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Q2 2013 GWMR

08 / 02 / 2013



DCP Midstream
370 17th Street, Suite 2500
Denver, CO 80202
303-595-3331
303-605-2226 FAX

August 2, 2013

Mr. Glenn von Gonten
Oil Conservation Division
New Mexico Energy, Minerals
& Natural Resources Department
1220 South St. Francis Dr.
Santa Fe, NM 87505

**RE: Second Quarter 2013 Groundwater Monitoring Report
Burton Flats Compressor Station
Lots 4 and 5, Section 1, Township 21 South, Range 27 East
Eddy County, New Mexico
OCD Case No. 2R799**

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RECEIVED OCD

Dear Mr. von Gonten:

DCP Midstream, LP (DCP) is pleased to submit for your review one copy of the Second Quarter 2013 Groundwater Monitoring Report for the DCP Burton Flats Booster Station located in Eddy County, New Mexico (Lots 4 and 5, Section 1, Township 21 South, Range 27 East).

If you have any questions regarding the report, please call at 303-605-1695 or e-mail me CECole@dcpmidstream.com.

Sincerely,

DCP Midstream, LP

Chandler E Cole
Senior Environmental Specialist

Enclosure

cc: Mr. Mike Bratcher - EMNRD
Mr. Jim Griswold - EMNRD
Mr. Jim Amos - BLM Carlsbad
Environmental Files

Second Quarter 2013 Groundwater Monitoring and Activities Summary Report

Burton Flats Booster Station
Eddy County, New Mexico
AP #2R799

Prepared for:



370 17th St., Suite 2500
Denver, CO 80202

Prepared by:



TASMAN
GEOSCIENCES

6899 Pecos Street, Unit C
Denver, Colorado 80221

July 15, 2013

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A	Laboratory Analytical Reports
B	Historical Analytical Results

1. Introduction

This report summarizes the groundwater monitoring activities conducted during the second quarter of 2013 at the Burton Flats Booster Station (Site) in Eddy County, New Mexico (Figure 1). Tasman Geosciences, LLC (Tasman) conducted these activities on behalf of DCP Midstream, LP (DCP). Field activities were conducted with the purpose of monitoring groundwater flow and quality conditions and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period.

2. Site Location and Background

The Site is located in the Fourth and Fifth Lots of Section 1, Township 21 South, Range 27 East (approximate coordinates 32.5195 degrees north and 104.1507 degrees west). It is approximately 3.4 miles northwest of the intersection of US Highway 62 and County Road 243. The area is sparsely populated and land use is primarily associated with livestock grazing and oil and gas production and gathering.

Based on information included in historical Site investigation reports, a release of approximately 10 barrels (bbl) of oil and produced water occurred on October 5, 2009 of which approximately 8 bbls were recovered from within the tank secondary containment area. The C-141 report was submitted on October 12, 2009. Site investigation and soil sampling within the release area occurred during the third quarter of 2009 and early fourth quarter of 2010 (BH-1 through BH-5). Elevated levels of petroleum hydrocarbons within the soil were encountered to depths of 20-feet below ground surface (bgs). Groundwater was noted between 16-feet and 20-feet bgs during site characterization activities. Subsequent to soil investigation activities, four groundwater monitoring wells were installed around and down-gradient from the release area during the 4th quarter of 2011 (MW-1 through MW-4). Elevated petroleum hydrocarbon concentrations in soil were observed during well installation. Consequently, two additional soil borings were completed to a depth of 20 feet bgs in the direct area of impacts (SB 11-1 and SB 11-2). Monitoring well and soil boring locations are shown on Figure 2.

Boring logs for the Site monitoring wells indicate that the subsurface geology contains unconsolidated fine-grained sand, silt, and clay sediments. This general characteristic has been utilized in evaluating the historic and current LNAPL behavior. Ongoing monitoring and sampling of the four Site monitoring wells listed above has been conducted on a quarterly basis since installation.

3. Groundwater Monitoring

This section describes the groundwater field and laboratory activities performed during the second quarter 2013 monitoring event. Quarterly monitoring activities were conducted on June 3, 2013 and included Site-wide groundwater gauging, LNAPL measurements, and groundwater sampling. Monitoring well MW-3 was resampled on June 12, 2013 due to damage sustained to the sample containers during shipping. Figure 2 illustrates the groundwater monitoring network, MW-1 through MW-4, utilized to perform these activities at the Site.

3.1 Groundwater and LNAPL Elevation Monitoring

Groundwater and LNAPL levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater elevations at the Site. During the second quarter 2013, groundwater levels were measured at four Site monitoring well locations.

Groundwater levels were measured on the north side of the well casing to the nearest 0.01-foot using an oil-water interface probe (IP). Groundwater level data were converted to elevation (feet above mean sea level [AMSL]). Measured groundwater levels and calculated groundwater elevation data are presented in Table 1 and a second quarter 2013 groundwater elevation contour map is illustrated on Figure 3. LNAPL levels, where detected by the IP, are also presented in Table 1.

Groundwater elevations ranged from 3,177.19 feet AMSL at monitoring well MW-2 to 3,177.39 feet AMSL at monitoring well MW-3. As illustrated on Figure 3, groundwater flow at the Site generally trends to the northwest with a gradient of approximately 0.0013 foot per foot between monitoring wells MW-2 and MW-3.

Groundwater elevation from MW-4 was not used in calculating hydraulic gradient due to the presence of LNAPL. The selected elevations were directly measured and are considered representative of the general gradient and flow direction at the Site.

LNAPL was detected at monitoring well MW-4 during the reporting period with a measured thickness of 1.53-feet.

3.2 Groundwater Quality Monitoring

Subsequent to recording groundwater level measurements at each monitoring well, groundwater samples were collected from the three monitoring wells that did not contain measurable LNAPL.

During sampling, a minimum of three well casing volumes of groundwater were purged from each monitoring well prior to collecting groundwater samples. Water quality parameters were recorded and used to confirm groundwater stabilization prior to sample collection. Monitoring wells did not require collection of more than three (3) purge volumes to achieve parameter stabilization. As such, the analytical data are considered to be representative of Site conditions in that a minimum 3 purge

volumes were evacuated from all sampled monitoring wells during the second quarter 2013 event. Groundwater samples were collected using dedicated polyethylene bailers, placed in clean laboratory supplied containers for the selected analytical methods, packed in an ice-filled cooler and maintained at approximately four (4) degrees Celsius ($^{\circ}\text{C}$) for transportation to the laboratory. Groundwater samples were then shipped under chain-of-custody procedures to ALS Environmental (ALS) laboratory in Houston, Texas, for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260B and chloride by USEPA Method 300.

Analytical results indicate that BTEX concentrations were below the New Mexico Water Quality Control Commission (NMWQCC) Standard at all sampled monitoring well locations during the reporting period. LNAPL was detected at one location (MW-4) as indicated in Section 3.1 above.

Chloride was detected in MW-1, MW-2, and MW-3 with concentrations of 703 mg/L, 1,150 mg/L, and 474 mg/L, respectfully. Chloride values in all of the sampled wells exceeded the NMWQCC suggested guideline of 250 mg/L.

Figure 4 displays analytical results from the second quarter 2013 event as well as the first quarter 2013 analytical results. Table 2 presents second quarter 2013 monitoring data along with data collected during the previous 4 quarters. Laboratory analytical reports for the event are included as Appendix A.

3.3 Data Quality Assurance / Quality Control

The data were reviewed for compliance with the analytical method and the associated quality assurance/quality control (QA/QC) procedures. All samples were analyzed using the correct analytical methods and within the correct holding times. Chain of custody forms were in order and properly executed and indicate that samples were received at the proper temperature with no headspace. All data were reported using the correct method number and reporting units. A trip blank, matrix spike or matrix spike duplicate (MS/MSD) and field duplicate sample from MW-1 were collected during the sampling event. The trip blank was fully in control, having no detection of targets.

The duplicate sample collected at MW-1 was in compliance with QA/QC standards. BTEX concentrations in MW-1 and the duplicate sample were below New Mexico Water Quality Control Commission (NMWQCC) Standards.

The overall QA/QC assessment of the data, based on the data review, indicate that both field precision and overall data precision and accuracy are acceptable.

4. Remediation Activities

During the second quarter 2013, a passive LNAPL collection bailer was deployed in MW-4 to address stagnant free phase petroleum hydrocarbons in the monitoring well. The bailer was set at the potentiometric surface and subsequent monitoring of the LNAPL recovery volume will commence during the third quarter of 2013.

Monitored natural attenuation is the current remediation strategy at the Site to address the dissolved phase petroleum hydrocarbon concentrations.

5. Conclusions

Comparison of the second quarter 2013 monitoring data and historic information provides the following general observations:

Groundwater elevation at the Site has remained stable with minor seasonal and annual fluctuations since monitoring was initiated in December 2011. There was no significant deviation from this trend during the second quarter 2013.

Dissolved phase BTEX concentrations in down-gradient well MW-1 continue to decrease over time. Between first quarter 2012 and first quarter 2013, benzene concentrations decreased by two orders of magnitude. During the June 2013 event, concentrations remained below the New Mexico Water Quality Control Commission (NMWQCC) Standards for the second consecutive quarter.

Constituent concentrations in MW-2 and MW-3 remained below laboratory detection limits during the second quarter 2013 suggesting that the dissolved phase hydrocarbon plume has minor lateral dispersion across the Site.

6. Recommendations

Based on evaluation of second quarter 2013 and historical Site observations and monitoring results, recommendations for future activities include:

- Continue quarterly groundwater monitoring and sampling at the monitoring locations illustrated on Figure 2 to assess impacts of the contaminant fate and transport.
- Continue LNAPL monitoring at MW-4 to evaluate effectiveness of the passive LNAPL collection bailer.

Tables

TABLE 1
SECOND QUARTER 2013
SUMMARY OF GROUNDWATER ELEVATION DATA
BURTON FLATS BOOSTER STATION
EDDY COUNTY, NEW MEXICO

Location	Date	Depth to Groundwater (1) (feet)	Depth to Product (1) (feet)	Free Phase Hydrocarbon Thickness (feet)	Total Depth (2) (feet)	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Groundwater Elevation Since Previous Event (3) (feet)
MW-1	6/20/2012	21.50				3198.88	3177.38	-0.26
MW-1	9/26/2012	21.65				3198.88	3177.23	-0.15
MW-1	12/5/2012	21.51			34.25	3198.88	3177.37	0.14
MW-1	2/21/2013	21.57			34.25	3198.88	3177.31	-0.06
MW-1	6/3/2013	21.60			34.25	3198.88	3177.28	-0.03
MW-2	6/20/2012	22.66				3200.00	3177.34	-0.27
MW-2	9/26/2012	22.78				3200.00	3177.22	-0.12
MW-2	12/5/2012	22.68			32.85	3200.00	3177.32	0.10
MW-2	2/21/2013	22.71			32.85	3200.00	3177.29	-0.03
MW-2	6/3/2013	22.81			32.85	3200.00	3177.19	-0.10
MW-3	6/20/2012	23.18				3200.85	3177.67	-0.10
MW-3	9/26/2012	23.40				3200.85	3177.45	-0.22
MW-3	12/5/2012	23.35			34.23	3200.85	3177.50	0.05
MW-3	2/21/2013	23.45			34.23	3200.85	3177.40	-0.10
MW-3	6/3/2013	23.46			34.23	3200.85	3177.39	-0.01
MW-4	6/20/2012	24.82	23.07	1.75		NM	NM	NM
MW-4	9/26/2012	25.26	23.21	2.05		NM	NM	NM
MW-4	12/5/2012	24.34	23.22	1.12	NM	NM	NM	NM
MW-4	2/21/2013	24.85	23.26	1.59	NM	NM	NM	NM
MW-4	6/3/2013	24.86	23.33	1.53	NM	NM	NM	NM
Average change in groundwater elevation since the previous monitoring event								-0.05

Notes:

1- Depths measured from the north edge of the well casing.

2- Total depths were collected and recorded during the second quarter 2013 monitoring event (with the exception of wells that contained LNAPL).

3- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring even from the measurement collected during the most recent monitoring event.
Data presented for well locations includes previous four sampling events, when available.

TOC elevation for monitoring well MW-4 was not available at the time this report was generated. Therefore, groundwater elevation could not be calculated.

Sample locations are shown on Figure 2 and a groundwater elevation contour map is shown on Figure 3.

amsl - feet above mean sea level.

TOC - top of casing

NM - not measured

TABLE 2
SECOND QUARTER 2013
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
BURTON FLATS BOOSTER STATION
EDDY COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
New Mexico Water Quality Control Commission Groundwater Standards		0.01 (mg/l)	0.75 (mg/l)	0.75 (mg/l)	0.62 (mg/l)	250*	
MW-1	6/20/2012	0.0967	<0.001	0.284	0.0474	651	Duplicate sample collected
MW-1	9/26/2012	0.0615	<0.001	0.0803	0.0015	590	
MW-1	12/5/2012	0.020	<0.001	0.17	0.037	599	
MW-1	2/21/2013	0.0021	<0.001	0.0058	<0.003	668	Duplicate sample collected
MW-1	6/3/2013	0.0049	<0.001	0.0048	<0.001	703	Duplicate sample collected
MW-2	4/26/2012	<0.001	<0.001	<0.001	<0.003	1,040	
MW-2	6/20/2012	<0.001	<0.001	<0.001	<0.003	1,150	
MW-2	9/26/2012	<0.001	<0.001	<0.001	<0.003	1,130	
MW-2	12/5/2012	<0.001	<0.001	<0.001	<0.003	1,120	Duplicate sample collected
MW-2	2/21/2013	<0.001	<0.001	<0.001	<0.003	1,250	
MW-2	6/3/2013	<0.001	<0.001	<0.001	<0.001	1,150	
MW-3	6/20/2012	<0.001	<0.001	<0.001	<0.003	435	
MW-3	9/26/2012	<0.001	<0.001	0.00057	<0.003	447	Duplicate sample collected
MW-3	12/5/2012	<0.001	<0.001	<0.001	<0.003	444	
MW-3	2/21/2013	<0.001	<0.001	<0.001	<0.003	503	
MW-3	6/12/2013	<0.001	<0.001	<0.001	<0.001	474	
MW-4	6/20/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/26/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/21/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	

Notes:

The environmental cleanup standards for water that are applicable to the Burton Flats Booster Station site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

Data presented for all well locations includes previous four sampling events, when available.

* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated constituent. The

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

LNAPL = Light Non-Aqueous Phase Liquid

NM = Not measured.

mg/L = milligrams per liter.

Figures

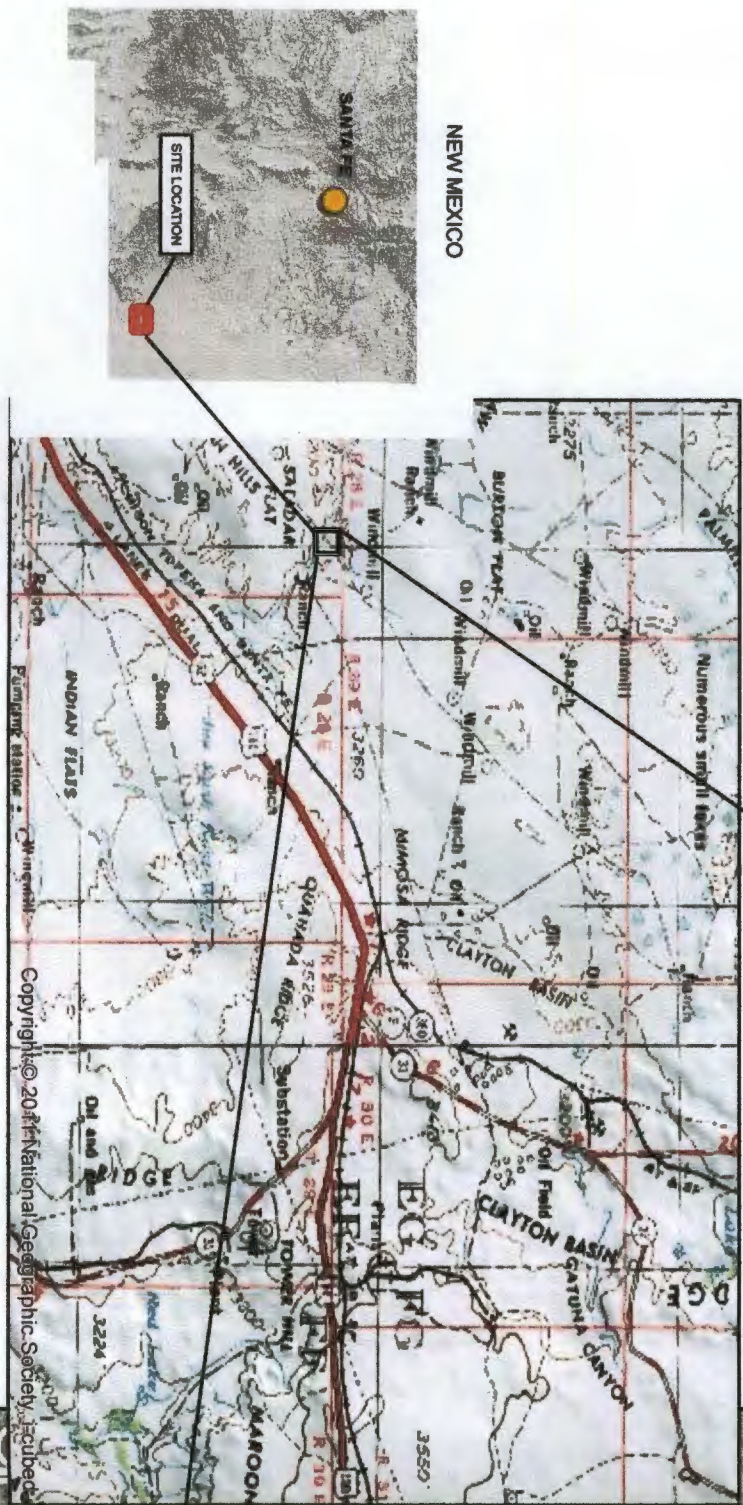


Image courtesy of USGS ©2013 Microsoft Corporation ImageBatch.com



DESIGNED BY: C. Wasko
DRAWN BY: J. Clonts
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
APPROVED BY: _____

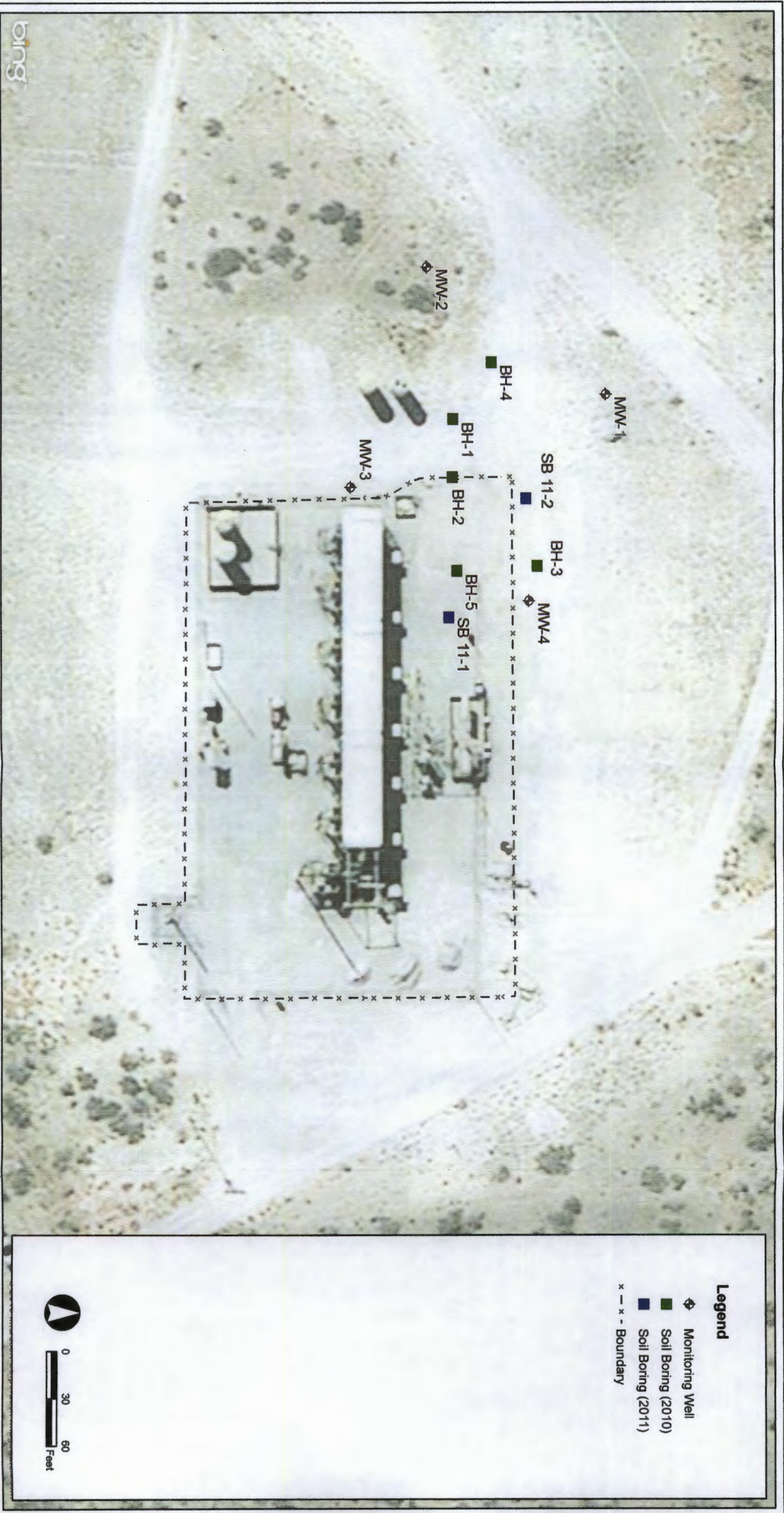


TASMAN
GEOSCIENCES
Tasman Geosciences, LLC
6899 Pecos Street - Unit C
Denver, CO 80221
303 487 1228


DCP Midstream
Burton Flats Booster Station
Lots 4 and 5, Section 1, Township 21 South, Range 27 East
Eddy County, New Mexico

SITE LOCATION

FIGURE
1



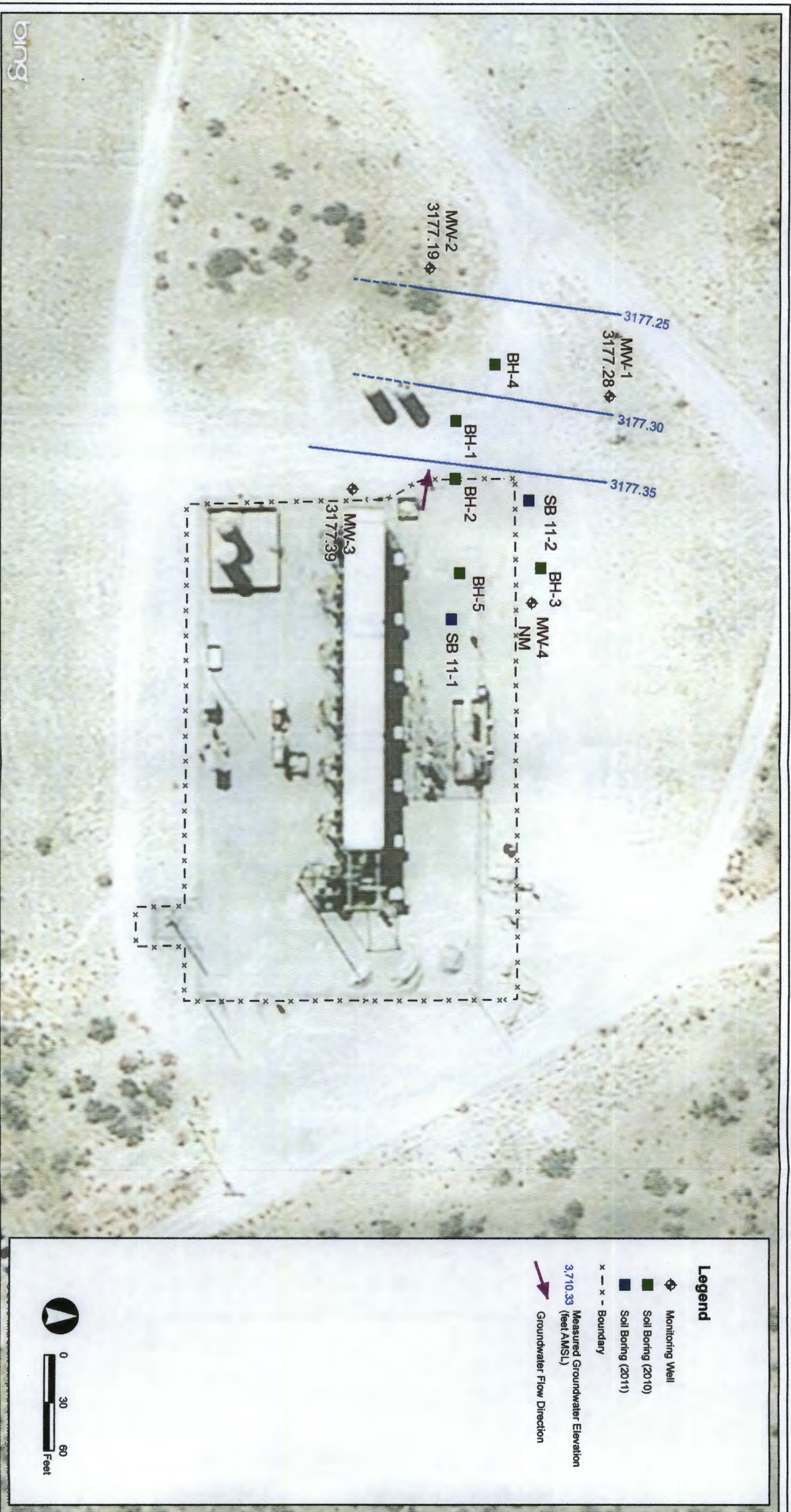
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**TASMAN**
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DCP Midstream
Burton Flats Booster Station
Lots 4 and 5, Section 1, Township 21 South, Range 27 East
Eddy County, New Mexico

SITE MAP

FIGURE
2



DESIGNED BY: C. Wasko
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Burton Flats Booster Station
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Eddy County, New Mexico

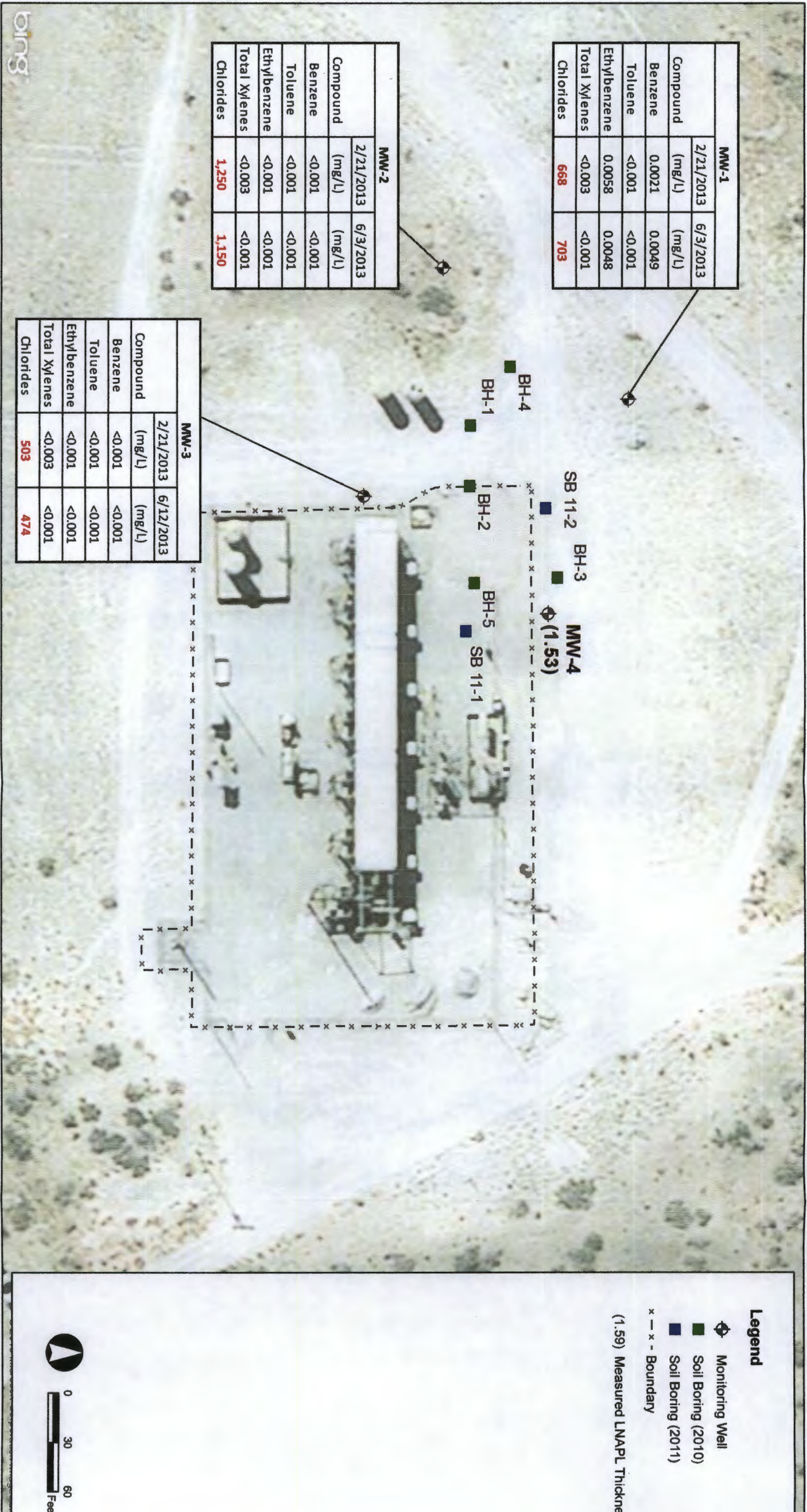
POTENTIOMETRIC SURFACE
MAP
(JUNE 3, 2013)

FIGURE
3

MW-1		
Compound	2/21/2013 (mg/L)	6/3/2013 (mg/L)
Benzene	0.0021	0.0049
Toluene	<0.001	<0.001
Ethylbenzene	0.0058	0.0048
Total Xylenes	<0.003	<0.001
Chlorides	668	703

MW-2		
Compound	2/21/2013 (mg/L)	6/3/2013 (mg/L)
Benzene	<0.001	<0.001
Toluene	<0.001	<0.001
Ethylbenzene	<0.001	<0.001
Total Xylenes	<0.003	<0.001
Chlorides	1,250	1,150

MW-3		
Compound	2/21/2013 (mg/L)	6/12/2013 (mg/L)
Benzene	<0.001	<0.001
Toluene	<0.001	<0.001
Ethylbenzene	<0.001	<0.001
Total Xylenes	<0.003	<0.001
Chlorides	503	474



DESIGNED BY: C. Wasko
DRAWN BY: J. Clonts
SHEET CHKD BY:
CROSS CHKD BY:
APPROVED BY:
APPROVED BY:



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303 487 1228

DCP Midstream
Burton Flats Booster Station
Lots 4 and 5, Section 1, Township 21 South, Range 27 East
Eddy County, New Mexico

ANALYTICAL RESULTS MAP
(JUNE 3, 2013)

FIGURE
4

Appendix A

Laboratory Analytical Reports

Appendix B

Historical Analytical Results

**APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER
BURTON FLATS BOOSTER STATION
EDDY COUNTY, NEW MEXICO**

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides (mg/l)	Comments
New Mexico Water Quality Control Commission Groundwater Standards		0.01 (mg/l)	0.75 (mg/l)	0.75 (mg/l)	0.62 (mg/l)	250*	
MW-1	3-2008	1.4	0.0395	0.948		0.128	
MW-1	6-2008	2.75	0.054	2.17		0.232	
MW-1	9-2008	1.1	0.0375	0.845		0.131	
MW-1	12-2008	0.869	0.0385	0.581		0.0709	
MW-1	3-2009	0.288	0.0149	0.107		0.0395	
MW-1	5-2009	1.38	0.0705	0.175		0.065	
MW-1	9-2009	0.267	0.024	0.0332		0.0078	
MW-1	12-2009	0.819	0.088	0.0267		0.012	
MW-1	3-2010	0.726	0.0879	0.107		0.0278	
MW-3	3/29/2010	NS	NS	NS		NS	
MW-1	12/14/2011	0.140	0.0034	0.200	0.111	665	Duplicate sample collected
MW-1	4/26/2012	0.153	<0.001	0.229	0.0073	584	
MW-1	6/20/2012	0.0967	<0.001	0.284	0.0474	651	Duplicate sample collected
MW-1	9/26/2012	0.0615	<0.001	0.0803	0.0015	590	
MW-1	12/5/2012	0.020	<0.001	0.17	0.037	599	
MW-1	2/21/2013	0.0021	<0.001	0.0058	<0.003	668	Duplicate sample collected
MW-1	6/3/2013	0.0049	<0.001	0.0048	<0.001	703	Duplicate sample collected
MW-2	12/14/2011	<0.001	<0.001	<0.001	<0.003	1,170	
MW-2	4/26/2012	<0.001	<0.001	<0.001	<0.003	1,040	
MW-2	6/20/2012	<0.001	<0.001	<0.001	<0.003	1,150	
MW-2	9/26/2012	<0.001	<0.001	<0.001	<0.003	1,130	
MW-2	12/5/2012	<0.001	<0.001	<0.001	<0.003	1,120	Duplicate sample collected
MW-2	2/21/2013	<0.001	<0.001	<0.001	<0.003	1,250	
MW-2	6/3/2013	<0.001	<0.001	<0.001	<0.001	1,150	
MW-3	12/14/2011	<0.001	<0.001	<0.001	<0.003	426	
MW-3	4/26/2012	<0.001	<0.001	<0.001	<0.003	406	Duplicate sample collected
MW-3	6/20/2012	<0.001	<0.001	<0.001	<0.003	435	
MW-3	9/26/2012	<0.001	<0.001	0.00057	<0.003	447	Duplicate sample collected
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MW-4	4/26/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/20/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/26/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/5/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	2/21/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/3/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	

Notes:

1.) The environmental cleanup standards for water that are applicable to the Burton Flats Booster Station site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

2.) Data presented for all well locations includes previous four sampling events, when available.

3.) MW-1 was reported as MW-1D in the first quarter 2013 laboratory analytical report.

* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated constituent. The 250 mg/L standard is established only as a guideline to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor.

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

LNAPL = Light Non-Aqueous Phase Liquid

NM = Not measured.

mg/L = milligrams per liter.



18-Jun-2013

Christine Wasko
Tasman Geosciences
5690 Webster Street
Arvada, CO 80002

Tel: (720) 988-2024
Fax:

Re: Burton Flats Booster Station

Work Order: **1306218**

Dear Christine,

ALS Environmental received 5 samples on 06-Jun-2013 08:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink that reads "Sonia West".

Electronically approved by: Jumoke M. Lawal

Sonia West
Project Manager



Certificate No: T104704231-13-12

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1306218

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1306218-01	MW-1	Water		6/3/2013 15:40	6/6/2013 08:50	<input type="checkbox"/>
1306218-02	MW-2	Water		6/3/2013 15:30	6/6/2013 08:50	<input type="checkbox"/>
1306218-03	MW-3	Water		6/3/2013 15:50	6/6/2013 08:50	<input type="checkbox"/>
1306218-04	DUP	Water		6/3/2013	6/6/2013 08:50	<input type="checkbox"/>
1306218-05	Trip Blank - 052013-25	Water		6/3/2013	6/6/2013 08:50	<input type="checkbox"/>

ALS Environmental

Date: 19-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1306218

Case Narrative

Sample MW-3 - 3 x 40mL vials were received broken. The client was notified on June 7, 2013 and will resample at a later date.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Sample ID: MW-1
Collection Date: 6/3/2013 03:40 PM

Work Order: 1306218
Lab ID: 1306218-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: PC
Benzene	0.0024		0.0010	mg/L	1	6/12/2013 02:42 PM
Ethylbenzene	0.0021		0.0010	mg/L	1	6/12/2013 02:42 PM
Toluene	ND		0.0010	mg/L	1	6/12/2013 02:42 PM
Xylenes, Total	ND		0.0010	mg/L	1	6/12/2013 02:42 PM
Surr: 1,2-Dichloroethane-d4	102		71-125	%REC	1	6/12/2013 02:42 PM
Surr: 4-Bromofluorobenzene	108		70-125	%REC	1	6/12/2013 02:42 PM
Surr: Dibromofluoromethane	100		74-125	%REC	1	6/12/2013 02:42 PM
Surr: Toluene-d8	99.8		78-123	%REC	1	6/12/2013 02:42 PM
ANIONS			SW9056			Analyst: JKP
Chloride	703		5.00	mg/L	10	6/18/2013 04:14 AM
Surr: Selenate (surr)	104		80-120	%REC	10	6/18/2013 04:14 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Sample ID: MW-2
Collection Date: 6/3/2013 03:30 PM

Work Order: 1306218
Lab ID: 1306218-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: PC
Benzene	ND		0.0010	mg/L	1	6/12/2013 03:06 PM
Ethylbenzene	ND		0.0010	mg/L	1	6/12/2013 03:06 PM
Toluene	ND		0.0010	mg/L	1	6/12/2013 03:06 PM
Xylenes, Total	ND		0.0010	mg/L	1	6/12/2013 03:06 PM
Surr: 1,2-Dichloroethane-d4	106		71-125	%REC	1	6/12/2013 03:06 PM
Surr: 4-Bromofluorobenzene	103		70-125	%REC	1	6/12/2013 03:06 PM
Surr: Dibromofluoromethane	101		74-125	%REC	1	6/12/2013 03:06 PM
Surr: Toluene-d8	90.5		78-123	%REC	1	6/12/2013 03:06 PM
ANIONS			SW9056			Analyst: JKP
Chloride	1,150		25.0	mg/L	50	6/18/2013 04:28 AM
Surr: Selenate (surr)	99.0		80-120	%REC	50	6/18/2013 04:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Sample ID: MW-3
Collection Date: 6/3/2013 03:50 PM

Work Order: 1306218
Lab ID: 1306218-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ANIONS			SW9056			Analyst: JKP
Chloride	474		5.00	mg/L	10	6/18/2013 05:12 AM
Surr: Selenate (surr)	102		80-120	%REC	10	6/18/2013 05:12 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Sample ID: DUP
Collection Date: 6/3/2013

Work Order: 1306218
Lab ID: 1306218-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: PC
Benzene	0.0049		0.0010	mg/L	1	6/12/2013 03:30 PM
Ethylbenzene	0.0048		0.0010	mg/L	1	6/12/2013 03:30 PM
Toluene	ND		0.0010	mg/L	1	6/12/2013 03:30 PM
Xylenes, Total	ND		0.0010	mg/L	1	6/12/2013 03:30 PM
Surr: 1,2-Dichloroethane-d4	107		71-125	%REC	1	6/12/2013 03:30 PM
Surr: 4-Bromofluorobenzene	90.9		70-125	%REC	1	6/12/2013 03:30 PM
Surr: Dibromofluoromethane	104		74-125	%REC	1	6/12/2013 03:30 PM
Surr: Toluene-d8	90.3		78-123	%REC	1	6/12/2013 03:30 PM
ANIONS			SW9056			Analyst: JKP
Chloride	684		5.00	mg/L	10	6/18/2013 05:27 AM
Surr: Selenate (surr)	103		80-120	%REC	10	6/18/2013 05:27 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
 Work Order: 1306218
 Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: R148765 Instrument ID VOA6 Method: SW8260

MBLK		Sample ID: VBLKW-130612-R148765				Units: µg/L		Analysis Date: 6/12/2013 12:38 PM		
Client ID:		Run ID: VOA6_130612A				SeqNo: 3249419		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	52.95	1.0	50	0	106	71-125	0			
Surr: 4-Bromofluorobenzene	52.19	1.0	50	0	104	70-125	0			
Surr: Dibromofluoromethane	50.95	1.0	50	0	102	74-125	0			
Surr: Toluene-d8	45.37	1.0	50	0	90.7	78-123	0			

LCS		Sample ID: VLCSW-130612-R148765				Units: µg/L		Analysis Date: 6/12/2013 11:22 AM		
Client ID:		Run ID: VOA6_130612A				SeqNo: 3249418		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.88	1.0	50	0	102	80-120				
Ethylbenzene	48.86	1.0	50	0	97.7	80-120				
Toluene	49.04	1.0	50	0	98.1	80-121				
Xylenes, Total	146.9	3.0	150	0	97.9	80-124				
Surr: 1,2-Dichloroethane-d4	51.14	1.0	50	0	102	71-125	0			
Surr: 4-Bromofluorobenzene	52.97	1.0	50	0	106	70-125	0			
Surr: Dibromofluoromethane	50.17	1.0	50	0	100	74-125	0			
Surr: Toluene-d8	49.72	1.0	50	0	99.4	78-123	0			

MS		Sample ID: 1306218-02AMS				Units: µg/L		Analysis Date: 6/12/2013 03:57 PM		
Client ID: MW-2		Run ID: VOA6_130612A				SeqNo: 3249939		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.86	1.0	50	0	97.7	80-120				
Ethylbenzene	41.27	1.0	50	0	82.5	80-120				
Toluene	42.15	1.0	50	0	84.3	80-121				
Xylenes, Total	126.3	3.0	150	0	84.2	80-124				
Surr: 1,2-Dichloroethane-d4	52.09	1.0	50	0	104	71-125	0			
Surr: 4-Bromofluorobenzene	49.92	1.0	50	0	99.8	70-125	0			
Surr: Dibromofluoromethane	50.23	1.0	50	0	100	74-125	0			
Surr: Toluene-d8	46.87	1.0	50	0	93.7	78-123	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 3

Client: Tasman Geosciences
 Work Order: 1306218
 Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R148765** Instrument ID **VOA6** Method: **SW8260**

MSD		Sample ID: 1306218-02AMSD				Units: µg/L		Analysis Date: 6/12/2013 04:23 PM		
Client ID: MW-2		Run ID: VOA6_130612A				SeqNo: 3249940		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.3	1.0	50	0	101	80-120	48.86	2.89	20	
Ethylbenzene	48.22	1.0	50	0	96.4	80-120	41.27	15.5	20	
Toluene	49.75	1.0	50	0	99.5	80-121	42.15	16.5	20	
Xylenes, Total	145.9	3.0	150	0	97.3	80-124	126.3	14.4	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	50.46	1.0	50	0	101	71-125	52.09	3.19	20	
<i>Surr: 4-Bromofluorobenzene</i>	54.36	1.0	50	0	109	70-125	49.92	8.52	20	
<i>Surr: Dibromofluoromethane</i>	48.88	1.0	50	0	97.8	74-125	50.23	2.74	20	
<i>Surr: Toluene-d8</i>	50.68	1.0	50	0	101	78-123	46.87	7.8	20	

The following samples were analyzed in this batch:

1306218-01A	1306218-02A	1306218-04A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tasman Geosciences
 Work Order: 1306218
 Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R149059** Instrument ID **ICS2100** Method: **SW9056** (Dissolve)

MBLK	Sample ID: WBLKW3-R149059				Units: mg/L		Analysis Date: 6/18/2013 12:21 AM			
Client ID:	Run ID: ICS2100_130617B				SeqNo: 3256665		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
<i>Surr: Selenate (surr)</i>	5.039	0.10	5	0	101	80-120	0			

LCS	Sample ID: WLCSW3-R149059				Units: mg/L		Analysis Date: 6/18/2013 12:36 AM			
Client ID:	Run ID: ICS2100_130617B				SeqNo: 3256666		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.72	0.50	20	0	104	80-120				
Surr: Selenate (surr)	4.934	0.10	5	0	98.7	80-120	0			

MS	Sample ID: 1306218-02BMS				Units: mg/L		Analysis Date: 6/18/2013 04:43 AM			
Client ID: MW-2	Run ID: ICS2100_130617B				SeqNo: 3256683		Prep Date:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1716	25	500	1151	113	80-120				
Surr: Selenate (surr)	252.9	5.0	250	0	101	80-120	0			

MSD	Sample ID: 1306218-02BMSD				Units: mg/L		Analysis Date: 6/18/2013 04:57 AM			
Client ID: MW-2	Run ID: ICS2100_130617B				SeqNo: 3256684		Prep Date:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1738	25	500	1151	117	80-120	1716	1.3	20	
Surr: Selenate (surr)	257.5	5.0	250	0	103	80-120	252.9	1.78	20	

The following samples were analyzed in this batch:

1306218-01B	1306218-02B	1306218-03A
1306218-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 18-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
WorkOrder: 1306218

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **TASMAN GEOSCIENCES**

Date/Time Received: **06-Jun-13 08:50**

Work Order: **1306218**

Received by: **RDH**

Checklist completed by *Larash M. Giga*
eSignature

06-Jun-13
Date

Reviewed by: *Sonia West*
eSignature

07-Jun-13
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.2c/2.2c C/U</u> <u>IR1</u>		
Cooler(s)/Kit(s):	<u>2476</u>		
Date/Time sample(s) sent to storage:	<u>6/6/13 19:40</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes: Sx - MW-3 - 2 x Vials received broken - 1 x Vial had a crack but still intact - tried to tape up vial but it broke on taping. Client will resample MW-3 for BTEX.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ORIGIN: AL-0000 (281) 530-5856
ALS LABORATORY GROUP
10450 STANCLIFF RD STE 210
HOUSTON, TX 770994338
UNITED STATES US

SHIP DATE: 05JUN13
ACTWGT: 29.5 LB
CAD: /POS1400
DIMS: 24x16x13 IN
BILL SENDER

TO CLIENT
ALS LAB GROUP
10450 STANCLIFF RD
STE 210
HOUSTON TX 77099
(281) 530-5856

REF:

DEPT:



FedEx
Express



2 of 2

MPS# 7957 8699 1448
0681

Mstr# 8010 5630 6350

0215

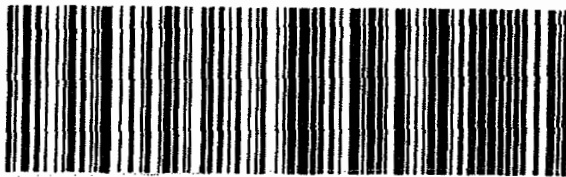
THU - 06 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099

TX-US

IAH



ALS Environmental

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5856
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 6/5/13 Time: 4:00
Name: Christina Winters
Company: [Signature]

Seal Applied By:

Date: 6/6/13

ALS Environmental

Date: 25-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1306552

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1306552-01	MW-3	Water		6/12/2013 12:45	6/13/2013 08:45	<input type="checkbox"/>
1306552-02	Trip Blank 060313-50	Water		6/12/2013	6/13/2013 08:45	<input type="checkbox"/>

ALS Environmental

Date: 25-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1306552

Case Narrative

Batch R149427, Volatile Organics 8260, Sample 1306685-05A: MS/MSD are for an unrelated sample.

ALS Environmental

Date: 25-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Sample ID: MW-3
Collection Date: 6/12/2013 12:45 PM

Work Order: 1306552
Lab ID: 1306552-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			SW8260			Analyst: AKP
Benzene	ND		0.0010	mg/L	1	6/21/2013 10:33 PM
Ethylbenzene	ND		0.0010	mg/L	1	6/21/2013 10:33 PM
Toluene	ND		0.0010	mg/L	1	6/21/2013 10:33 PM
Xylenes, Total	ND		0.0010	mg/L	1	6/21/2013 10:33 PM
Surr: 1,2-Dichloroethane-d4	99.7		71-125	%REC	1	6/21/2013 10:33 PM
Surr: 4-Bromofluorobenzene	95.0		70-125	%REC	1	6/21/2013 10:33 PM
Surr: Dibromofluoromethane	100		74-125	%REC	1	6/21/2013 10:33 PM
Surr: Toluene-d8	97.5		78-123	%REC	1	6/21/2013 10:33 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 25-Jun-13

Client: Tasman Geosciences
Work Order: 1306552
Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R149427** Instrument ID **VOA8** Method: **SW8260**

MBLK		Sample ID: VBLKW-130621-R149427				Units: µg/L		Analysis Date: 6/21/2013 02:04 PM		
Client ID:		Run ID: VOA8_130621A				SeqNo: 3264217		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	48.37	1.0	50	0	96.7	71-125	0			
Surr: 4-Bromofluorobenzene	48.01	1.0	50	0	96	70-125	0			
Surr: Dibromofluoromethane	48.89	1.0	50	0	97.8	74-125	0			
Surr: Toluene-d8	50.22	1.0	50	0	100	78-123	0			

LCS		Sample ID: VLCSW-130621-R149427				Units: µg/L		Analysis Date: 6/21/2013 12:48 PM		
Client ID:		Run ID: VOA8_130621A				SeqNo: 3264216		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SP149427K Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.48	1.0	50	0	101	80-120				
Ethylbenzene	55.19	1.0	50	0	110	80-120				
Toluene	51.17	1.0	50	0	102	80-121				
Xylenes, Total	173.6	3.0	150	0	116	80-124				
Surr: 1,2-Dichloroethane-d4	44.53	1.0	50	0	89.1	71-125	0			
Surr: 4-Bromofluorobenzene	49.94	1.0	50	0	99.9	70-125	0			
Surr: Dibromofluoromethane	46.91	1.0	50	0	93.8	74-125	0			
Surr: Toluene-d8	48.55	1.0	50	0	97.1	78-123	0			

MS		Sample ID: 1306685-06AMS				Units: µg/L		Analysis Date: 6/21/2013 07:36 PM		
Client ID:		Run ID: VOA8_130621A				SeqNo: 3264230		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	57.9	1.0	50	0	116	80-120				
Ethylbenzene	61.72	1.0	50	0	123	80-120				S
Toluene	57.75	1.0	50	0	116	80-121				
Xylenes, Total	192.7	3.0	150	0	128	80-124				S
Surr: 1,2-Dichloroethane-d4	45.57	1.0	50	0	91.1	71-125	0			
Surr: 4-Bromofluorobenzene	51.47	1.0	50	0	103	70-125	0			
Surr: Dibromofluoromethane	47.13	1.0	50	0	94.3	74-125	0			
Surr: Toluene-d8	49.07	1.0	50	0	98.1	78-123	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 2

Client: Tasman Geosciences
 Work Order: 1306552
 Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R149427** Instrument ID **VOA8** Method: **SW8260**

MSD		Sample ID: 1306685-06AMSD		Units: µg/L		Analysis Date: 6/21/2013 08:00 PM				
Client ID:		Run ID: VOA8_130621A		SeqNo: 3264231		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	58.08	1.0	50	0	116	80-120	57.9	0.299	20	
Ethylbenzene	61.81	1.0	50	0	124	80-120	61.72	0.155	20	S
Toluene	58.42	1.0	50	0	117	80-121	57.75	1.16	20	
Xylenes, Total	194.6	3.0	150	0	130	80-124	192.7	0.971	20	S
Surr: 1,2-Dichloroethane-d4	45.56	1.0	50	0	91.1	71-125	45.57	0.0121	20	
Surr: 4-Bromofluorobenzene	52	1.0	50	0	104	70-125	51.47	1.01	20	
Surr: Dibromofluoromethane	47.93	1.0	50	0	95.9	74-125	47.13	1.69	20	
Surr: Toluene-d8	49.54	1.0	50	0	99.1	78-123	49.07	0.951	20	

The following samples were analyzed in this batch:

1306552-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 25-Jun-13

Client: Tasman Geosciences
Project: Burton Flats Booster Station
WorkOrder: 1306552

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **TASMAN GEOSCIENCES**

Date/Time Received: **13-Jun-13 08:45**

Work Order: **1306552**

Received by: **RDH**

Checklist completed by Bernadette A. Fine
eSignature

14-Jun-13
Date

Reviewed by: Senia West
eSignature

17-Jun-13
Date

Matrices: Water

Carrier name: FedEx Priority Overnight

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>0.9c/0.9c c/u</u> <u>IR1</u>		
Cooler(s)/Kit(s):	<u>2616</u>		
Date/Time sample(s) sent to storage:	<u>6/14/13 12:55</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: **83429**

Environmental

TASMAN GEOSCIENCES: Tasman Geosciences

Project: Burton Flats Booster Station

1306552

Customer Information				Project Information			
Purchase Order	Project Name	Burton Flats Booster Station		ALS Project Manager:		BTEX (8/60B)	
Work Order	Project Number	311090017 RCHGN00					
Company Name	Bill To Company	Tasman Geosciences					
Send Report To	Invoice Attn	Christine Wasko					
Address	Address	5690 Webster Street					
City/State/Zip	City/State/Zip	Avada, CO 80002					
Phone	Phone	(720) 968-2024					
Fax	Fax						
e-Mail Address	e-Mail Address						
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A B C D E F G H I J
1	MW-3	10/12/13	12:45	Water	HCL	3	X
2							
3							
4							
5							
6							
7							
8							
9							
10							

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
<i>Dan Groves</i>	<i>Dan Groves</i>	<i>Fed Ex</i>	<i>Fed Ex</i>	<input checked="" type="checkbox"/> Std 10 WK Days	<input type="checkbox"/> 5 WK Days	<input type="checkbox"/> 2 WK Days	<input type="checkbox"/> 24 Hour
Relinquished by:	Date: 10/12/13	Time: 14:45	Received by (Laboratory):	Notes: 10 Day TAT			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID:	Cooler Temp:	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			<input checked="" type="checkbox"/> Level II Std OC <input type="checkbox"/> TRRP Checklist	
						<input type="checkbox"/> Level III Std QC/Flow Data <input type="checkbox"/> TRRP Level IV	
						<input type="checkbox"/> Level IV SW/946/CLP <input type="checkbox"/> Other / EDD	

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed to a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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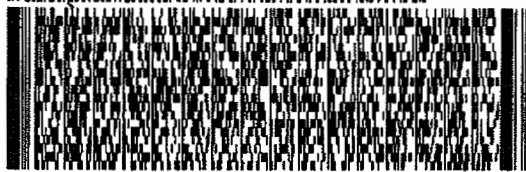
ORIGIN ID:MOBA (281) 530-5656
ALS LABORATORY GROUP
10450 STANCLIFF RD STE 210
HOUSTON, TX 770994338
UNITED STATES US

SHIP DATE: 12JUN13
ACTWGT: 16.7 LB
CAD: /POS1400
DIMS: 14x14x14 IN
BILL SENDER

TO CLIENT SERVCS
ALS LABORATORY SERVICES
10450 STANCLIFF RD
STE 210
HOUSTON TX 77099

(281) 530-5656
REF:

DEPT:



TRK# 8020 3307 3642
0215

THU - 13 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH



7 Payment Bill to
Sender
Act No. 5000
Total Packages
Total Weight

CUSTODY SEAL
Time: 14:45
Signature: Amber Grimes
Company: Terman

Seal Broken By:
Date: 6/13/13

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
Time: 14:45
Signature: Amber Grimes
Company: Terman
Seal Broken By:
Date: 6/13/13