2R - 799

Q4 2012 GWMR

04 / 02 / 2013

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

April 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: Fourth Quarter 2012 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

Dear Mr. von Gonten:

DCP Midstream, LP (DCP) is pleased to submit for your review one copy of the Fourth Quarter 2012 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

Fourth Quarter 2012 Groundwater Monitoring and Activities Summary Report

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

Prepared for:

dcp Midstream

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

Prepared by:

TASMAN GEOSCIENCES

6899 Pecos Street, Unit C
Denver, Colorado 80221

February 15, 2013

Table of Contents

1. Introduction

This report summarizes the groundwater monitoring activities conducted during the fourth quarter 2012 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). Previous groundwater monitoring activities up to and including Third Quarter 2012, were performed by Conestoga-Rovers and Associates (CRA) after which project responsibilities were transferred to Tasman. 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 extraction and conveyance.

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. Subsequent to the submittal of a C-141 report on October 12, 2009, Ocotillo Environmental was contracted to delineate and remediate residual petroleum hydrocarbon impacts at the Site. Site investigation and soil sampling within the release area occurred during the 3rd quarter of 2009 and early 4th 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 impact (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 fourth quarter 2012 monitoring event. Monitoring activities included Site-wide groundwater gauging, LNAPL measurements, and groundwater sampling. 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 fourth quarter 2012, 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 later converted to elevation (feet above mean sea level [AMSL]). Measured groundwater levels and calculated groundwater elevation data are presented in Table 1 and a fourth quarter 2012 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 3,177.32 feet AMSL at monitoring well MW-2 to 3,177.50 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 0.0015 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 representative of the general observed gradient and flow direction.

LNAPL was detected at monitoring well MW-4 during the fourth quarter 2012 with a measured thickness of 1.12-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 collected during the fourth quarter 2012 monitoring event and were 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 fourth quarter 2012 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 (^{0}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 benzene concentrations are in excess of the New Mexico Water Quality Control Commission (NMWQCC) Standard at monitoring well MW-1 at a concentration of 0.020 mg/L. 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 599 mg/L, 1,120 mg/L, and 444 mg/L, respectfully. Chloride values in all of the wells exceeded the NMWQCC suggested guideline of 250 mg/L.

Figure 4 displays analytical results from the fourth quarter 2012 event as well as the third quarter 2012 analytical results. Table 2 presents fourth quarter 2012 monitoring data along with data collected during the previous 3 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-2 were collected during the sampling event. The trip blank was fully in control, having no detection of targets.

The duplicate sample collected at MW-2 was in compliance with QA/QC standards. BTEX concentrations in MW-2 and duplicate sample were below laboratory detection limits.

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

Monitored natural attenuation is the current remediation strategy at the Site. Additional remediation options have been evaluated and are outlined below in the recommendations section.

5. Conclusions

Comparison of the fourth quarter 2012 monitoring data and historic information provides the following general observations:

The groundwater elevation surface beneath 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 fourth quarter 2012.

Elevated dissolved phase BTEX concentrations persist at down-gradient well MW-1, although concentrations have decreased by an order of magnitude since the first monitoring event in 2011. Monitoring wells MW-2 and MW-3 remain below laboratory detection limits suggesting that the dissolved phase hydrocarbon plume has minor lateral dispersion across the Site. Both the dissolved and free phase petroleum hydrocarbon plumes appear stationary possibly due to attenuation, low permeability within the aquifer, low hydraulic gradient, and/or a combination of these factors.

6. Recommendations

Based on evaluation of fourth quarter 2012 and historical Site observations and monitoring results, recommendations for future activities include:

- Installation of a passive LNAPL collection bailer at MW-4 to address residual free phase hydrocarbons.

- Continue quarterly groundwater monitoring and sampling at the monitoring locations illustrated on Figure 2 to assess impacts of the contaminant fate and transport.

Tables

TABLE 1
FOURTH QUARTER 2012
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)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-1	12/14/2011	21.17						
MW-1	4/26/2012	21.24				3198.88	3177.64	
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	-0.01
MW-2	12/14/2011	22.33						
MW-2	4/26/2012	22.39				3200.00	3177.61	
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	-0.02
MW-3	12/14/2011	23.02						
MW-3	4/26/2012	23.08				3200.85	3177.77	
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	-0.17
MW-4*	4/26/2012	24.00	23.01	0.99		NM	NM	NM
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
						Average change in groundwater elevation since the previous monitoring event		-0.07

Notes:

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

2- Total depths were collected and recorded during the fourth quarter 2012 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.

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

5- 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
FOURTH QUARTER 2012
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	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**	0.17	<0.001	0.037	**599**	
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-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
MW-3	12/5/2012	<0.001	<0.001	<0.001	<0.003	**444**	
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	

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.

* 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.

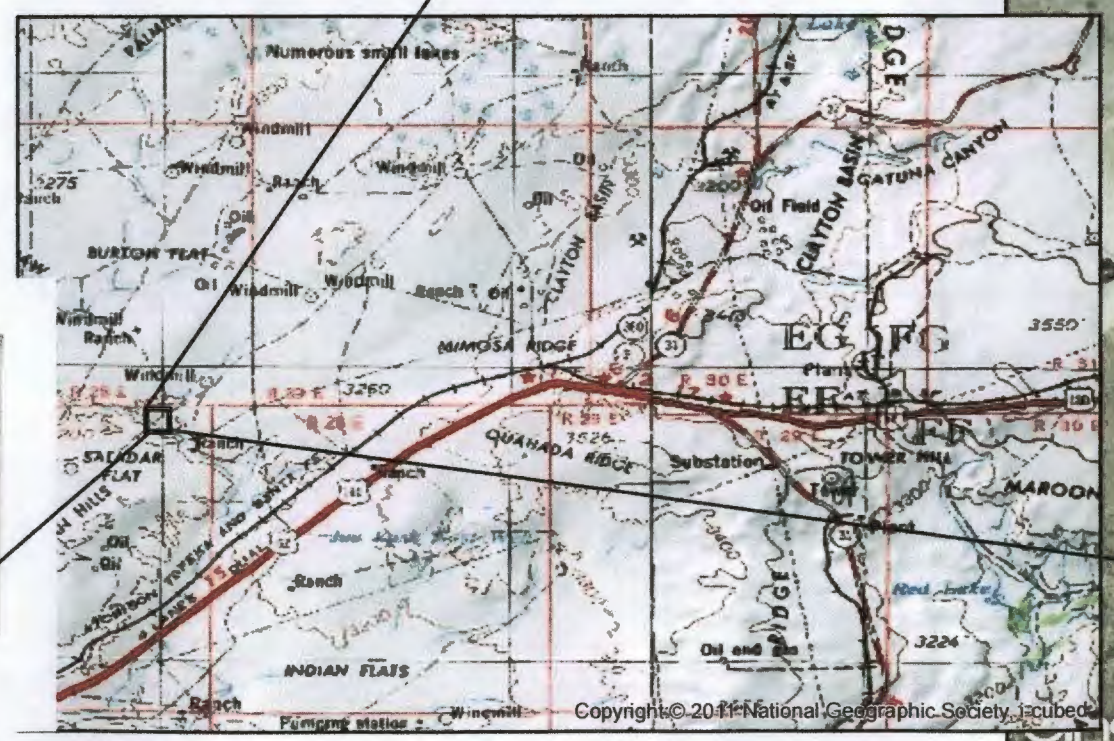
Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4

LNAPL = Light Non-Aqueous Phase Liquid

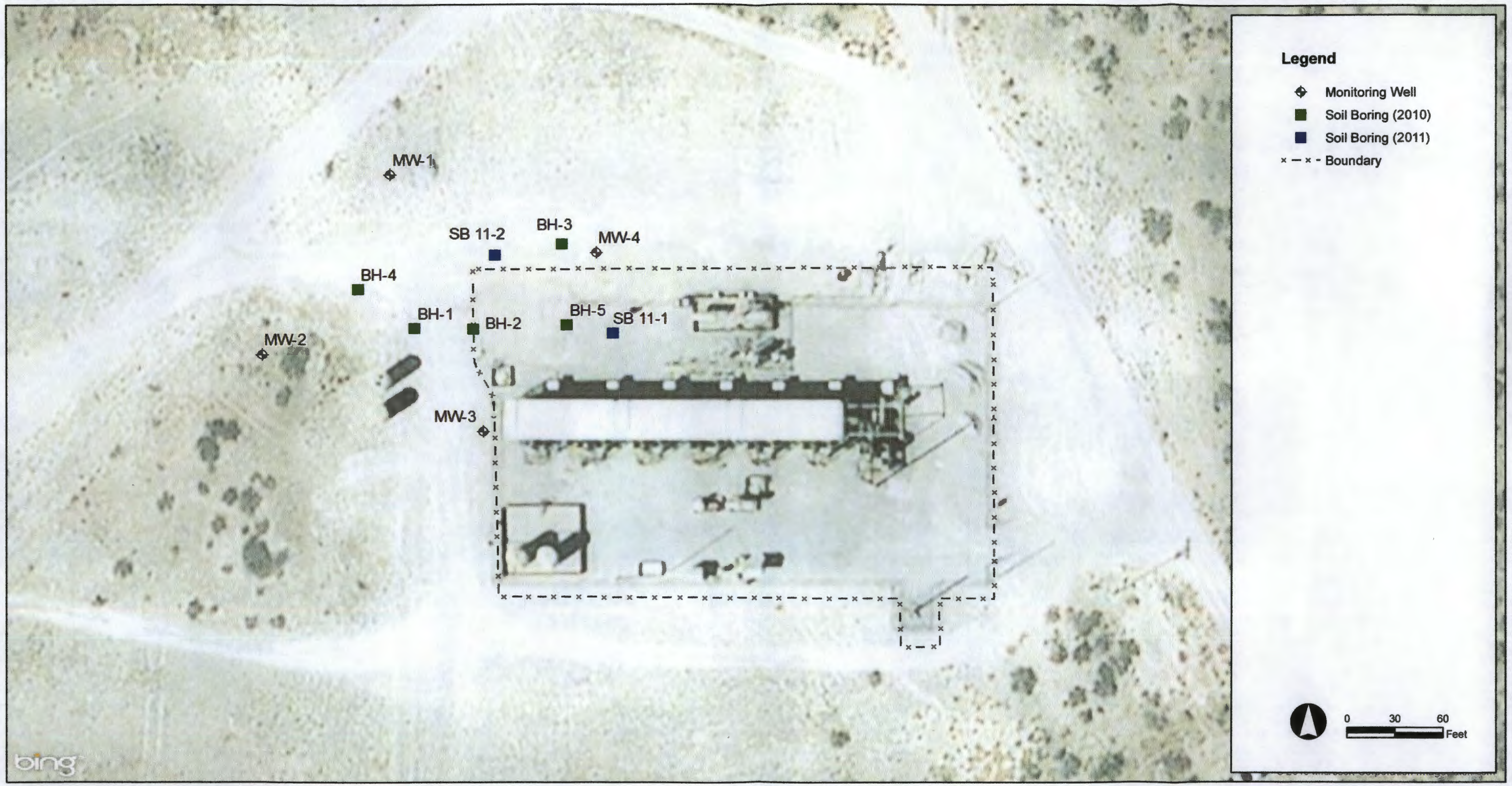
NM = Not measured.

mg/L = milligrams per liter.

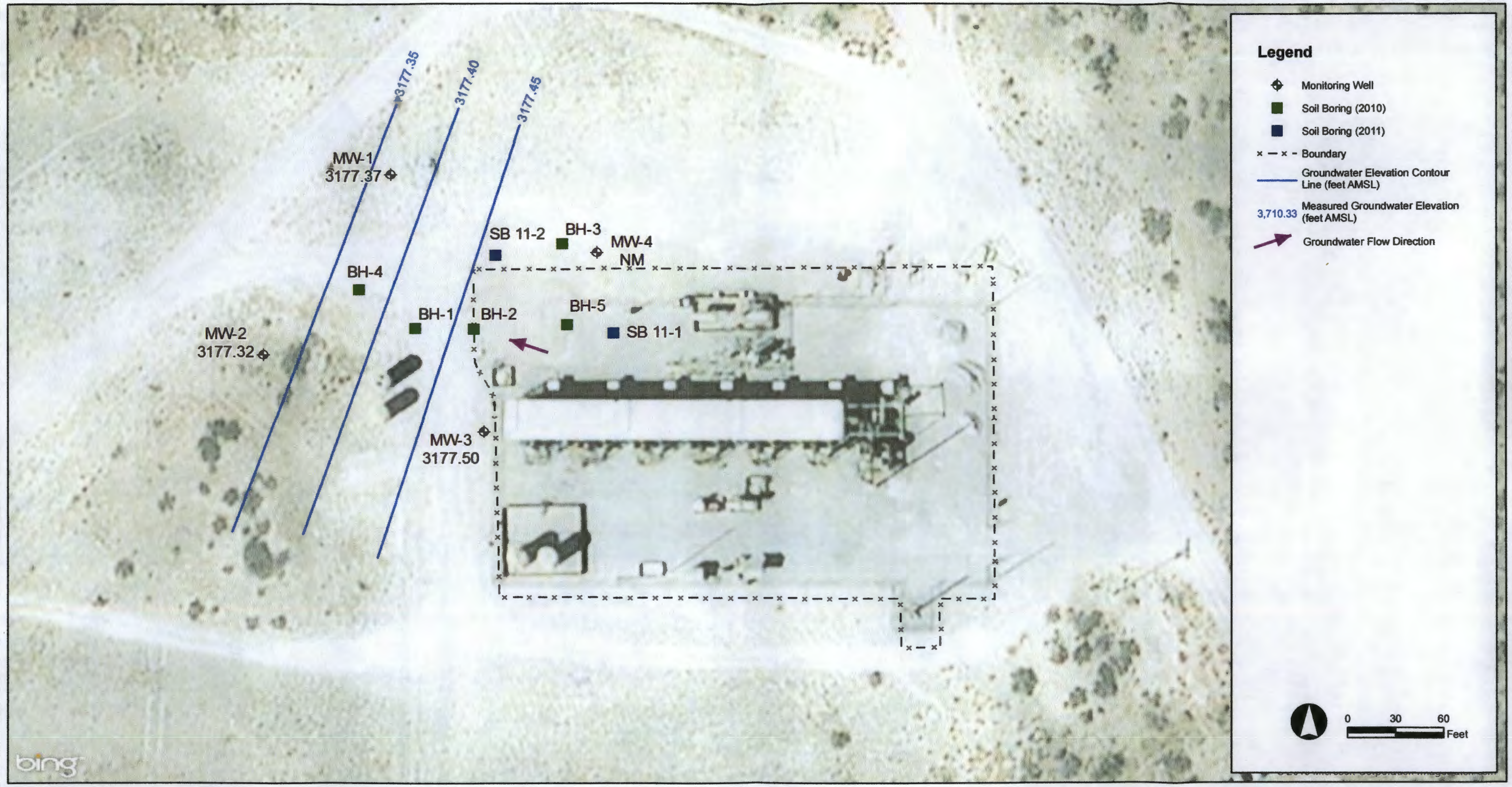
Figures



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



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 MAP	FIGURE 2

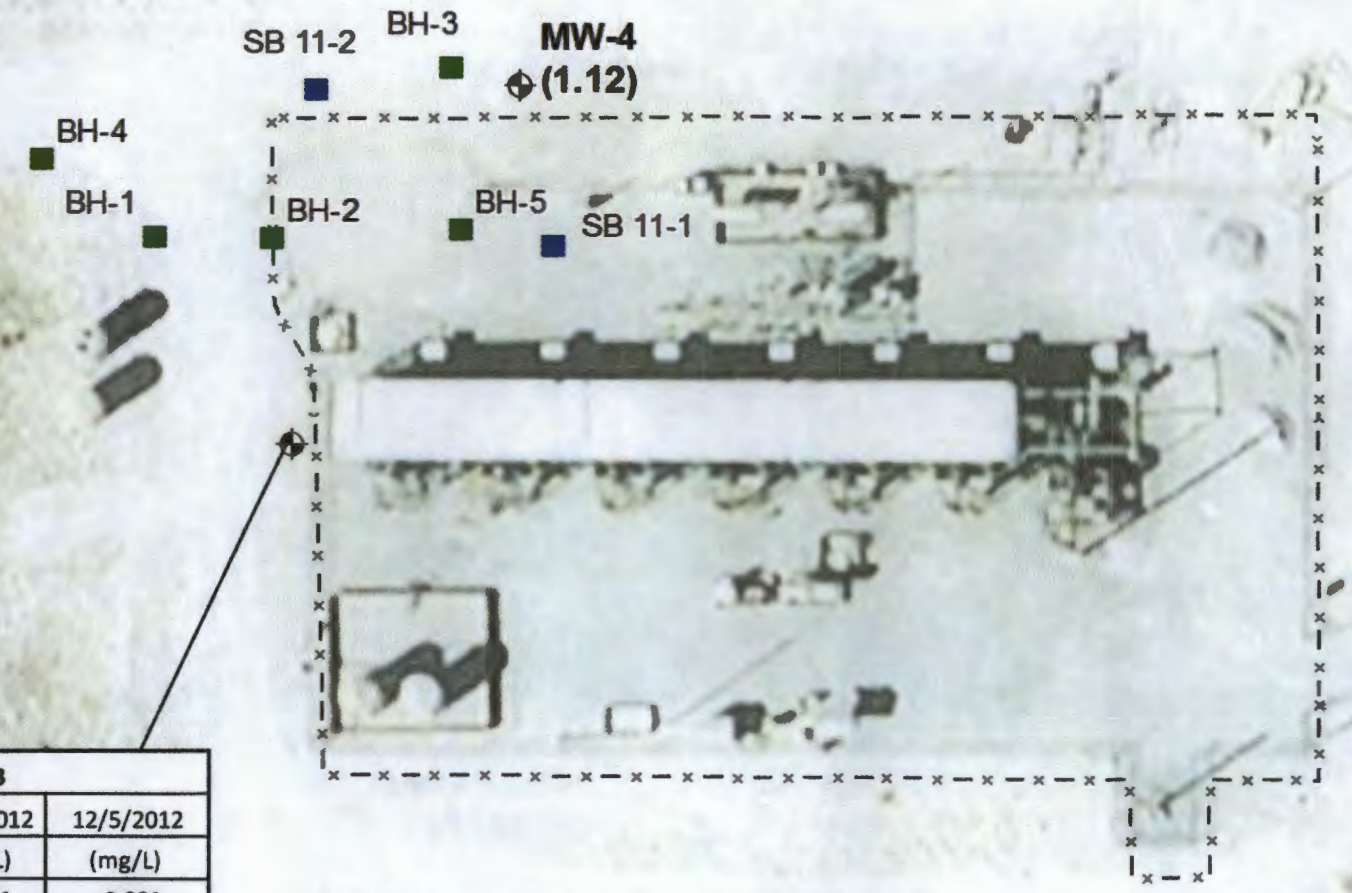


DESIGNED BY: C. Wasko DRAWN BY: J. Clonts SHEET CHK'D BY: CROSS CHK'D BY: APPROVED BY: APPROVED BY:	TASMAN GEOSCIENCES Tasman Geosciences, LLC 6899 Pecos Street - Unit C Denver, CO 80221 303 487 1228	**DCP Midstream** **Burton Flats Booster Station** *Lots 4 and 5, Section 1, Township 21 South, Range 27 East* *Eddy County, New Mexico*	POTENTIOMETRIC SURFACE MAP	FIGURE 3

MW-1		
Compound	9/26/2012 (mg/L)	12/5/2012 (mg/L)
Benzene	0.0615	0.020
Toluene	<0.001	0.17
Ethylbenzene	0.0803	<0.001
Total Xylenes	0.0015	0.037
Chlorides	590	599

MW-2		
Compound	9/26/2012 (mg/L)	12/5/2012 (mg/L)
Benzene	<0.001	<0.001
Toluene	<0.001	<0.001
Ethylbenzene	<0.001	<0.001
Total Xylenes	<0.003	<0.003
Chlorides	1130	1120

MW-3		
Compound	9/26/2012 (mg/L)	12/5/2012 (mg/L)
Benzene	<0.001	<0.001
Toluene	<0.001	<0.001
Ethylbenzene	0.00057	<0.001
Total Xylenes	<0.003	<0.003
Chlorides	447	444



Legend

- Monitoring Well
- Soil Boring (2010)
- Soil Boring (2011)
- Boundary
- (1.12) Measured LNAPL Thickness

0 30 60 Feet

bing

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

ANALYTICAL RESULTS MAP
(DECEMBER 5, 2012)

FIGURE
4

Appendix A

Laboratory Analytical Reports

17-Dec-2012

Christine Wasko
Tasman Geosciences
5690 Webster Street
Arvada, CO 80002

Tel: (720) 988-2024
Fax:

Re: Burton Flats Booster Station Work Order: **1212312**

Dear Christine,

ALS Environmental received 5 samples on 08-Dec-2012 09:30 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,

Sonia West

Electronically approved by: Luke F. Hernandez

Sonia West
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 17-Dec-12

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: **1212312**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1212312-01	MW - 1	Water		12/5/2012 15:25	12/8/2012 09:30	☐
1212312-02	MW - 2	Water		12/5/2012 15:05	12/8/2012 09:30	☐
1212312-03	MW - 3	Water		12/5/2012 15:45	12/8/2012 09:30	☐
1212312-04	DUP	Water		12/5/2012	12/8/2012 09:30	☐
1212312-05	Trip Blank 111912-19	Water		12/5/2012	12/8/2012 09:30	☐

Client:	Tasman Geosciences
Project:	Burton Flats Booster Station
Work Order:	1212312

Case Narrative

Batch R139935, Method 300_W, Sample MW-3: MS/MSD was outside of the QC limits due to possible matrix interference.

ALS Environmental

Date: *17-Dec-12*

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1212312
Sample ID: MW - 1
Lab ID: 1212312-01
Collection Date: 12/5/2012 03:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW LEVEL VOLATILES - SW8260C			**SW8260**			Analyst: **AKP**
Benzene	**0.020**		**0.0010**	**mg/L**	1	12/16/2012 05:03 AM
Ethylbenzene	**0.17**		**0.0010**	**mg/L**	1	12/16/2012 05:03 AM
Toluene	ND		0.0010	mg/L	1	12/16/2012 05:03 AM
Xylenes, Total	**0.037**		**0.0030**	**mg/L**	1	12/16/2012 05:03 AM
Surr: 1,2-Dichloroethane-d4	*88.7*		*71-125*	*%REC*	1	12/16/2012 05:03 AM
Surr: 4-Bromofluorobenzene	*89.2*		*70-125*	*%REC*	1	12/16/2012 05:03 AM
Surr: Dibromofluoromethane	*92.9*		*74-125*	*%REC*	1	12/16/2012 05:03 AM
Surr: Toluene-d8	*90.9*		*78-123*	*%REC*	1	12/16/2012 05:03 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**599**		**25.0**	**mg/L**	50	12/17/2012 10:05 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	50	12/17/2012 10:05 AM

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

ALS Environmental

Date: *17-Dec-12*

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1212312
Sample ID: MW - 2
Lab ID: 1212312-02
Collection Date: 12/5/2012 03:05 PM
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	12/16/2012 05:27 AM
Ethylbenzene	ND		0.0010	mg/L	1	12/16/2012 05:27 AM
Toluene	ND		0.0010	mg/L	1	12/16/2012 05:27 AM
Xylenes, Total	ND		0.0030	mg/L	1	12/16/2012 05:27 AM
Surr: 1,2-Dichloroethane-d4	*93.8*		*71-125*	*%REC*	1	12/16/2012 05:27 AM
Surr: 4-Bromofluorobenzene	*86.6*		*70-125*	*%REC*	1	12/16/2012 05:27 AM
Surr: Dibromofluoromethane	*96.0*		*74-125*	*%REC*	1	12/16/2012 05:27 AM
Surr: Toluene-d8	*94.3*		*78-123*	*%REC*	1	12/16/2012 05:27 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**1,120**		**25.0**	**mg/L**	50	12/17/2012 10:27 AM
Surr: Selenate (surr)	*99.8*		*85-115*	*%REC*	50	12/17/2012 10:27 AM

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

ALS Environmental

Date: *17-Dec-12*

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1212312
Sample ID: MW - 3
Lab ID: 1212312-03
Collection Date: 12/5/2012 03:45 PM
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	12/16/2012 12:36 AM
Ethylbenzene	ND		0.0010	mg/L	1	12/16/2012 12:36 AM
Toluene	ND		0.0010	mg/L	1	12/16/2012 12:36 AM
Xylenes, Total	ND		0.0030	mg/L	1	12/16/2012 12:36 AM
Surr: 1,2-Dichloroethane-d4	*91.3*		*71-125*	*%REC*	1	12/16/2012 12:36 AM
Surr: 4-Bromofluorobenzene	*83.7*		*70-125*	*%REC*	1	12/16/2012 12:36 AM
Surr: Dibromofluoromethane	*92.6*		*74-125*	*%REC*	1	12/16/2012 12:36 AM
Surr: Toluene-d8	*93.1*		*78-123*	*%REC*	1	12/16/2012 12:36 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**444**		**5.00**	**mg/L**	10	12/17/2012 10:48 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	12/17/2012 10:48 AM

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

ALS Environmental

Date: *17-Dec-12*

Client: Tasman Geosciences
Project: Burton Flats Booster Station
Work Order: 1212312
Sample ID: DUP
Lab ID: 1212312-04
Collection Date: 12/5/2012
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	12/16/2012 05:52 AM
Ethylbenzene	ND		0.0010	mg/L	1	12/16/2012 05:52 AM
Toluene	ND		0.0010	mg/L	1	12/16/2012 05:52 AM
Xylenes, Total	ND		0.0030	mg/L	1	12/16/2012 05:52 AM
Surr: 1,2-Dichloroethane-d4	*92.4*		*71-125*	*%REC*	1	12/16/2012 05:52 AM
Surr: 4-Bromofluorobenzene	*84.3*		*70-125*	*%REC*	1	12/16/2012 05:52 AM
Surr: Dibromofluoromethane	*94.1*		*74-125*	*%REC*	1	12/16/2012 05:52 AM
Surr: Toluene-d8	*93.6*		*78-123*	*%REC*	1	12/16/2012 05:52 AM

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

ALS Environmental

Date: 17-Dec-12

Client: Tasman Geosciences

Work Order: 1212312

Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R139916** Instrument ID **VOA4** Method: **SW8260**

MBLK Sample ID: **VBLKW-121215-R139916** Units: **µg/L** Analysis Date: **12/16/2012 12:11 AM**

Client ID: Run ID: **VOA4_121215A** SeqNo: **3054760** 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	0.50								
Surr: 1,2-Dichloroethane-d4	*45.28*	1.0	*50*	0	*90.6*	*71-125*	0			
Surr: 4-Bromofluorobenzene	*41.78*	1.0	*50*	0	*83.6*	*70-125*	0			
Surr: Dibromofluoromethane	*46.07*	1.0	*50*	0	*92.1*	*74-125*	0			
Surr: Toluene-d8	*46.38*	1.0	*50*	0	*92.8*	*78-123*	0			

LCS Sample ID: **VLCSW-121215-R139916** Units: **µg/L** Analysis Date: **12/15/2012 10:59 PM**

Client ID: Run ID: **VOA4_121215A** SeqNo: **3054758** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.73	1.0	50	0	101	80-120	0			
Ethylbenzene	53.38	1.0	50	0	107	80-120	0			
Toluene	51.92	1.0	50	0	104	80-121	0			
Xylenes, Total	158.7	0.50	150	0	106	80-124	0			
Surr: 1,2-Dichloroethane-d4	*43.2*	1.0	*50*	0	*86.4*	*71-125*	0			
Surr: 4-Bromofluorobenzene	*44.96*	1.0	*50*	0	*89.9*	*70-125*	0			
Surr: Dibromofluoromethane	*45.7*	1.0	*50*	0	*91.4*	*74-125*	0			
Surr: Toluene-d8	*46.56*	1.0	*50*	0	*93.1*	*78-123*	0			

LCSD Sample ID: **VLCSDW-121215-R139916** Units: **µg/L** Analysis Date: **12/15/2012 11:23 PM**

Client ID: Run ID: **VOA4_121215A** SeqNo: **3054759** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.41	1.0	50	0	96.8	80-120	50.73	4.67	20	
Ethylbenzene	51.02	1.0	50	0	102	80-120	53.38	4.53	20	
Toluene	49.93	1.0	50	0	99.9	80-121	51.92	3.92	20	
Xylenes, Total	151.8	0.50	150	0	101	80-124	158.7	4.5	20	
Surr: 1,2-Dichloroethane-d4	*42.66*	1.0	*50*	0	*85.3*	*71-125*	43.2	*1.26*	*20*	
Surr: 4-Bromofluorobenzene	*44.22*	1.0	*50*	0	*88.4*	*70-125*	44.96	*1.68*	*20*	
Surr: Dibromofluoromethane	*45.73*	1.0	*50*	0	*91.5*	*74-125*	45.7	*0.0572*	*20*	
Surr: Toluene-d8	*46.35*	1.0	*50*	0	*92.7*	*78-123*	46.56	*0.458*	*20*	

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

Client: Tasman Geosciences
Work Order: 1212312
Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R139916** Instrument ID **VOA4** Method: **SW8260**

MS Sample ID: **1212312-03AMS** Units: **µg/L** Analysis Date: **12/16/2012 01:00 AM**
Client ID: **MW - 3** Run ID: **VOA4_121215A** SeqNo: **3054762** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.58	1.0	50	0	109	80-120	0			
Ethylbenzene	55.77	1.0	50	0	112	80-120	0			
Toluene	54.65	1.0	50	0	109	80-121	0			
Xylenes, Total	165.3	0.50	150	0	110	80-124	0			
Surr: 1,2-Dichloroethane-d4	*43.39*	1.0	*50*	0	*86.8*	*71-125*	0			
Surr: 4-Bromofluorobenzene	*43.99*	1.0	*50*	0	*88*	*70-125*	0			
Surr: Dibromofluoromethane	*45.29*	1.0	*50*	0	*90.6*	*74-125*	0			
Surr: Toluene-d8	*46.28*	1.0	*50*	0	*92.6*	*78-123*	0			

MSD Sample ID: **1212312-03AMSD** Units: **µg/L** Analysis Date: **12/16/2012 01:25 AM**
Client ID: **MW - 3** Run ID: **VOA4_121215A** SeqNo: **3054763** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.25	1.0	50	0	106	80-120	54.58	2.47	20	
Ethylbenzene	55.46	1.0	50	0	111	80-120	55.77	0.559	20	
Toluene	54.55	1.0	50	0	109	80-121	54.65	0.184	20	
Xylenes, Total	164.2	0.50	150	0	109	80-124	165.3	0.632	20	
Surr: 1,2-Dichloroethane-d4	*42.79*	1.0	*50*	0	*85.6*	*71-125*	43.39	*1.4*	*20*	
Surr: 4-Bromofluorobenzene	*43.98*	1.0	*50*	0	*88*	*70-125*	43.99	*0.0341*	*20*	
Surr: Dibromofluoromethane	*45.52*	1.0	*50*	0	*91*	*74-125*	45.29	*0.509*	*20*	
Surr: Toluene-d8	*46.46*	1.0	*50*	0	*92.9*	*78-123*	46.28	*0.378*	*20*	

The following samples were analyzed in this batch: 1212312-01A 1212312-02A 1212312-03A 1212312-04A

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

Client: Tasman Geosciences
Work Order: 1212312
Project: Burton Flats Booster Station

QC BATCH REPORT

Batch ID: **R139935** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-121612-R139935** Units: **mg/L** Analysis Date: **12/17/2012 02:17 AM**
Client ID: Run ID: **ICS3000_121216B** SeqNo: **3055162** 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								
Surr: Selenate (surr)	*4.822*	0.10	*5*	0	*96.4*	*85-115*	0			

LCS Sample ID: **WLCSW1-121612-R139935** Units: **mg/L** Analysis Date: **12/17/2012 02:38 AM**
Client ID: Run ID: **ICS3000_121216B** SeqNo: **3055164** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	18.45	0.50	20	0	92.3	90-110	0			
Surr: Selenate (surr)	*4.67*	0.10	*5*	0	*93.4*	*85-115*	0			

MS Sample ID: **1212312-03BMS** Units: **mg/L** Analysis Date: **12/17/2012 11:09 AM**
Client ID: **MW - 3** Run ID: **ICS3000_121216B** SeqNo: **3055201** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	512	5.0	100	444.5	67.6	80-120	0			SO
Surr: Selenate (surr)	*49.25*	1.0	*50*	0	*98.5*	*85-115*	0			

MSD Sample ID: **1212312-03BMSD** Units: **mg/L** Analysis Date: **12/17/2012 11:30 AM**
Client ID: **MW - 3** Run ID: **ICS3000_121216B** SeqNo: **3055202** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	514.6	5.0	100	444.5	70.1	80-120	512	0.504	20	SO
Surr: Selenate (surr)	*49.76*	1.0	*50*	0	*99.5*	*85-115*	49.25	*1.05*	*20*	

The following samples were analyzed in this batch: 1212312-01B 1212312-02B 1212312-03B

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

Client: Tasman Geosciences
Project: Burton Flats Booster Station
WorkOrder: 1212312

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **TASMAN GEOSCIENCES** Date/Time Received: **08-Dec-12 09:30**

Work Order: **1212312** Received by: **RDN**

Checklist completed by *Johnnie B. Allen* (eSignature) 10-Dec-12 (Date) Reviewed by: *Sonia West* (eSignature) 11-Dec-12 (Date)

Matrices: water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.4 C/uc	005	
Cooler(s)/Kit(s):	2796		
Date/Time sample(s) sent to storage:	12/10/12 15:25		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 76954

1212312

TASMAN GEOSCIENCES: Tasman Geosciences

Project: Burton Flats Booster Station

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Burton Flats Booster Station	A	BTEX (circled)
Work Order		Project Number	311090017 RC#GN00	B	~~GRO (8015M)~~
Company Name	Tasman Geosciences	Bill To Company	DCP Midstream, LP	C	~~DRO (8015M)~~
Send Report To	Christine Wasko	Invoice Attn	Chandler Cole	D	Anions (9056) Cl (circled)
Address	5690 Webster Street	Address	370 17th Street, Suite 2500	E	
				F	
City/State/Zip	Arvada, CO 80002	City/State/Zip	Denver, Colorado 80202	G	
Phone	(720) 988-2024	Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	12/5/12	1525	Water	HCl	4	X	—		X							☐
2	MW-2	↓	1505	Water	HCl	4	X	—		X							☐
3	MW-3	↓	1545	Water	HCl	4	X	—		X							☐
4	MW-4	—	—	Water	—	—	—					LNAPL					☐
5	DUP	—	—	Water	HCl	3	X	—									☐
6	MS	12/5/12	1545	Water	HCl	3	X	—									☐
7	MSD	12/5/12	1545	Water	HCl	3	X	—									☐
8																	
9																	
10																	

Sampler(s) Please Print & Sign: CHRISTINE WASKO

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: | Date: 12/7/12 | Time: 1700 | Received by: Fedex

Relinquished by: | Date: 12/8/12 | Time: 0930 | Received by (Laboratory): RW

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Day TAT

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 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 in 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.

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

CUSTODY SEAL

Date: 12/5/12 Time: 1705
Name: [illegible]
Company: [illegible]

Seal Broken By: [illegible]
Date: 12/8/12

SDR SDR

FedEx Express

Delivery 151966 10/04 MWI FedEx® Saturday Delivery 151966 10/04 MWI FedEx® Saturda

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	0.17	<0.001	0.037	599	
MW-2	3/19/2008	NS	NS	NS	NS	NS	
MW-2	6/29/2008	NS	NS	NS	NS	NS	
MW-2	9/17/2008	NS	NS	NS	NS	NS	
MW-2	12/3/2008	NS	NS	NS	NS	NS	
MW-2	3/11/2009	NS	NS	NS	NS	NS	
MW-2	5/19/2009	NS	NS	NS	NS	NS	
MW-2	9/23/2009	NS	NS	NS	NS	NS	
MW-2	12/20/2009	NS	NS	NS	NS	NS	
MW-2	3/22/2010	NS	NS	NS	NS	NS	
MW-5*	3/29/2010	NS	NS	NS	NS	NS	
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-3	3/19/2008	NS	NS	NS	NS	NS	
MW-3	6/29/2008	NS	NS	NS	NS	NS	
MW-3	9/17/2008	NS	NS	NS	NS	NS	
MW-3	12/3/2008	NS	NS	NS	NS	NS	
MW-3	3/11/2009	NS	NS	NS	NS	NS	
MW-3	5/19/2009	NS	NS	NS	NS	NS	
MW-3	9/23/2009	NS	NS	NS	NS	NS	
MW-3	12/20/2009	NS	NS	NS	NS	NS	
MW-3	3/22/2010	NS	NS	NS	NS	NS	
MW-6*	3/29/2010	NS	NS	NS	NS	NS	
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
MW-3	12/5/2012	<0.001	<0.001	<0.001	<0.003	444	
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	

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

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.

* 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.