

LESLIE JORDAN

County: MONTEREY

Facility:

Federal Lab ID No.: IL00028

PO BOX 951

Site ID: 2710004-048

MONTEREY CA 93942-0951

Report Summary

Location

PARALTA WELL

Collection Date: 11/09/10

Received Date: 11/12/10

Sample Type RAW

CollectionTime: 13:30

Received Time: 09:00

SDG: 11121014

Received Temp: 13 °C

### Case Narrative:

Results are at or above the reporting limit for the following analytes:

ARSENIC

SELENIUM

MOLYBDENUM

MANGANESE

**BARIUM** 

STRONTIUM

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Technical Director or Designee

CA 703 10080990 **GOC and Report Number**  Starting Sample: CP71786

Page 1 of 2

Sample Number:	CP71786										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	o / Time
IRON			200.7R4.4	01045	0.3(8)	0.06	ND	mg/L	JLG	11/15/10	12:50
STRONTIUM			200.7R4.4			0.050	0.313	mg/L	JLG	11/15/10	12:50
Sample Number:	CP71786										
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
ARSENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LKR	11/18/10	13:54
BARIUM			200.8R5.4	01007	1	0.001	0.053	mg/L	LKR	11/18/10	13:54
MANGANESE			200.8R5.4	01055	0.05(s)	0.010	0.026	mg/L	LKR	11/18/10	13:54
SELENIUM			200.8R5.4	01147	0.05	0.002	0.003	mg/L	LKR	11/18/10	13:54
ZINC			200.8R5.4	01092	5.0(s)	0.050	ND	mg/L	LKR	11/18/10	13:54
MOLYBDENUM			200.8R5.4	01062		0.001	0.006	mg/L	LKR	11/18/10	13:54

CA 703 10080990 COC and Report Number Starting Sample: CP71786

Page 2 of 2





Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net **ELAP Certification Number: 2385** 

Page 1 of 1

Thursday, August 12, 2010

Lab Number: AA67417

Collection Date/Time: 7/8/2010

10:35

Sample Collector:

JACOBSON S

Submittal Date/Time: 7/8/2010

14:11

Sample ID

Sample Description: Ord Grove Well 02										
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed			
Chloramines	SM4500-CI G	mg/L	Not detected	di di	0.05		7/8/2010			
Chlorine Residual (Field Test)	4500-Cl G	mg/L	0.04		0.05	2.00	7/8/2010			
Dissolved Oxygen	4500-O G	mg/L	6.00		0.5		7/8/2010			
Lithium	EPA200.8	ug/L	17		1		8/3/2010			
Methane	EPA174/175	ug/L	1.0	E	5		7/22/2010			

Sample Comments:

Lab Number: AA67418

Collection Date/Time: 7/8/2010

13:35

Sample Collector:

JACOBSON S

Submittal Date/Time: 7/8/2010

14:11

Sample ID

Sample Description: Paralta Well									
Analyte	Method	Unit	Result Qua	il PQL	MCL	Date Analyzed			
Chloramines	SM4500-CI G	mg/L	Not detected	0.05		7/8/2010			
Chlorine Residual (Field Test)	4500-CI G	mg/L	0.05	0.05	2.00	7/8/2010			
Dissolved Oxygen	4500-O G	mg/L	6.70	0.5		7/8/2010			
Lithium	EPA200.8	ug/L	21	1		8/3/2010			
Methane	EPA174/175	ug/L	0.69 E	5		7/22/2010			

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



**Certificate of Analysis** 

Report Issue Date: 8/13/2010 14:46

Received Date: 07/15/2010

Received Time: 09:00

Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951

Lab Sample ID:

A0G1095-02

Sample Date:

07/08/2010 13:35

Sample Type:

Grab

Sampled by: Susy Jacobson

Matrix: Ground Water

Sample Description: Paralta Well

### **Metals**

Analyte	Method	Result	RL	Units	Dil.	Batch	Prepared	Analyzed	Qualifiers
*Uranium	EPA 200.8	ND	1.0	ug/L	1	A006346	07/26/10	07/26/10	
*Uranium, Radiological		< 0.67		pCi/L					

### Radiological

Analyte	Method	Result	Units	MDA	Batch	Prepared	Analyzed	Qualifiers	
*Gross Alpha	EPA 00-02	2.65	pCi/L	2.41	A006333	07/26/10	07/26/10		
*1 65 Sigma Uncertainty		0.290	+						



Pace Analytical Services, Inc. 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

### **ANALYTICAL RESULTS**

Project:

A0G1095

Pace Project No.:

3031484

Sample: A0G1095-01/Ord Grove

Well 02

Lab ID: 3031484001

Collected: 07/08/10 10:35 Received: 07/26/10 10:00 Matrix: Drinking Water

PWS:

Site ID:

Sample Type:

Parameters Method Act ± Unc (MDC) Units Analyzed CAS No. Qual EPA 903.1 Radium-226 1.91 ± 0.718 (0.484) pCi/L 08/05/10 10:59 13982-63-3 EPA 904.0 Radium-228 08/11/10 12:17 15262-20-1 1.35 ± 0.486 (0.853) pCi/L

Sample: A0G1095-02/Paralta Well

Parameters

Lab ID: 3031484002

PWS:

Collected: 07/08/10 13:35 Received: 07/26/10 10:00 Matrix: Drinking Water

Site ID:

Method

Sample Type:

Act ± Unc (MDC) Units

CAS No. Analyzed

Radium-226 Radium-228 EPA 903.1 EPA 904.0 2.03 ± 0.733 (0.677)

pCi/L

08/05/10 10:59 13982-63-3

2.01 ± 0.513 (0.811)

pCi/L

08/11/10 12:18 15262-20-1

Date: 08/13/2010 10:42 AM

REPORT OF LABORATORY ANALYSIS

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Page 5 of 8



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### **ANALYTICAL RESULTS**

Project:

A0K0907

Pace Project No.:

3037757

Sample: A0K0907-01/Ord Grove Well 02

Lab ID: 3037757001

Collected: 11/09/10 13:00 Received: 11/23/10 10:00

Matrix: Drinking Water

PWS:

Site ID:

Sample Type:

Parameters

Method

Act ± Unc (MDC) 3.14 ± 0.938 (0.198)

Units pCi/L

Analyzed 12/09/10 13:22 13982-63-3

CAS No. Qual

Sample: A0K0907-02/Paralta Well

**Parameters** 

Lab ID: 3037757002

Method

Collected: 11/09/10 13:30 Received: 11/23/10 10:00

Units

Matrix: Drinking Water

PWS:

Radium-226

Site ID:

EPA 903.1

Sample Type:

Act ± Unc (MDC)

Analyzed

CAS No.

Qual

Radium-226

EPA 903.1

1.12 ± 0.639 (0.694)

pCi/L

12/09/10 13:22 13982-63-3

Date: 12/15/2010 03:01 PM

REPORT OF LABORATORY ANALYSIS

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Page 5 of 7

### RADIOACTIVITY ANALYSIS (9/99)

Date of Report: 10/12/15 Sample ID No.3037757002/K0907-02

Laboratory Signature Lab

Name: PACE ANALYTICAL SERVICES, INC-GREENSBURG Director: Curl mulu eme palate

Name of Sampler: Susy Jacobson Employed By: CA American Water

Date/Time Sample Date/Time Sample Date Analyses

Collected: 10/11/09/1300 Received @ Lab:10/11/23/1000 Completed: 10/12/09 

System System

Name: CAL AM WATER COMPANY - MONTEREY Number: 2710004

Name or Number of Sample Source: PARALTA WELL - RAW

\*

User ID: HEN Station Number: 2710004-048

Date/Time of Sample: |10|11|09|1300| Laboratory Code: 0010 \*

YY MM DD TTTT YY MM DD \*

Date Analysis completed: |10|12|09| \* Submitted by:\_

Phone #:

MCL REPORT UNITS	CHEMICAL	STORET   CODE	-	ANALYSES RESULTS		DLR
pCi/L pCi/L	TITLE 22 CALIFORNIA CODE OF REGULATIONS SECTION 64442 (22 CCR 64442)		1			
pCi/L	Gross Alpha Gross Alpha Counting Error Gross Alpha MDA95 *	01501 01502 A-072	1			3.0
	Uranium Uranium Counting Error Uranium MDA95	28012 A-028 A-073	i			1.0
pCi/L	Radium 226 Radium 226 Counting Error Radium 226 MDA95	09501 09502 A-074	ĺ	1.12 0.639	2.5	1.0
pCi/L	Radium 228 Radium 228 Counting Error Radium 228 MDA95	11501 11502 A-075	i		   	1.0
pCi/L	Ra 226 + Ra 228, Combined Ra 226 + Ra 228 Counting Error, Combined Ra 226 + Ra 229 MDA95, Combined	11503 11504 A-076	Ì			
pCi/L	RADIUM, TOTAL, (FOR NTNC ONLY, BY 903.0)		l		l	
pCi/L	Radium, Total Radium, Total, Counting Error Radium, Total, MDA95	A-080 A-081 A-082	1		1	
0.70	TITLE 22 CALIFORNIA CODE OF REGULATIONS SECTION 64443 (22 CCR 64443)	181	l		1	
50 pCi/L	Gross Beta	03501	I	İ	ſ	4.0

	-	Gross Beta Counting Error Gross Beta MDA95	03502 A-077			
4	pCi/L	Gross Beta, Calculated Dose Equivalent *	A-071	1	İ	
8	pCi/L	Strontium 90 Strontium 90 Counting Error Strontium 90 MDA95	13501 13502 A-078		} }	2.0
20000	pCi/L	Trilium Tritium Counting Error Tritium MDA95	07000 07001 A-079	i	1.   	000
	pCi/L	RADON		1 ,	1	
	•	Radon 222 Radon 222 Counting Error	82303 82302	•	1	00.00
	pCi/L pCi/L pCi/L pCi/L	*MDA95 is Minimum Detectable Activity at the 95% confidence level, per 22 CCR 64442 and 64443. **Gross Beta, Calculated Total Body or Organ Dose Equivalent, Per 22 CCR 64443				

# **BSK Analytical Laboratories**

EDT

Date of Report:

10|12|17|1229

Sample ID No.:

A0K0907-02

**Laboratory Name:** 

**BSK Analytical Laboratories** 

Signature Lab Director:

Jeks J. Frelayn

Name of Sampler: Date/Time Sample Susy Jacobson

**Date/Time Sample** 

Completed:

**Date Analyses** 10|11|22

Collected:

User ID:

10|11|09|1330

Received @ Lab:

10|11|12|0745

System Number:

2710004

HEN

System Name: CAL AM WATER COMPANY - MONTEREY

Name or Number of Sample Source:

PARALTA WELL - RAW

**Station Number:** 

2710004-048

10|11|09|1330

**Laboratory Code:** 

5810

Date/Time of Sample:

Submitted by: BSK Analytical Laboratories

Date Analyses Completed: 10|11|22

Phone #: 559-497-2888

MCL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR						
Title 22 California Code of Regulations, Section 64442 (22 CCR 64442)											
15	pCi/L	Gross Alpha	01501	5.96	3.0						
	pCi/L	Gross Alpha Counting Error	01502	± 0.350							
20	pCi/L	Uranium	28012	ND	1.0						



Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951

### **Certificate of Analysis**

Report Issue Date: 12/17/2010 12:30

Received Date: 11/12/2010 Received Time: 07:45

Lab Sample ID:

A0K0907-02

Client Project: ASR Bi-Annual Monitoring/Radiologicals

Sample Date:

11/09/2010 13:30

Sampled by: Susy Jacobson

Sample Type:

Grab

Matrix: Ground Water

Sample Description: Paralta Well

### Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
*Uranium	EPA 200.8	ND	1.0	ug/L	1	A011635	11/22/10	11/22/10	
*Uranium, Radiological		< 0.67		pCi/L					
Radiological							V		

Analyte	Method	Result	Units	MDA	Batch	Prepared	Analyzed	Qual
*Gross Alpha	EPA 00-02	5.96	pCi/L	1.39	A011424	11/17/10	11/18/10	
*1 65 Sigma Uncertainty		0.350	+					



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net ELAP Certification Number: 2385

Thursday, November 18, 2010

Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

Lab Number: AA70946

Lab Italibon

Collection Date/Time: 11/9/2010 13:30

Sample Collector:

JACOBSON, S

Submittal Date/Time: 11/9/2010 14:15 Sample ID

Sample	Description	: Paralta Well
Samue	: Describilion	. Palaita Well

Analyte	Method	Unit	<b>Result</b> Qual	PQL	MCL Date Analyzed
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05	11/9/2010
Dissolved Oxygen	4500-O G	mg/L	5.90	0.5	11/9/2010
Lithium	EPA200.8	ug/L	30	1	11/12/2010
Methane	EPA174/175	ug/L	1.4 E	5	11/15/2010

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility ID:

Site ID: 2710004-024

Date of Report: 07/15/10

Drinking Water Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location

ORD GROVE WELL 02

Sample Type

Collection Date: 07/08/10

CollectionTime: 10:35 SDG: 791029

Received Date: 07/09/10 Received Time: 09:00

Received Temp: 3°C

**Case Narrative:** 

TOTAL HAA (5) Result: 0

TOTAL THM Result: 0

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Technical Director or Designee

703 10070042 COC and Report Number

Starting Sample: CP62003

Sample Number: CP62003										
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
DIBROMOACETIC ACID		SM6251BMOD	82721		1.0	ND	ug/L	BC	07/14/10	21:13
DICHLOROACETIC ACID		SM6251BMOD	77288		1.0	ND	ug/L	BC	07/14/10	21:13
MONOBROMOACETIC ACID		SM6251BMOD	A-041		1.0	ND	ug/L	BC	07/14/10	21:13
MONOCHLOROACETIC ACID	)	SM6251BMOD			1.0	ND	ug/L	BC	07/14/10	21:13
TRICHLOROACETIC ACID		SM6251BMOD			1.0	ND	ug/L	BC	07/14/10	21:13
HAA5 TOTAL		SM6251BMOD	A-049	60	1.0	ND	ug/L	ВС	07/14/10	21:13
Sample Number: CP62003										
Unregulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOCHLOROAGETIC ACID		SM6251BMOD	A-038		1.0	ND	ug/L	BC	07/14/10	21:13
Sample Number: CP62006								•		
Trihalomethanes	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOFORM		502.2R2.1	32104		0.5	ND	ug/L	CRK	07/09/10	22:06
BROMODICHLOROMETHANS	<u> </u>	502.2R2.1	32101		0.5	ND	ug/L	CRK	07/09/10	22:06
CHLORODIBROMOMETHANE	<u> </u>	502.2R2,1	32105		0.5	ND	ug/L	CRK	07/09/10	22:06
CHLOROFORM		502.2R2.1	32106		0.5	ND	ug/L	CRK	07/09/10	22:06
TOTAL TRIHALOMETHANES		502.2R2.1	82080	80	0.5	ND	ug/L	CRK	07/09/10	22:06



703 CA 10070042 COC and Report Number Starting Sample: CP62003 Page 2 of 2



Central Laboratory -1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# Inorganic Chemical (IOC)Analysis Report

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report: 07/15/10

Drinking Water Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location ORD GROVE WELL 02

Sample Type RAW

Collection Date: 07/08/10

CollectionTime: 10:35

SDG: 791029

Received Date: 07/09/10 Received Time: 09:00

Received Temp: 3 °C

Case Narrative:

Results are at or above the reporting limit for the following analytes:

ARSENIC

**SELENIUM** 

BARIUM

MOLYBDENUM

MANGANESE

**STRONTIUM** 

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Technical Director or Designee

10040543 **COC** and Report Number

Starting Sample: CP30348

Sampie Number:	CP30348										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
IRON			200.7R4.4	01045	0.3(s)	0.06	ND	mg/L	LG	07/12/10	13:07
STRONTIUM			200.7R4.4			0.050	0.362	mg/L	LĢ	07/12/10	13:07
Sample Number:	CP30348										
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL.	Reporting Limit	Result	Unit	Analyst	Analysis Date	a / Time
ARSENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LG	07/13/10	13:24
SELENIUM			200.8R5.4		0.05	0.002	0.006	mg/L	LG	07/13/10	13:24
BARIUM			200.8R5.4	01007	1	0.001	0.053	mg/L	LG	07/12/10	12:32
MANGANESE			200.8R5.4	01055	0.05(s)	0.010	0.018	mg/L	LG	07/12/10	12:32
ZINC			200.8R5.4	01092	5.0(s)	0.050	ND	mg/L	LG	07/12/10	12:32
MOLYBDENUM			200.8R5.4	01062		0.001	0.006	mg/L	LG	07/12/10	12:32
VANADIUM			200.8R5.4	01087		0.050	ND	mg/L	LG	07/12/10	12:32



CA 703

10040543

COC and Report Number

Starting Sample: CP30348

Page 2 of 2



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102

Phone: (618)235-3600 - Fax: (618)235-6349



# **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility ID:

Site ID: 2710004-024

Date of Report: 12/03/10 ·

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

Report Summary

Location

ORD GROVE WELL 02

Sample Type

Collection Date: 11/09/10

CollectionTime: 13:00

Received Date:

11/12/10

Received Time: 09:00

6°C

SDG: 11121015

Received Temp:

### Case Narrative:

Results are at or above the reporting limit for the following analytes:

MONOCHLOROACETIC ACID

TOTAL HAA (5) Result: 1.8

TOTAL THM Result: 0

Revised report to correct DV Code per utility request

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Technical Director or Designee

703

10080195

COC and Report Number

REVISED 12/3/2010 Starting Sample: CP69594

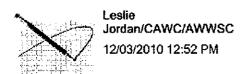


Sample Number: CP69594										
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
DIBROMOACETIC ACID		SM6251BMOD	82721		1.0	ND	ug/L	KAY	11/18/10	02:41
DICHLOROACETIC ACID		SM6251BMOD	77288		1.0	ND	ug/L	KAY	11/18/10	02:41
MONOBROMOACETIC ACIE	)	SM6251BMOD	A-041		1.0	ND	ug/L	KAY	11/18/10	02:41
MONOCHLOROACETIC ACI	D	SM6251BMOD			1.0	1.8	ug/L	KAY	11/18/10	02:41
TRICHLOROACETIC ACID		SM6251BMOD			1.0	ND	ug/L	KAY	11/18/10	02:41
HAA5 TOTAL		SM6251BMOD	A-049	60	1.0	1.8	ug/L	KAY	11/18/10	02:41,
Sample Number: CP69594										
11 1 4 11 10 10 10 10 10 10 10 10 10 10 10 10	Qualifier Code	Analysis Method	State Code		Reporting Limit	F1	1 Imia	Analyst	Analysis Date	/ Time
Unregulated Haloacetic	0000	metrica	0006	MCL	W-111111	Result	Unit	Analysi	Milalysis Date	, tille
Acids										
BROMOCHLOROACETIC ACID		SM6251BMOD	A-038		1.0	ND	ug/L	KAY	11/18/10	02:41
BROMOCHLOROACETIC		SM6251BMOD	A-038		1.0	ND	ug/L	КАҮ	11/18/10	02:41
BROMOCHLOROACETIC ACID		SM6251BMOD  Analysis Method	A-038 State Code	MCL	1.0  Reporting Limit	ND Result	ug/L Unit	KAY Analyst	11/18/10 Analysis Date	•
BROMOCHLOROACETIC ACID  Sample Number: CP69598	Qualifier	Analysis	State	MCL	Reporting					•
BROMOCHLOROACETIC ACID  Sample Number: CP69598  Trihalomethanes	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
BROMOCHLOROACETIC ACID  Sample Number: CP69598  Trihalomethanes BROMOFORM	Qualifier Code	Analysis Method 502.2R2.1	State Code 32104	MCL	Reporting Limit 0.5	Result NO	Unit ug/L	Analyst TD	Analysis Date 11/12/10	/ Time 23:35
BROMOCHLOROACETIC ACID  Sample Number: CP69598  Trihalomethanes BROMOFORM BROMODICHLOROMETHAN	Qualifier Code	Analysis Method 502.2R2.1 502.2R2.1	State Code 32104 32101	MCL	Reporting Limit 0.5 0.5	Result ND ND	Unit ug/L มg/L	Analyst TD TD	Analysis Date 11/12/10 11/12/10	/ Time 23:35 23:35



703 CA 10080195 COC and Report Number

**REVISED** 12/3/2010 Starting Sample: CP69594 Page 2 of 2



To Alyssa A Webb/SERVCO/AWWSC@AWW

CC

bcc

Subject November monitoring

### Alyssa

Can you please change the DVCode on a couple of samples?

Chain of Custody	y Sample Location	Sample Date	Starting Sample	DVCode in
Powerflow 10080195	Actual DVCode Ord Grove Well 02	11/09/2010	CP69594	714
703	Paralta Well	11/09/2010	CP69671	714
10080215 703	raiaita vveii	11/09/2010	QF 0307 1	

## Thank you

### Leslie

Leslie Q. Jordan, Water Quality Superintendent California American Water Central Division leslie.jordan@amwater.com 1-831-646-3258 (desk) 1-831-236-7533 (cell) 1-831-375-4367 (fax)



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fex: (618)235-6349



# Inorganic Chemical (IOC)Analysis Report

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report: 11/19/10

Drinking Water Certification No.: 01161CA

Federal Lab ID No.: IL00028

Report Summary

Location

ORD GROVE WELL 02

Sample Type

RAW

Collection Date: 11/09/10 CollectionTime: 13:00

SDG: 11121014

Received Time: 09:00

Received Date: 11/12/10

Received Temp: 13 °C

Case Narrative:

Results are at or above the reporting limit for the following analytes:

ARSENIC

SELENIUM **BARIUM** 

MOLYBDENUM

**MANGANESE** 

**STRONTIUM** 

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Technical Director or Designee

703 CA 10080989 COC and Report Number

Starting Sample: CP71785

<u>Sample Number:</u>	CP71785										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
IRON			200.7R4.4	01045	0.3(s)	0.06	ND	mg/L	JLG	11/15/10	12:46
STRONTIUM			200.7R4.4			0.050	0.370	mg/L	JLG	11/15/10	12:46
Sample Number:	CP71785										
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	) / Time
ARŞENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LKR	11/18/10	\3.50
BARIUM			200.8R5.4	01007	1	0.001	0.052	mg/L	LKR	11/18/10	13:50
MANGANESE			200.8R5.4	01055	0.05(8)	0.010	0.018	mg/L	LKR	11/18/10	13:50
SELENIUM			200.8R5.4	01147	0.05	0.002	0.007	mg/L	LKR	11/18/10	13:50
ZINC			200.8R5.4	01092	5.0(s)	0.050	ND	mg/L	LKR	11/18/10	13:50
MOLYBDENUM			200.8R5.4	01062		0.001	0.006	mg/L	LKR	11/18/10	13:50
VANADIUM			200,8R5,4	01087		0.050	ND	mg/L	LKR	11/18/10	13:50

CA 703
10080989
COC and Report Number

Starting Sample: CP71785

Page 2 of 2



Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS montereybayanalytical@usa.net

**ELAP Certification Number: 2385** 

Page 1 of 1

Thursday, August 12, 2010

Lab Number: AA67417

Submittal Date/Time: 7/8/2010

Collection Date/Time: 7/8/2010

10:35 14:11

Sample Collector:

JACOBSON S

Sample ID

· · · · · · · · · · · · · · · · · · ·	Sample De	scription	: Ord Grove W	/ell 02			
Analyte	Method	Unit	Result	Qual	PQL	MCL	Date Analyzed
Chloramines	SM4500-CI G	mg/L	Not detected	1	0,05		7/8/2010
Chlorine Residual (Field Test)	4500-CI G	mg/L	0.04		0.05	2.00	7/8/2010
Dissolved Oxygen	4500-O G	mg/L	8.00		0.5		7/8/2010
Lithium	EPA200.8	ug/L	17		1		8/3/2010
Methane	EPA174/175	ug/L	1.0	E.	5		7/22/2010

Sample Comments:

Lab Number: AA67418

Collection Date/Time: 7/8/2010 Submittal Date/Time: 7/8/2010

13:35 14:11 Sample Collector:

JACOBSON 8

Sample ID

	Sample	Descript	ion: Paralta Well			
Analyte	Method	Unit	Result Qua	ıl PQL	MCL	Date Analyzed
Chloramines	5M4500-CI G	mg/L	Not detected	0.05		7/8/2010
Chlorine Residual (Field Test)	4500-CI G	mg/L	0.06	0.05	2.00	7/8/2010
Dissolved Oxygen	4500-O G	mg/L	6.70	0.5		7/8/2010
Lithium	EPA200.8	ug/L	21	1		8/3/2010
Methane	EPA174/175	ug/L	0.89 E	5		7/22/2010

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS

montereybayanalytical@usa.net ELAP Certification Number: 2385

Thursday, November 18, 2010

Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

Lab Number: AA70945

Collection Date/Time: 11/9/2010

13:00 14:15 Sample Collector:

JACOBSON, S

Submittal Date/Time: 11/9/2010

Sample ID

Sample Description: Ord Grove Well 02								
Analyte	Method	Unit	<b>Result</b> Qual	PQL.	MCL Date Analyzed			
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05	11/9/2010			
Dissolved Oxygen	4500-O G	mg/L	7.95	0.5	11/9/2010			
Lithium	EPA200.8	ug/L	24	1	11/12/2010			
Methane	EPA174/175	ua/L	1.1 F	5	11/15/2010			

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951 **Certificate of Analysis** 

Report Issue Date: 8/13/2010 14:46 Received Date: 07/15/2010

Received Time: 09:00

07/26/10

A0G1095-01

Lab Sample ID: Sample Date:

07/08/2010 10:35

Sample Type:

Grab

Sampled by: Susy Jacobson

Matrix: Ground Water

2.41

A006333 07/26/10

Sample Description: Ord Grove Well 02

### Metals

Analyte	Method	Result	RL	Units	Dil.	Batch	Prepared	Analyzed	Qualifiers	
*Uranium *Uranium, Radiological	EPA 200.8	1.1 0.73	1.0	ug/L pCi/L	1	A006346	07/26/10	07/26/10		
Radiological										
Analyte	Method	Result		Units	MDA	Batch	Prepared	Analyzed	Qualifiers	

\*Gross Alpha EPA 00-02 pCi/L 5.30 \*1.65 Sigma Uncertainty 0.360 ±



Well 02

Pace Analytical Services, Inc. 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

### **ANALYTICAL RESULTS**

Project:

A0G1095

Pace Project No.:

3031484

Sample: A0G1095-01/Ord Grove

Lab ID: 3031484001

Collected: 07/08/10 10:35 Received: 07/26/10 10:00 Matrix: Drinking Water

PWS:

Site ID:

Sample Type:

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	1.91 ± 0.718 (0.484)	pCi/L	08/05/10 10:59	13982-63-3	
Radium-228	EPA 904.0	1.35 ± 0.486 (0.853)	pCi/L	08/11/10 12:17	15262-20-1	

Sample: A0G1095-02/Paralta Well

PWS:

Lab ID: 3031484002

Collected: 07/08/10 13:35 Received: 07/26/10 10:00 Matrix: Drinking Water

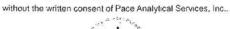
Site ID: Sample Type: **Parameters** Method Act ± Unc (MDC) Units Analyzed CAS No.

Radium-226 EPA 903.1 2.03 ± 0.733 (0.677) pCi/L 08/05/10 10:59 13982-63-3 EPA 904.0 Radium-228 2.01 ± 0.513 (0.811) pCi/L 08/11/10 12:18 15262-20-1

Date: 08/13/2010 10:42 AM

REPORT OF LABORATORY ANALYSIS This report shall not be reproduced, except in full,

Page 5 of 8







Pace Analytical Services, Inc. 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

### **ANALYTICAL RESULTS**

Project:

A0K0907

Pace Project No.:

3037757

Sample: A0K0907-01/Ord Grove Well 02

Lab ID: 3037757001

Collected: 11/09/10 13:00 Received: 11/23/10 10:00 Matrix: Drinking Water

PWS:

Site ID:

Sample Type:

Parameters

Method

Act ± Unc (MDC)

Units Analyzed CAS No. Qual

Radium-226

EPA 903.1

3.14 ± 0.938 (0.198)

pCi/L

12/09/10 13:22 13982-63-3

Sample: A0K0907-02/Paralta Well

Parameters

Lab ID: 3037757002 Site ID:

Sample Type:

Collected: 11/09/10 13:30 Received: 11/23/10 10:00 Matrix: Drinking Water

PWS:

Method

Act ± Unc (MDC)

Units

Analyzed

CAS No.

Qual

Radium-226

EPA 903.1

1.12 ± 0.639 (0.694)

pCi/L

12/09/10 13:22 13982-63-3

Date: 12/15/2010 03:01 PM

REPORT OF LABORATORY ANALYSIS

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Page 5 of 7

### RADIOACTIVITY ANALYSIS (9/99)

Date of Report: 10/12/15 Sample ID No.3037757001/K0907-01 Laboratory Signature Lab Name: PACE ANALYTICAL SERVICES, INC-GREENSBURG Director: Carla Comos for Rook 12 15/10 Name of Sampler: Susy Jacobson Employed By: CA American Water Date/Time Sample Date/Time Sample Date Analyses Collected: 10/11/09/1300 Received @ Lab:10/11/23/1000 Completed:10/12/09 \_ System Name: CAL AM WATER COMPANY - MONTEREY Number: 2710004 Name or Number of Samole Source: ORD GROVE WELL 02 - RAW User ID: HEN Station Number: 2710004-024 Date/Time of Sample: |10|11|09|1300| Laboratory Code: 0010 \* TTTT GG MM YY YY MM DD \* Date Analysis completed: |10|12|09| \* Submitted by: Phone #: \* MCL REPORT CHEMICAL | STORET | ANALYSES | DLR | UNITS CODE RESULTS | pCi/L TITLE 22 CALIFORNIA CODE OF REGULATIONS pCi/L SECTION 64442 (22 CCR 64442) 15 pCi/L Gross Alpha 01501 | 3.0 pCi/L Gross Alpha Counting Error 01502 | pCi/L Gross Alpha MDA95 \* A-072 | 20 pCi/L Uranium 28012 | 1.0 pCi/L Uranium Counting Error A-028 | pCi/L Uranium MDA95 A-073 pCi/L Radium 226 09501 | 3.14 1.0 pCi/L Radium 226 Counting Error 09502 | 0.938 | pCi/L Radium 226 MDA95 A-074 | pCi/L Radium 228 11501 1.0 pCi/L Radium 228 Counting Error 11502 I pCi/L Radium 228 MDA95 A-075 | 5 pCi/L Ra 226 + Ra 228, Combined 11503 pCi/L Ra 226 + Ra 228 Counting Error, Combined 11504 | pCi/L Ra 226 + Ra 229 MDA95, Combined A-076 | pCi/L RADIUM, TOTAL, (FOR NTNC ONLY, BY 903.0) pCi/L Radium, Total A-080 I pCi/L Radium, Total, Counting Error A-081 pCi/L Radium, Total, MDA95 A-082 | pCi/L TITLE 22 CALIFORNIA CODE OF REGULATIONS pCi/L SECTION 64443 (22 CCR 64443) 50 pCi/L Gross Beta 03501 | 4.0

		Gross Beta Counting Error Gross Beta MDA95	03502 A-077	•	1	
4	pCi/L	Gross Beta, Calculated Dose Equivalent *	A-071	1	1	
8	pCi/L	Strontium 90 Strontium 90 Counting Error Strontium 90 MDA95	13501 13502 A-078		1	2.0
20000	pCi/L	Tritium Tritium Counting Error Tritium MDA95	07000 07001 A-079			1000
	pCi/L	RADON		{	1	
	-	Radon 222 Radon 222 Counting Error	82303 82302	•	1	100.0
	pCi/L pCi/L pCi/L pCi/L	*MDA95 is Minimum Detectable Activity at the 95% confidence level, per 22 CCR 64442 and 64443. **Gross Beta, Calculated Total Body or Organ Dose Equivalent, Per 22 CCR 64443				

# **BSK Analytical Laboratories**

**EDT** 

Date of Report:

10|12|17|1229

Sample ID No.:

A0K0907-01

**Laboratory Name:** 

**BSK Analytical Laboratories** 

Signature Lab Director:

Jeff J. Frelayn

Name of Sampler:

Susy Jacobson

**Date/Time Sample** 

**Date/Time Sample** 

Received @ Lab:

10|11|12|0745

**Date Analyses** 

Completed:

10|11|22

Collected:

User ID:

10|11|09|1300

System Number:

2710004

Name or Number of Sample Source:

System Name: CAL AM WATER COMPANY - MONTEREY

ORD GROVE WELL 02 - RAW

Station Number:

2710004-024

Date/Time of Sample: 10|11|09|1300

HEN

**Laboratory Code:** 

5810

Submitted by: BSK Analytical Laboratories

**Date Analyses Completed:** 

10|11|22

Phone #: 559-497-2888

MCL	REPORTING UNITS	CHEMICAL	ENTRY #	ANALYSES RESULTS	DLR				
	Title 22 California Code of Regulations, Section 64442 (22 CCR 64442)								
15	pCi/L	Gross Alpha	01501	5.96	3.0				
	pCi/L	Gross Alpha Counting Error	01502	± 0.350					
20	pCi/L	Uranium	28012	ND	1.0				



Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951

### **Certificate of Analysis**

Report Issue Date: 12/17/2010 12:30 Received Date: 11/12/2010

Received Time: 07:45

Lab Sample ID:

A0K0907-01

11/09/2010 13:00

Sample Date: Sample Type:

Grab

Client Project: ASR Bi-Annual Monitoring/Radiologicals

Sampled by: Susy Jacobson Matrix: Ground Water

Sample Description: Ord Grove Well 02

### Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qua
Uranium	EPA 200.8	1.0	1.0	ug/L	1	A011635	11/22/10	11/22/10	
Uranium, Radiological		0.70		pCi/L					
Radiological									

Analyte	Method	Result	Units	MDA	Batch	Prepared	Analyzed	Qual
*Gross Alpha	EPA 00-02	5.96	pCi/L	1.39	A011424	11/17/10	11/18/10	
*1 65 Sigma Uncertainty		0.350	+					



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

PWS ID: CA2710004

08/02/11 Date of Report:

MONTEREY DISTRICT

County: MONTEREY

Lab Certification No.: 01161CA

LESLIE JORDAN

Facility:

PO BOX 951

Federal Lab ID No.: IL00028

Site ID: 2710004-048

MONTEREY CA 93942-0951

**Report Summary** 

Location:

PARALTA WELL

Collection Date: 07/27/11

Received Date:

Sample Type

Received Time: 09:15

07/28/11

CollectionTime: 12:00

SDG: 72811-15

Received Temp: 5 °C

### Case Narrative:

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

Results are at or above the reporting limit for the following analytes:

ARSENIC

SELENIUM

**MANGANESE** 

BORON

STRONTIUM

MAGNESIUM

CALCIUM

SODIUM

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Technical Director or Designee

CA

11072086

703

**COC and Report Number** 

Starting Sample: CS78706

Cample	Number:	CS78706

ICP Metals		Qualifier Code	Analysis Method	State Code	****	Reporting Limit	77 16	Half	Amnticat	Amalumia Data	- ( **!
					MCL		Result	Unit	•	Analysis Date	
IRON			200.7R4.4	01045	0.3(s)	0.1	ND	mg/L	LG	07/29/11	16:50
CALCIUM			200.7R4.4	00916		1	62	mg/L	LG	07/29/11	16:50
MAGNESIUM			200.7R4.4	00927		1	15	mg/L	LG	07/29/11	16:50
POTASSIUM			200.7R4.4	00937		5	ND	mg/L	LG	07/29/11	16:50
SODIUM			200.7R4.4			0.2	80.6	mg/L	LG	07/29/11	16:50
STRONTIUM			200.7R4.4			0.1	0.3	mg/L	LG	07/29/11	16:50
Sample Number:	CS78706										
00000000000		Qualifier Code	Analysis Method	State Code		Reporting Limit	<b></b>				
ICP/MS Metals		would			MCL		Result	Unit	-	Analysis Date	
ARSENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LKR	07/29/11	19:37
BARIUM			200.8R5.4	01007	1	0.1	ND	mg/L	LKR	07/29/11	19:37
MANGANESE			200.8R5.4	01055	0.05(s)	0.010	0.022	mg/L	LKR	07/29/11	19:37
NICKEL			200.8R5.4	01067	0.1	0.005	ND	mg/L	LKR	07/29/11	19:37
SELENIUM			200.8R5.4	01147	0.05	0.002	0.003	mg/L	LKR	07/29/11	19:37
ZINC			200.BR5.4	01092	5.0(s)	0.050	ND	mg/L	LKR	07/29/11	19:37
BORON			200.8R5,4	01020		0.050	0.081	mg/L	LKR	07/29/11	19:37
KAZSI SZOLOWANI IKA			200.8R5.4	01062		0.1	ND	mg/L	LKR	07/29/11	19:37
MOLYBDENUM						*					



CA 703
11072086
COC and Report Number

Starting Sample: CS78706

Page 2 of 2

Facility ID: PWSID:

CA 703

MONTEREY DISTRICT

American Water Central Laboratory 1115 South Illinois Street Belleville, IL 62220-3102 618-235-3600

# **CHAIN OF CUSTODY** # 11072086

Jul 2011

|--|



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility ID:

Site ID: 2710004-048

Date of Report: 08/03/11

Drinking Water Certification No.: 01161CA

Federal Lab ID No.: IL00028

### Report Summary

Location

PARALTA WELL

Sample Type RAW

Collection Date: 07/27/11

CollectionTime: 12:00

SDG: 72811-15

Received Date: 07/28/11

Received Time: 09:15

Received Temp: 5 °C

### Case Narrative:

Results are at or above the reporting limit for the following analytes:

BROMODICHLOROMETHANE

CHLOROFORM

TOTAL HAA (5) Result: 0

TOTAL THM Result: 9.8

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Technical Director or Designee

CA 703 11052756 **COC and Report Number** 

Starting Sample: C\$53555

Sample Number: CS53555										
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Dat	e / Time
DIBROMOACETIC ACID		552.3R1.0	82721	OL	1.0	ND	ug/L	BC	08/02/11	13:31
DICHLOROACETIC ACID		552.3R1.0	77288		1.0	ND	ug/L	BC	08/02/11	13:31
MONOBROMOACETIC ACID		552.3R1.0	A-041		1.0	ND	ug/L	ВС	08/02/11	13:31
MONOCHLOROACETIC ACIE	)	552.3R1.0			2.0	ND	ug/L	BC	08/02/11	13:31
TRICHLOROACETIC ACID		552.3R1.0			1.0	ND	ug/L	вс	08/02/11	13:31
HAA5 TOTAL		552.3R1.0	A-049	60	1.0	ND	ug/L	BC	08/02/11	13:31
Sample Number: CS53555										
	Qualifier	Analysis	State		Reporting					
Unregulated Haloacetic Acids	Code	Method	Code	MCI.	Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOCHLOROACETIC ACID		552.3R1.0	A-038		1.0	ND	ug/L	BC	08/02/11	13:31
Sample Number: CS53557										
	Qualifier	Analysis	State		Reporting					
Trihalomethanes	Code	Method	Code	MCL	Limit	Result	Unit	Analyst	Analysis Dat	e / Time
BROMOFORM		524.2R4.1	32104		0.5	ND	ug/L	CRK	07/28/11	12:35
BROMODICHLOROMETHANI	<b>=</b>	524.2R4.1	32101		0.5	2.0	ug/L	CRK	07/28/11	12:35
DIBROMOCHLOROMETHANI	Ξ	524.2R4.1	32105		0.5	ND	ug/L	CRK	07/28/11	12:35
CHLOROFORM		524.2R4.1	32106		0.5	7.8	ug/L	CRK	07/28/11	12:35
TOTAL TRIHALOMETHANES		524,2R4,1	82080	80	0.5	9.8	ug/L	CRK	07/28/11	12:35



CA 703

11052756

COC and Report Number

Starting Sample: CS53555

Page 2 of 2

PWSID: CA2710004

Facility ID:

CA 703

SCHE

Belleville, IL 62220-3102

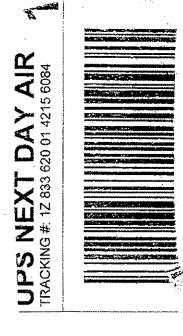
618-235-3600

Jun 2011

11052756 CHAIN OF CUSTODY#

MONTEREY DISTRICT	11052756
PRIOR TO SHIPPING - COMPLETE ALL FIELDS	FORLABUSEONLY
Location: PARALTA WELL	
ST, etc.) R	11052756
Sampler's First Initial and Last Name	Iracking #: 128336200142156084
Date Sampled 57/77/11 Time Sampled 1300 Military (24 hr) Format	Shipping Method: UPS 72811-15 Received Date: 07/28/2011 72811-15
Contact Phone # 831-646-3259	Received Time: 09:15 ULogin:NO
Contact Person SUSAN-JACOBSON/	A Company of the Comp
Relinquished by 1	
Date/Time Reling 1997 2 3 4	
For compliance perposes \$\ \mathread{\mathread{MO}}	COMMENTS: FER ES - ALVILLAR 151/2 (DISSIN 1510/ SOLAR)
CCR Report?: NO Field Chlorine Residual (2) (2) mg/L	
<b>3</b> ( ) - W	
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MANA			5 <b>1</b> 5		
S E R.V. & T. I. O. Analysis					
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FIELD PRESERVATION					
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	None None	None			N 14
	tone.	COLIE			SONE
13000	65mg Ammonium Chloride	Ammonium Chloride	Sodium Thiosulfate	Sodium Iniosultate Sodium Thiosulfate	
	hlorid	horid	Ifate	Ilfate Ifate	Ifate
ervation	nium Chic	ium C	Thiosu	hiosi Thiosi	sodium Thiosulfate
eserva	nmon	nmon	Jim.		dium
	65mg Ar	mg A	ig Sg	50 SQ 50 SQ	S gr
	65	65mg	3mg S	Smg S Smr S	6
		**			
8	552.3	552.3	524.2	524.2	5242
Meth	EPA	EPA 5523	EPA 524.2	EPA FDA	i Bi
787-541	AA 562:3			EPA 524.2 FPA 524.3	EPA 524.2
				100	
SIS					1
Analy	HAA	HAA	€ E		
O	Type	DUP HAA		DUP THIN	FBITM
oc Analysis	Sample ID # 1ype	ř			
	Sample ID#	CS53556	CS53557	CS53558	CS53560
	Sample ID	3 8	CS5355	CSS	SS
Jan 1994.	VI.	i	J	i.	لسند





Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



# Organic Carbon Analysis Report PROCESS

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-048

Date of Report:

08/03/11

Lab Certification No.:

01161CA

Federal Lab ID No.: IL00028

### **Report Summary**

Location PARALTA WELL
Sample Type RAW

Collection Date: 07/27/11
CollectionTime: 12:00

Time: 12:00 SDG: 72811-15 Received Date: 07/28/11

Received Time: 09:15

Received Temp: 5 °C

### **Case Narrative:**

Results are at or above the reporting limit for the following analytes:

TOC

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

### **Report Details**

Sample Number:

CS78710

Qualifier Analysis Code Method

ysis Sta

State Code MCL

Reporting Limit

Result

Unit

Analyst

lyst Analysis Date / Time

TOC

SM5310C

0.25

0.80

mg/L

RS

07/29/11

17:45

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Technical Director or Designee

CA 703

11072088

COC and Report Number

Starting Sample: CS78710

Facility ID: PWSID:

CA 703

MONTEREY DISTRICT

American Water Central Laboratory 1115 South Illinois Street

Belleville, 1L 62220-3102

618-235-3600

Jul 2011

# CHAIN OF CUSTODY # 11072088

ASK RI-AMMED 151/2 Chry Ling Secon Ę Received Date: 07/28/2011 72811-15
Received Time: 09:15 ULogin: NO Received by: MS Logged By TS FOR LAB USE ONLY Temperature, C: 5 128336200142156084 FORIABUS Shipping Method: UPS tab Comments: Tracking # 3かつーカタロナか :cliatis マニアの Military (24 hr) Format PRIOR TO SHIPPING - COMPLETE ALL FIELDS mg/L m ന Field Alkalinity Reading: 5 JACOL Time Sampled SUSTAN JACOBSON Sampler's First fnitial and Last Name Sample Type (RAW, EFF, DIST, etc.) 2 2 Date Sampled (FR/2F/) Contact Phone # 831-646-3259 Location: PARALTA WELL For compliance purposes State Reporting by Lab? Date/Time Reling Relinquished by Contact Person CCR Report?:

Propie Visioni	 : :			
lysis es		\$5310CTOC	\$5310CTOC	\$5310CTOC
FIELD PRESERVATION Description Date Time Initials Codes		\$531	\$531	\$531
alegiu				
je je				
TFO.N Time Initials		ve;	, e e e e e e e e e e e e e e e e e e e	1111
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ESE			45¥	
D P R				
FIELD PR			10) 24) 31	
Vation				
Preser	0.00	Vone	Yone	None
		Arrest (480)	<b>9</b>	
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Arial		700	Toc	700
2 a			DUP TOC N 12	DUP TOC
ample ID#		CS78710	CS78711	CS78712
Sample	1	CS7	CS7	CS7

SPEC-PROC

American Water Central Laboratory

1115 South Illinois Street

Belleville, IL 62220-3102 618-235-3600

Jul 2011

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	Location: PARALTA WELL	Sample Type (RAW, EFF, DIST, etc.)	Sampler's First Initial and Last Name	Date Sampled (T)	Contact Phone # 831-646-3259	Contact Person	Relinquished by	Date/Time Refind 1	For compliance purposes	State Reporting by Lab?	CCR Report?:		Sample ID #	CS78710	CS7874 USP TOC	CS78712 DUP TOC	

S7571 POHIO DIGION INFIELD



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-048

Date of Report: 08/04/11

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location:

Sample Type

PARALTA WELL

RAW

Collection Date: 07/27/11

CollectionTime: 12:00

SDG: 72811-15

Received Date: 07/28/11

Received Time: 09:15

Received Temp: 5 °C

### Case Narrative:

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

Results are at or above the reporting limit for the following analytes:

TOTAL KJELDAHL NITROGEN (TKN)

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Technical Director or Designee

703

11072082

CA

**COC and Report Number** 

Starting Sample: CS78702

MCL

CS78702 Sample Number:

> Qualifier Analysis Code Method

State Code Reporting Limit

Result Unit

Analyst Analysis Date / Time

TOTAL KJELDAHL

351.2R2.0

NITROGEN (TKN)

0.25

mg/L

RE 08/03/11

14:16

Sample Number: CS78702

Qualifier

Analysis State

Code

Reporting

Unit Analyst Analysis Date / Time

**Minerals** TOTAL PHOSPHORUS Code Method MCL.

Limit Result

08/03/11

365.4

ND

0.31

mg/L

RE

0.1

14:16



CA 11072082

COC and Report Number

703

Starting Sample: CS78702

Page 2 of 2

American Water Central Laboratory 1115 South Illinois Street

Belleville, IL 62220-3102 618-235-3600

Jul 2011

### Shipping Hermon, Jr. 28/2011 72811-15 Received Date: 07/28/2011 72811-15 Received Time: 09:15 Logged By TS Received by: MS C: 5 128335200142155084 FOR LAB USE ONLY 11072082 Temperature, 11072082 SiteID: 3子/2007 しんなど Military (24 hr) Format CHAIN OF CUSTODY# PRIOR TO SHIPPING - COMPLETE ALL FIELDS Тіте Sampled Sampler's First Initial and Last Name Sample Type (RAW, EFF, DIST, etc.) Date Sampled 57/25/11 Contact Phone # 831-646-3259 Facility ID: PWSID: Location: PARALTA WELL MONTEREY DISTRICT CA 703

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Method		365.4MO	351-2MOD
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	Sample ID #	CS78702	CS78702

COMMENTS AS ANAURY 1572 ( DOZI )

Lab Comments:

က

SLISAN JACOBSON

Contact Person Relinquished by

State Reporting by Lab For compliance pu Date/Time Reling

CCR Report?:



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC) Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-048

Date of Report: 08/04/11

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location:

PARALTA WELL

Collection Date:

07/27/11

Received Date: 07/28/11

Sample Type

RAW

CollectionTime: 12:00

Received Time: 09:15

SDG: 72811-15

Received Temp: 5 °C

### Case Narrative:

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

Results are at or above the reporting limit for the following analytes:

MANGANESE - Dissolved

DOC

Total Dissolved Solids (TDS)

CONDUCTIVITY

NITRATE-N

ALKALINITY (as CaCO3)

SULFATE

CHLORIDE

### For sample number CS78700:

See Report Details

M14 - Matrix related quality control for the sample batch did not meet control

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Technical Director or Designee

CA

703

11072080

**COC** and Report Number

Starting Sample: CS78700

Sample Number:	CS78700										
		Qualifier Code	Analysis Method	State Code	MCL.	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
ALKALINITY (as Ca	(CO3)		SM2320B	00410		7	192	mg/L	RE.	07/28/11	18:53
DOC			SM5310C			0.25	0.77	mg/L	RS	07/29/11	17:28
Total Dissolved Solid	ds (TDS)		SM2540C	70300	500 (s)	135	460	mg/L	RE	07/28/11	14:10
		M14									
Sample Number: 0	CS78700					•					
Minerals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
NITRATE-N			300.0R2.1		10	0.1	0.2	mg/L	AMH	07/28/11	19:22
NITRITE-N			300.0R2.1		1	0.1	ND	mg/L	AMH	07/28/11	19:22
Sample Number: (	CS78700										
Other		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
CONDUCTIVITY			SM2510B	00095		1	710	umhos/cm	MS	07/29/11	12: <b>1</b> 5
Sample Number: 0	CS78700										
Minerals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
CHLORIDE			300.0R2.1A		250(s)	1.0	85.5	mg/L	MS	07/29/11	07:26
ORTHO-PHOSPHAT	re-P		300.0R2.1			0.25	ND	mg/L	AMH	07/28/11	19:22
SULFATE			300.0R2.1A		250(s)	0.5	68.3	mg/L	MS	07/29/11	07:26
Sample Number: (	CS78700										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
IRON - Dissolved			200.7R4.4		0.3(s)	0.1	ND	mg/L	LG	07/29/11	18:06
Sample Number: 0	CS78700				. •						
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
MANGANESE - Diss	olved		200.8R5.4		0.05(s)	0.010	0.021	mg/L	LKR	07/29/11	19:56
								-			

703 CA 11072080 **COC and Report Number**  Starting Sample: CS78700

Page 2 of 2

Jul 2011

American Water Central Laboratory 1115 South Illinois Street

raciniy iD. PWSID:

CA 703

SPEC-PROC

MONTEREY DISTRICT

**CHAIN OF CUSTODY # 11072080** 

Belleville, IL 62220-3102 618-235-3600



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-048

Date of Report: 08/04/11

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

### **Report Summary**

Location:

PARALTA WELL

Sample Type

Collection Date: 07/27/11

CollectionTime: 12:00

Received Date: 07/28/11

Received Time: 09:15

SDG: 72811-15

Received Temp: 5 °C

### Case Narrative:

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

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Technical Director or Designee

CA 703 11072084 **COC and Report Number**  Starting Sample: CS78704

Sample Number:

CS78704

Qualifier Analysis State Reporting Code Method Code MCL.

AMMONIA AS N

350.1R2.0MOD

Limit

Result

Unit mg/L Analyst Analysis Date / Time

08/02/11

0.05

ND

RE

CA

11072084

COC and Report Number

Starting Sample: CS78704

Page 2 of 2



Facility ID: PWSID:

CA 703

American Water Central Laboratory 1115 South Illinois Street

Belleville, IL 62220-3102 618-235-3600

**CHAIN OF CUSTODY** # 11072084

Jul 2011

11072084	FORTAB USE ONLY		Temperature, C: 5 11872864	Tracking #: 128336200142156084 問題 Shipping Method: 1105	Received Date: 07/28/2011 72811-15	Received by: MS Logged By TS		Lao Comments.			本の木だったでは、シングのなら、イアグラスのタン			, ,	10958 1 3 75/1 1/3C 2 183801 P
	ETE	メナク・ナスクートでdietis		· (-	Military (24 hr) Format			3 4	3	COMMENTS	一个なながった		01-11-1	Pre-Preservation Preservation	25 mg Sodium Thiosulfate Suffuric Acid
MONTEREY DISTRICT	PRIOR TO SHIPPING - COMPL	Location: PARALTA WELL	Sample Type (RAW, EFF, DIST, etc.)	Sampler's First Initial and Last Name S. JFICA CT	Date Sampled 37/27/// Time Sampled	Contact Phone # 831-646-3259	Contact Person & USAN JACOBSON	Refinquished by 1	Date/Time Reling 1962	For compliance purposes NO	State Reporting by Lab No	CCR Report?: NO	The state of the s	DG Analysis Method Sample ID # Type	CS78704 AMMONIA EPA 3501



Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951

### **Certificate of Analysis**

Report Issue Date: 9/2/2011 8:07 Received Date: 07/29/2011

Received Time: 08:15

Lab Sample ID:

A1G2314-02

Client Project: ASR Bi-Annual/Radiologicals

Sample Date:

07/27/2011 12:00

Sampled by: Susy Jacobson

Sample Type:

Grab

Sample Description: Paralta Well

Matrix: Ground Water

### Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
*Uranium	EPA 200.8	ND	1.0	ug/L	1	A109429	08/09/11	08/09/11	
*Uranjum, Radiological		< 0.67		pCi/L					

### Radiological

Analyte	Method	Result	Units	MDA	Batch	Prepared	Analyzed	Qual
*Gross Alpha	EPA 00-02	ND	pCi/L	2.78	A109033	08/01/11	08/03/11	
*4 CE Ciama Unacatalatu		0.070	90					



Pace Analytical Services, Inc. 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

### ANALYTICAL RESULTS

Project:

A1G2314

Pace Project No.: 3051619

Sample: A1G2314-01

Lab ID: 3051619001

Collected: 07/27/11 11:10 Received: 08/08/11 09:30

**Parameters** 

Site ID:

Sample Type: Act ± Unc (MDC)

Units

Analyzed 08/18/11 12:45

CAS No. 13982-63-3 Qual

Radium-226

**Parameters** 

Method EPA 903.1

2.24 ± 0.902 (0.773)

pCi/L

Received: 08/08/11 09:30

Sample: A1G2314-02

Lab ID: 3051619002 Site ID:

Method

Collected: 07/27/11 12:00

Sample Type: Act ± Unc (MDC)

Units

Analyzed

CAS No.

Quaf

Radium-226

EPA 903.1

1.31 ± 0.662 (0.640)

pCI/L

08/18/11 13:02

13982-63-3

Date: 08/28/2011 03:14 PM

REPORT OF LABORATORY ANALYSIS

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## BSK ANALYTICAL 1414 STANISLAUS ST., FRESNO, CA 93706 (559) 497-2888 · FAX (559) 497-2893 · www.dsklabs.com

2 ANAIYTICAL ANALYSIS REQUESTED なるへいた Company 9 MAX Chien/Company Names No. 1/(a) Report Attention 1/00 CV S21.646.3259

Emails 1000 S220 August Per. Com Received by (Signature and Print Name) Received by (Signature and Print Name) REGULATORY COMPLIANCE
Electronic Data Transfer: Y N TABLE DISHE Carbon Copies: (Circle One) Matrix Types: RSW= Raw Surface Water CFW= Chlorinated Finished Water CWW= Chlorinated Waste Water BW= Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid でいる。 Mentix\* Comments Station Gode PODI KOOT このようなうし Merced Co Tulare Co CDHS Fresno Co System No.\* \*\* 1-10 (10 to ration 228 Th Frod Supace STD Level II | STD 5Day\*\* 2Day\*\* 1 Day\*\* Result Request \*\*Surcharge Address: Box PSI Maryley CA 93142 -0951 COMPANY WATER HORSE ☐ EDD ☐ Mail Only-CAS UPS (SA) WAIKIN TOVE FEDEX OFFIER 70 11000 CAO 5000 Sample Desertion Foreston ASA BI-ANNUCX (ROCIOICITO)S How would you like your completed results sent? Framil Fax QC Request or date to a "(Stemators card Ported Name) mshed by : (Signature and Printed Name) Relinguished by: (Signature and Printed Name) Pure Proposition Sampler Name Printed / Signature\* THE PO Date Bills

Notice: Payment for services rendered as noted herein are due in full within 30 independent of the payment account balances are deemed definition. Independent to monthly service in-addings charges and attentive the balances are subject to monthly service in-addings charges and

settlement, compromise or otherwise. The person signing for the client/Company stating capressly actorwisingse that they are either the Client or authorized agent to the Client, an the Client agrees to be responsible for payment for analytical services ment.

on this Chain of Custody, Any modification of the analysis requested, either type or quantities, will be noted and agreed upon this Chin of Custody. The turn around time for any samples received after 3.00pm will begin the next business day.



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS

montereybayanalytical@usa.net **ELAP Certification Number: 2385** 

Wednesday, August 03, 2011

Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

Lab Number: AA78625

Collection Date/Time: 7/27/2011 12:00

12:50

Sample Collector:

JACBSON S

Submittal Date/Time: 7/27/2011

Sample ID

	Sample Descriptio <mark>n: Paralta Well</mark>														
Analyte	Method	Unit	Result Qual	PQL	MCL Date Analyzed										
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05	7/27/2011										
Lithium	EPA200.8	ug/L	24	1	7/28/2011										
Methane	EPA174/175	ug/L	1.2 E	5	7/29/2011										

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



## Chain of Custody

Analysis Request

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Suite D	93940	(6227) Fax	al@usa.ne	on/Leslie Jor		DPH EDI		# of Containers									77/07/0		1						4		
4 Justin Court, Suite D	Monterey, CA 93940	831-375-MBAS (6227) 831-641-0734 Fax	montereybayanalytical@usa.net	Susy Jacobson/Leslie Jordan		בֿב		Type of Sample						ころに		1	2-20		7					1	X		
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			A## 40.	. Oi (ii)	Copy to:	Phone #		Collection Date	11620	1000	11/20/20		K3 11				& mon							V	1	N	1
		MONTEREY BAY ANALYTICAL SERVICES PRECISION • ACCURACY • DEFENDABLITY		Camound American Water	PO Box 951	Monterev CA 93942-0951		Site / Description / Field Point Name	SEASONS INSTITUTES		1 (2 K: 14   (2 ( ) 2   )		15 CT				KINDING KOK					me	子のろろう	PO DINEY	1 1 1 1 1	HANG	
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		Y BAY ANAL	5	Ca		Moi		Sample ID															N/SUX	137X	1001	CHERN	
Û		MONTEREY PRECISION	Client Name		Address	City, State, Zip		Laboratory #															Sampled by:	Relinquished by:	c	Received by:	Relinquished by:

Date:

Receipt #

Amount.

Check #

[ ] Payment received

Received by:



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO.

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report:

08/02/11

Lab Certification No.:

01161CA

Federal Lab ID No.: IL00028

### **Report Summary**

Location:

ORD GROVE WELL 02

Sample Type

RAW

Collection Date: 07/27/11

CollectionTime: 11:10

SDG: 72811-15

Received Date:

07/28/11

Received Time: 09:15

Received Temp: 5 °C

Case Narrative:

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

Results are at or above the reporting limit for the following analytes:

**ARSENIC** 

**MANGANESE** 

STRONTIUM

CALCIUM

SELENIUM

BORON

**MAGNESIUM** 

SODIUM

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Technical Director or Designee

CA 703 11072085 COC and Report Number Starting Sample: CS78705

Samole Number - C	578705

ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
IRON			200.7R4.4	01045	0.3(s)	0.1	ND	mg/L	LG	07/29/11	17:28
CALCIUM			200.7R4.4	00916		1	66	mg/L	LG	07/29/11	17:28
MAGNESIUM			200.7R4.4	00927		1	19	mg/L	LG	07/29/11	17:28
POTASSIUM			200.7R4.4	00937		5	ND	mg/L	LG	07/29/11	17:28
SODIUM			200.7R4.4			0.2	96.8	mg/L	LG	07/29/11	17:28
STRONTIUM			200.7R4.4			0.1	0.4	mg/L	LG	07/29/11	17:28
Sample Number:	CS78705										
ICP/MS Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	₃ / Time
ARSENIC			200.8R5.4	01002	0.010	0.001	0.002	mg/L	LKR	07/29/11	20:05
BARIUM			200.8R5.4	01007	1	0.1	ND	mg/L	LKR	07/29/11	20:05
MANGANESE			200.8R5.4	01055	0.05(s)	0.010	0.018	mg/L	LKR	07/29/11	20:05
NICKEL			200.8R5.4	01067	0.1	0.005	ND	mg/L	LKR	07/29/11	20:05
SELENIUM			200.8R5.4	01147	0.05	0.002	0.006	mg/L	LKR	07/29/11	20:05
ZINC			200.8R5.4	01092	5.0(s)	0.050	ND	mg/L	LKR	07/29/11	20:05
BORON			200.8R5.4	01020		0.050	0.132	mg/L	LKR	07/29/11	20:05
MOLYBDENUM			200.8R5.4	01062		0.1	ND	mg/L	LKR	07/29/11	20:05
VANADIUM			200.8R5.4	01087		0.050	ND	mg/L	LKR	07/29/11	20:05

CA 703
11072085
COC and Report Number

Starting Sample: CS78705

Page 2 of 2

PWSID: Facility ID:

CA 703

MONTEREY DISTRICT

American Water Central Laboratory 1115 South Illinois Street Belleville, IL 62220-3102 618-235-3600

## Jul 2011

## **CHAIN OF CUSTODY** # 11072085

FOR LABUSE ONLY	Tracking #: 128336200142156084 Tracking #: 128316200142156084	Received Date: 07/28/2011 /Login:NO Received Time: 08:15 ULogged By TS Received by: MS Logged By Edb.Con.mems.		COMMENTS: ASA & Annied CIS/2 (Exil) and show	Preservation Description Date Time Initials Codes
PRIOR TO SHIPPING - COMPLETE ALL FIELDS Location: ORD GROVE WELL 02	Sample Type (RAW, EFF, DIST, etc.) $f(2U)$ , Sampler's First Initial and Last Name $S \cdot THOUS$	N N	Date/Time Reling 1	For compliance purposes   No State Reporting by Lab No CCR Report?:	OC Analysis Method Pre-Preservation Whe WETALS EPA-2008 Nitric Acid Norie



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report: 08/11/11

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

**Report Summary** 

Location: Sample Type ORD GROVE WELL 02

RAW

Collection Date: 07/27/11

CollectionTime: 11:10

SDG: 72811-15

Received Date: 07/28/11

Received Time: 09:15

Received Temp:

### **Case Narrative:**

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

For sample number CS78699:

Utility determined resample unnecessary.

Results are at or above the reporting limit for the following analytes:

MANGANESE - Dissolved

NITRATE-N

ALKALINITY (as CaCO3)

SULFATE

DOC

CHLORIDE

Total Dissolved Solids (TDS)

CONDUCTIVITY

Results are equal to or exceed regulated MCL for the analytes listed below.

Total Dissolved Solids (TDS)

### For sample number CS78699:

See Report Details

N6 - Above Secondary MCL.

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Technical Director or Designee

Starting Sample: CS78699

Page 1 of 2

703

11072079 **COC** and Report Number

Sample Number:	CS78699										
		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
ALKALINITY (as C	aCO3)		SM2320B	00410		7	181	mg/L	RE	07/28/11	18:31
DOC	•		SM5310C			0.25	0.67	mg/L	R\$	07/29/11	15:59
Total Dissolved Sol	ids (TDS)		SM2540C	70300	500 (s)	135	534	mg/L	RE	07/28/11	14:10
		N6									
Sample Number:	CS78699										
Minerals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
NITRATE-N			300.0R2.1		10	- 0.1	1.7	mg/L	AMH	07/28/11	18:56
NITRITE-N			300.0R2.1		1	0.1	ND	mg/L	AMH	07/28/11	18:56
Sample Number:	CS78699										
Other		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
CONDUCTIVITY			SM2510B	00095		1	902	umhos/cm	MS	07/29/11	12:15
Sample Number:	C\$78699										
Minerals		Qualifler Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
CHLORIDE			300.0R2.1A		250(s)	1.0	132.3	mg/L	AMH	08/10/11	02:20
ORTHO-PHOSPHA	\TE-P		300.0R2.1			0.25	ND	mg/L	AMH	07/28/11	18:56
SULFATE			300.0R2.1A		250(s)	0.5	64.0	mg/L	MS	07/29/11	07:01
Sample Number:	C\$78699										
ICP Metals		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
IRON - Dissolved			200.7R4.4		0.3(s)	0.1	ND	mg/L	LG	07/29/11	18:02
Semple Number:	CS78699				. ,						
ICD/SEC Himbolic		Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	/ Time
ICP/MS Metals  MANGANESE - Dis	havioss		200.8R5.4	+ <b>* ** *</b>	0.05(s)	0.010	0.018	mg/L	LKR	07/29/11	19:53
MUNICONAL OF A DE	Jacivou		200,0110.7		0.00(0)	0.010	#.# · <del>*</del>				

Starting Sample: CS78699

Page 2 of 2



CA 703
11072079
COC and Report Number

618-235-3600

Belleville, IL 62220-3102

## American Water Central Laboratory

### **61021011** # AUGISTO CHAIN DE

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SCPRIOSesPO4 includes the woodufes since 2010 SZ540C-TDS SESTRECTOC C-NW80028 \$2007ED \$SILFATE SCHORID SOME CA Analysis Codes \$2320 \$2510 COMMENTS ASK BY AUTHOR Initials FOR LAB USE ONLY lah Time FIELD PRESERVATION Date ab Comments: Preservation Description Nitric Acid added at Lab Nitric Acid added at Lab でからがし NOME ROKE NOW. Z Cite None カスローたのの」ナス:Glassic Some COOK Mone 3 = 5 Military (24 hr) Format PRIOR TO SHIPPING - COMPLETE ALL FIELDS mg/L Pre-Preservation None Include None 13 NOW NO SER MON More Mone Mone None (\*) Perd Albertator Reguling: EPA 300.0A EPA 288,7 RA 4 EPA 300.0A EFA 366.0K EPA 2510B EPA 386.6A S# 2540C EPA 200.8 SM 5310C SM 2320 Method Filtered By: Time Sampled A ORTHO PHOSPIATE MITEME & MITEME CONDUCTIVITY SUSAN JACÓBSON Sampler's First Initial and Last Name S.O. Sample Type (RAW, EFF, DIST, etc.) 11/20/29 ALKALINITY ALKALINITY MINERALS CHLORIDE Location: ORD GROVE WELL 02 Contact Phone # 831-646-3259 Arralysis METALS METALS 200 あなられ MONTEREY DISTRICT State Reporting by Lab? For compliance puring Date/Time Reling 1 9 <u>8</u> Contact Person Relinquished by CCR Report?: Date Sampled CS78699 CS78699 CS78699 Sample ID # CS78659 CS78699 CS78695 CS78699 CS78699 CS78699 CS78699

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Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report:

08/04/11

Lab Certification No.:

01161CA

Federal Lab ID No.: IL00028

### **Report Summary**

Location:

**ORD GROVE WELL 02** 

Sample Type

RAW

Collection Date: 07/27/11

CollectionTime:

11:10

SDG: 72811-15

Received Date: 07/28/11

Received Time: 09:15

Received Temp: 5 °C

### **Case Narrative:**

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

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Technical Director or Designee

11072083

**COC and Report Number** 

Starting Sample: CS78703

Sample Number: CS

CS78703

Qualifier Analysis State Reporting Code Method Code MCI Limit

Code Method Code MCL Limit Result Unit Analyst Analysis Date / Time
AMMONIA AS N 350.1R2.0MOD 0.05 ND mg/L RE 08/02/11 15:16

CA 703

11072083

COC and Report Number

Starting Sample: C\$78703

Page 2 of 2

American Water Central Laboratory 1115 South Illinois Street Belleville, IL 62220-3102 618-235-3600

Jul 2011

MONTEREY DISTRICT

PWSID: Facility ID:

CA 703

**CHAIN OF CUSTODY** # 11072083

FORLABUSEONLY		Temperature, C: 5 11072851 Tracking #: 128336200142156084 Shipping Method: UPS Received Date: 07/28/2011 72811-15 Received Time: 09:15 ULogin:NO Received by: MS Logged By TS	Lab Comments.	COMMENTS: ASR BY-Annual (151/2 Capity) End	Analysis Analysis Analysis Codes Cultuc Acid (A) Analysis Codes Codes (A) Analysis Codes (A) Analysis Codes (A) Analysis Codes (A) Analysis Codes (A) Analysis
PRIOR TO SHIPPING - COMPLETE ALL FIELDS	た20~600/h/7 : sitetic: 1/2000/h/7 : siteti	7.10	£ &	COMMENTS: ASI	Pre-Preservation 25 mg Sodium Thiosuffate
PRIOR TO SHIPPING -	Location: ORD GROVE WELL 02	Sampler Type (RAW, EFF, DIST, etc.) Sampler's First Initial and Last Name  Date Sampled  Contact Phone # 831-646-3259	Relinquished by A SALIN K 50. 2  Date/Time Reling 1 PATIN K 50. 2	For compliance purposes? No State Reporting by Lab? NO CCR Report?: NO	Sample ID # Type



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### Inorganic Chemical (IOC)Analysis Report **PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024

Date of Report:

08/04/11

Lab Certification No.: 01161CA

Federal Lab ID No.: IL00028

Report Summary

Location:

ORD GROVE WELL 02

Sample Type

RAW

Collection Date: 07/27/11

CollectionTime:

SDG: 72811-15

11:10

Received Date:

07/28/11

Received Time:

09:15

Received Temp: 5 °C

**Case Narrative:** 

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

Results are at or above the reporting limit for the following analytes:

TOTAL KJELDAHL NITROGEN (TKN)

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non Technical Director or Designee

CA

703

11072081

**COC** and Report Number

Starting Sample: CS78701



Sample Number: C\$78701

	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst RE	Analysis Date / Time 08/03/11 14:1	
TOTAL KJELDAHL NITROGEN (TKN) Sample Number: CS78701	ſ	351.2R2.0			0.25	0.36	mg/L	IX.	00/03/11 14.1	J
Minerals	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date / Time	•
TOTAL PHOSPHORUS		365,4			0.1	ND	mg/L	RE	08/03/11 14:1	3



CA 703 11072081 COC and Report Number

Starting Sample: CS78701

Page 2 of 2

American Water Central Laboratory

Facility ID:

703

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MONTEREY DISTRICT

PWSID:

SPEC-PROC

1115 South Illinois Street

Believille, IL 62220-3102

618-235-3600

### 11072081 CHAIN OF CUSTODY#

S W Analysis Codes Received Date: 07/28/2011 72811-15 Received Time: 09:15 ULogin:NO ULogin: No Logged By C: 5 128336200142156084 FOR LAB USE ONLY Time Initials 11872881 FIELD PRESERVATION ASK # Annual CA The state of the s Received by: MS Date Tracking #: ab Comments: Preservation Description か20~カクマンナで : classic ること COMMENTS Military (24 hr) Format PRIOR TO SHIPPING - COMPLETE ALL FIELDS Method Time Sampled S.JAR SUSAN JACKBSON Sampler's First Initial and Last Name Sample Type (RAW, EFF, DIST, etc.) 川市の市り Location: ORD GROVE WELL 02 Contact Phone # 831-646-3259 Analysis For compliance purposes State Reporting by Lab? Date/Time Reling 1 ည် Relinquished by. Contact Person Date Sampled CCR Report?: Sample ID#

\$3654

Suffere Acid Sulfuric Acid

365.4MOD 351.2MOD

PHOS

K

CS78701

CS78701

\$3512



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102 Phone: (618)235-3600 - Fax: (618)235-6349



### **Organic Carbon Analysis Report PROCESS**

CALIFORNIA-AMERICAN WATER CO

MONTEREY DISTRICT

LESLIE JORDAN

PO BOX 951

MONTEREY CA 93942-0951

PWS ID: CA2710004

County: MONTEREY

Facility:

Site ID: 2710004-024 Date of Report:

08/03/11

Lab Certification No.:

01161CA

Federal Lab ID No.: IL00028

### **Report Summary**

SDG:

Location

ORD GROVE WELL 02

Sample Type

RAW

Collection Date:

07/27/11 CollectionTime:

11:10 72811-15 Received Date:

07/28/11

Received Time:

09:15

Received Temp:

### Case Narrative:

Results are at or above the reporting limit for the following analytes:

TOC

Process Sample - Analyte(s) is(are) not acceptable for compliance purposes.

### Report Details

Sample Number:

CS78707

Qualifier **Analysis** Code Method

State Code

MCL

Reporting Limit

Result

Analyst

Analysis Date / Time

SM5310C

0.25

0.62

Unit mg/L

TOC

RS

07/29/11

16:17

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Technical Director or Designee

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11072087

**COC and Report Number** 

Starting Sample: C\$78707

Facility IÜ: pwsin

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MONTEREY DISTRICT

American Water Central Laboratory 1115 South Illinois Street

Belleville, IL 62220-3102

618-235-3600

Jul 2011

# CHAIN OF CUSTODY # 11072087

Location: ORD GROVE WELL 02	ζ,	アンターナジターナの in all states	<u>-</u> 大 な な と	WE.			
Sample Type (RAW, EFF, DIST, etc.)	Rawi						
Sampler's First Initial and Last Name	JA0041	S		Sabellar Meland	Meditor.		
Date Sampled 57/7/1/ Time	Time Sampled	/ <b>M</b> ilitary (24	Military (24 hr) Format	Received Libite	Date		
Contact Phone # 831-646-3259				THE PROPERTY OF THE PROPERTY O	Time:	W. T.	
Contact Person SUSAN-MCOBSON				A CONTRACTOR			
Refinquished by	2	ю	4	Lab Comments:			
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For compliance purposes?		And the state of t	COMMENTS	PRAK DOGO	1/0/12	1	
State Reporting by Labe? NO	Contraction of the Contraction o	į		1000 / 10	20/20	<u>2</u> 位	2000 A D
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QC Aratysis	Method	Pre-Preservation		FIELO PRE	FIELD PRESERVATION		Analysis
Sample to # Type				Preservation Description	Date Tarre	re Imitials	Codes
C\$78707 TOC	SM 5316C	0.5 ml Phasphoric Acid		None			\$5310CTOC
CS78708 DUP TOC	SW 5310C	0.5 ml Phosphoric Acid		Notie			\$5310CTOC
CS78709 DUP TOC	SM 5316C	0.5 ml Phosphoric Acid		None			\$5310CTOC



Central Laboratory - 1115 South Illinois Street Belleville, IL 62220-3102

Phone: (618)235-3600 - Fax: (618)235-6349



### **DBP Analysis Report**

CALIFORNIA-AMERICAN WATER CO

PWS ID: CA2710004

Date of Report: 08/03/11

MONTEREY DISTRICT

County: MONTEREY

Drinking Water Certification No.: 01161CA

LESLIE JORDAN

Facility ID:

PO BOX 951

Site ID: 2710004-024

Federal Lab ID No.: IL00028

MONTEREY CA 93942-0951

**Report Summary** 

ORD GROVE WELL 02 Location

Collection Date: 07/27/11

07/28/11 Received Date:

Sample Type

CollectionTime: 11:10

Received Time:

09:15

RAW

SDG: 72811-15

Received Temp: 5°C

**Case Narrative:** 

TOTAL HAA (5) Result: 0

TOTAL THM Result: 0

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Technical Director or Designee

CA

703

11052755 **COC** and Report Number Starting Sample: CS53549

Sample Number: CS53549										
Regulated Haloacetic Acids	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
DIBROMOACETIC ACID		552.3R1.0	82721		1.0	ND	ug/L	BC	08/02/11	12:59
DICHLOROACETIC ACID		552.3R1.0	77288		1.0	ND	ug/L	ВС	08/02/11	12:59
MONOBROMOACETIC ACID		552.3R1.0	A-041		1.0	ND	ug/L	вс	08/02/11	12:59
MONOCHLOROACETIC ACII	)	552.3R1.0			2.0	ND	ug/L	BC	08/02/11	12:59
TRICHLOROACETIC ACID		552.3R1.0			1.0	ND	ug/L	BC	08/02/11	12:59
HAA5 TOTAL		552.3R1.0	A-049	60	1.0	ND	ug/L	BC	08/02/11	12:59
Sample Number: CS53549			٠							
Unregulated Haloacetic	Qualifier Code	Analysis Method	State Code	MCL	Reporting Limit	Result	Unit	Analyst	Analysis Date	e / Time
BROMOCHLOROACETIC		552.3R1.0	A-038		1.0	ND	ug/L	BC	08/02/11	12:59
ACID										
ACID <u>Sample Number:</u> CS53551										
Sample Number: CS53551	Qualifier	Analysis	State		Reporting					
Sample Number: CS53551  Trihalomethanes	Qualifier Code	Method	State Code	MCL.	Limit	Result	Unit	Analyst	Analysis Date	
Sample Number: CS53551		•		MCL.	, -	Result ND	Unit ug/L	<b>Analyst</b> CRK	Analysis Date	e / Time 16:57
Sample Number: CS53551  Trihalomethanes	Code	Method	Code	MCL.	Limit		*		•	
Sample Number: CS53551  Trihalomethanes  BROMOFORM	Code E	Method 524.2R4.1	Code 32104	MCL.	Limit 0.5	ND	ug/L	CRK	07/28/11	16:57
Sample Number: CS53551  Trihalomethanes BROMOFORM BROMODICHLOROMETHAN	Code E	Method 524.2R4.1 524.2R4.1	Code 32104 32101	MCL.	Limit 0.5 0.5	ND ND	ug/L ug/L	CRK CRK	07/28/11 07/28/11	16:57 16:57

703 CA 11052755 COC and Report Number Starting Sample: CS53549 Page 2 of 2

PWSID: CA2710004

Facility ID:

703

SCHE

MONTEREY DISTRICT

1115 South Illinois Street

Believille, IL 62220-3102

618-235-3600

### 11052755 CHAIN OF CUSTODY#

COMMENTS: ASK BY MONITED 1772 (BRS. 1-1000) SECURA Received Date: 07/28/2011 72811-15 Received Time: 09:15 ULogin:NO Received by: MS Loggod Rr. 79 C: 5 II835 1Z8336200142155084 FOR LAB USE ONLY Shipping Method: UPS femperature, Tracking #: Lab Comments: A 201-8 Military (24 hr) Format SiteID: 2710004-024 PRIOR TO SHIPPING - COMPLETE ALL FIELDS mg/L m Field Chlorine Residual: Time Sampled SUSAM JACOBSON Sampler's First Initial and Last Name Sample Type (RAW, EFF, DIST, etc.) 9 o Z THEHES Location: ORD GROVE WELL 02 Contact Phone # 831-646-3259 State Reporting by Lab For compliance pur Date/Time Reling Contact Person Relinquished by Date Sampled CCR Report?:

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Sel anon	monium Chlorid	imonium Chlorid	ium Thiosulfate	rum Thiosulfate	ium Thiosulfater	ium Thiosulfate
reservation	Ammonium Chlorid	Ammonium Chlorid	odium Thiosulfate	odium Thiosulfate	odium Thiosulfater	odium Thiosulfate
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Pre-Preservation	Song Ammonium Chloride	Smg Ammonium Chlorid	3mg Sodium Thiosulfate	amg Sodium Thiosulfate	3mg Sodium Thiosulfate:	3mg Sodium Thiosulfate
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	Φ	9	3mg Sodium Thiosulfate	1010	ຕ	<b>27</b> .
	Φ	9	2. 3mg Sodium Thiosulfate	1010	ຕ	<b>27</b> .
	Φ	9	24.2: 3mg Sodium Thiosulfate	1010	ຕ	<b>27</b> .
	Φ	9	A 524.2 3mg Sodium Thiosulfate	1010	ຕ	<b>27</b> .
	Φ	9	PA 524.2	1010	ຕ	<b>27</b> .
	Φ	9	EPA 524.2 3mg Sodium Thiosulfate	1010	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	EPA 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	TTHM 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	TTHM 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	TTHM 524.2	EPA 524.2	EPA 524.2	EPA 524.2
	Φ	9	TTHM 524.2	EPA 524.2	EPA 524.2	EPA 524.2
<b>'A</b>	Φ	9	EPA 524.2	EPA 524.2	EPA'524.2	EPA 524.2

THE PARTY OF THE



Leslie Jordan California American Water PO Box 951 Monterey, CA 93942-0951

### **Certificate of Analysis**

Report Issue Date: 9/2/2011 8:07 Received Date: 07/29/2011

Received Time: 08:15

Lab Sample ID:

A1G2314-01

07/27/2011 11:10

Sample Date: Sample Type:

Grab

Client Project: ASR Bi-Annual/Radiologicals

Sampled by: Susy Jacobson

Matrix: Ground Water

Sample Description: Ord Grove Well 02

### Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qua
Uranium	EPA 200.8	1.1	1.0	ug/L	1	A109393	08/08/11	08/09/11	
Uranium, Radiological		0.73		pCi/L					
Radiological									

Analyte	Method	Result	Units	MDA	Batch	Prepared	Analyzed	Qual
*Gross Alpha	EPA 00-02	9.28	pCi/L	2.78	A109033	08/01/11	08/03/11	
*1.65 Sigma Uncertainty		0.470	±					



Pace Analytical Services, Inc. 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

### **ANALYTICAL RESULTS**

Project:

A1G2314

Pace Project No.: 3051619

Sample: A1G2314-01

Lab ID: 3051619001

Collected: 07/27/11 11:10 Received: 08/08/11 09:30

PWS:

**Parameters** 

Method

Site ID:

Sample Type: Act ± Unc (MDC)

Units

Analyzed

CAS No. Qual

Radium-226

EPA 903.1

2.24 ± 0.902 (0.773)

pCi/L

08/18/11 12:45 13982-63-3

Sample: A1G2314-02

Lab ID: 3051619002

Collected: 07/27/11 12:00 Sample Type:

Received: 08/08/11 09:30

**Parameters** 

Site ID: Method

Act ± Unc (MDC)

Units

Analyzed

CAS No. Qual

Radium-226

EPA 903.1

1.31 ± 0.662 (0.640)

pCi/L

08/18/11 13:02 13982-63-3

Date: 08/28/2011 03:14 PM

REPORT OF LABORATORY ANALYSIS

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## BSK ANALYTICAL 1414 STANISLAUS ST., FRESNO, CA 93706 (559) 497-2888 • FAX (559) 497-2893 • www.bsklabs.com

Int. ANALYTICAL ANALYSIS REOUESTED グロハントナ Company Check/Cash/Card PLA# Packing Material POPE Emails 1000 Synd On water Con REGULATORY COMPLIANCE
Electronic Data Transfer: Y Received by (Signature and Print Name) Received by (Signature and Print Name) Carbon Copies: (Circle One) WET BLUE NONE Matrix Types: RSW= Raw Surface Water CFW= Chlorinated Finished Water CWW= Chlorinated Waste Water BW= Bottled Water · The leaves Payment Received at Delivery: RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid Matrix\* | Comments / Station Code TOON ITOOK いったかなうユ Tulare Co CDHS Fresno Co Phone\*: Fax\* 831.646.3259 System No.\* Merced Co Other: Date: Cooling Method: 1-100/1-20 to row 10/th 228 Spage STD 5Day\*\* 2Day\*\* 1 Day\*\* Time Result Request \*\*Surcharge Address\* Box PSI Meriphey CA 93142 - CASI ☐ EDD ☐ Mail Only-CC Mr. Water CHOSH Quent/Company Named No. R. (a.) Report Attention A Or CSC Date GSO WALK-IN SIVC PEDEX OTHER Quote# 280 E STD Level II Sample Description/Location\* ASK BI-Amues (Rodiolarica)s QC Request 大 火 Received for lab by: (Signature and Printed Name) Relingarished by: (Signature and Printed Name) Relinquished by : (Signature and Printed Name) CAO UPS 10 tocal Sampler Name Printed / Signature Sampled\* ALL PROPERTY MESTE Date Shipping Method: Project Information: Sample # # Btls

Notice: Payment for services rendered as noted herein are due in hill within 30 interest calculated at 1 1/2% per month, 18% per annum. BSK & Associates days from when invoiced. If not so paid, account balances are deemed delinquent, shall be entitled to recover on delinquent accounts, cost of collections, including Delinquent balances are subject to monthly service in-billings charges and attentions are subject to monthly service in-billings charges and

grier the client/Company on this Chain of Oustock, Any modification of the analysis requised teather type authorized early to proquentities, will be noted and egreed upon this Chin of Custock. The turn around if for maly sanyties a thin for any samples received after 3:00 pm will bugin the next business day.

settement, compromise or otherwise. The person signing for the client/Company of supressly acknowledges that they are either the Client or authorized agent to the Client, an the Client agrees to be responsible for payment for analytical sarvinces.



4 Justin Court Suite D, Monterey, CA 93940 831.375.MBAS

montereybayanalytical@usa.net **ELAP Certification Number: 2385** 

Wednesday, August 03, 2011

Cal Am Water Company Susy Jacobson / Leslie Jordan 511 Pacific Lodge Road, Suite 100 Pacific Grove, CA 93950

Lab Number: AA78624

Collection Date/Time: 7/27/2011

11:10

Sample Collector:

JACBSON S

Submittal Date/Time: 7/27/2011

12:50

Sample ID

	Sample D	escription	: Ord Grove Well 02		
Analyte	Method	Unit	Result Qual	PQL	MCL Date Analyzed
Chloramines	SM4500-CI G	mg/L	Not Detected	0.05	7/27/2011
Lithium	EPA200.8	ug/L	22	1	7/28/2011
Methane	EPA174/175	ug/L	0.45 E	5	7/29/2011

Sample Comments:

Report Approved by:

David Holland, Laboratory Director



## Chain of Custody

4 Justin Court, Suite D Monterey, CA 93940 831-375-MBAS (6227) 831-641-0734 Fax

Analysis Request

Analysis Requested Season siacobson@amwater.com Size / Type / preservative 3 Susy Jacobson/Leslie Jordan からいる montereybayanalytical@usa.net # of Containers Email: DPH EDT Type of Sample U. 67 Chlorine Residual 831-646-3259 Collection などろう Care! なっとみ
お Collection Date T. W. 3000 川もかち Phone # Copy to: Attn to: 57570 Site / Description / Field Point Name AJUNIOUS WASHIELD - Knowled PRECISION . ACCURACY . DEPENDABILITY California American Water Paratheroell Monterey CA 93942-0951 PO Box 951 11 1 Sample ID City, State, Zip Laboratory # Client Name Address

	Printed Name	Signature	Date and Time		Commoné
Sampled by:	Susa Arebon		FL'SH	EDE Logondo.	The state of the s
Relinquished by:	V 1	THE THE THE THE THE THE THE THE THE THE	13	COL Education	
Received by	Received by: TEREEN CHANG	Market	1/27/11 170		
Relinquished by:				•:	
Received by:				_	

Date:

Receipt #

Amount.

Check #

[ ] Payment received