

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



#7592

FOR OGCC USE ONLY

RECEIVED
2/20/2013

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: _____	Contact Name and Telephone: _____
Name of Operator: _____	_____
Address: _____	No: _____
City: _____ State: _____ Zip: _____	Fax: _____
API Number: _____	County: _____
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location: (QtrQtr, Sec, Twp, Rng, Meridian): _____ Latitude: _____ Longitude: _____	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): _____

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): _____

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: _____

Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	_____	_____
Vegetation	_____	_____
Groundwater	_____	_____
Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Describe how source is to be removed:

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:



Tracking Number: _____
Name of Operator: XTC
OGCC Operator No: _____
Received Date: _____
Well Name & No: PCU 296-6A
Facility Name & No: Location ID #398837

REMEDIAL WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Available information indicates that the uppermost groundwater bearing zone is greater than 150 feet below the ground surface. Soil samples were collected for laboratory analysis of subliner material to confirm no groundwater impact potential exists (see Table 1).

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Please see Attachment I

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☒ N If yes, describe:

Based on subliner sample results no additional assessment will be necessary beneath the Freshwater, Reserve Pit or Cuttings Pits #1, #2 and #3 (see Table 1).

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Synthetic liners from each of the pits have been removed and will be transported to an approved offsite disposal/recycling facility. Reserve Pit and Cuttings Pits #1, #2 and #3 contents will either be treated onsite with a temporary Thermal Desorption Unit; Mix/blend processed to below Table 910-1 concentration levels and/or transported to an approved offsite disposal/recycling facility. Material mix/blend and/or Thermal Desorption Unit processed will be used for onsite fill.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>1/21/11</u>	Date Site Investigation Completed: <u>in progress</u>	Date Remediation Plan Submitted: <u>2/20/2013</u>
Remediation Start Date: <u>pending approval</u>	Anticipated Completion Date: <u>pending approval</u>	Actual Completion Date: <u>TBD</u>

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jessica Dooling

Signed: _____

Title: Lead EH&S Coordinator

Date: 2/20/2013

OGCC Approved: _____

Title: FOR Chris Camfield Date: 02/21/2013

EPS
NW Region

ATTACHMENT I

PCU 296-6A Pit Closure Workplan, Form 27 Page 1

Describe initial action taken:

The site consists of Freshwater, Reserve Pit and Cuttings Pits #1, #2 and #3 (see Figure 1).

1. Freshwater Pit

- Freshwater Pit contents (de minimis) and associated synthetic liners were removed and transported to an offsite permitted disposal/recycling facility.
- Freshwater Pit subliner composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for pH (9.57) and Arsenic (7.6 mg/kg).

2. Reserve Pit

- The Reserve Pit contents in the smaller Settling Chamber side of the pit were solidified with native onsite material and sampled for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for pH (9.67) and Arsenic (5.9 mg/kg).
- The Reserve pit contents in the larger part of the pit were solidified and sampled for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for TPH (738 mg/kg), EC (9.990 mmhos/cm), pH (12.68) and Arsenic (14.2 mg/kg).
- Reserve Pit subliner composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for pH (10.23) and Arsenic (7.7 mg/kg).

3. Cuttings Pit #1

- Cuttings Pit #1 contents were solidified and composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for TPH (554 mg/kg), Benzene (0.805 mg/kg), SAR (17.9), pH (12.14) and Arsenic (9.6 mg/kg).
- Cuttings Pit #1 subliner composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for SAR (17.6), pH (10.87) and Arsenic (6.0 mg/kg).

4. Cuttings Pit #2

- Cuttings Pit #2 contents were solidified and composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for Benzene (1.35 mg/kg), EC (4.640 mmhos/cm), SAR (56.6), pH (11.46) and Arsenic (12.6 mg/kg).
- Cuttings Pit #2 subliner composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for pH (9.75) and Arsenic (6.4 mg/kg).

5. Cuttings Pit #3

- Cuttings Pit #3 contents were solidified and composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for TPH (557 mg/kg), (Benzene (0.939 mg/kg), EC (5.090 mmhos/cm), SAR (97.4), pH (11.40) and Arsenic (13.9 mg/kg).
 - Cuttings Pit #3 subliner composite samples were collected and analyzed for Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for pH (10.05) and Arsenic (9.2 mg/kg).
-
- Reserve Pit and Cuttings Pits #1, #2 and #3 contents were removed from the respective pits and will either be treated onsite with a temporary Thermal Desorption unit; mix/blend processed and sampled to ensure Table 910-1 compliance and/or transported to an offsite permitted disposal/recycling facility.
 - Mix/blend and/or Thermal Desorption Unit processed Reserve and Cuttings Pit material that meets Table 910-1 concentration levels will be used onsite for backfill.
 - All associated Freshwater, Reserve and Cuttings Pits #1, #2 and #3 synthetic liners were removed and will be transported to an offsite permitted disposal/recycling facility.
 - Refer to Table 1 for a summary of the laboratory results and Figure 1 for layout of the pits and sample locations.
 - Elevated Arsenic levels above Table 910-1 concentration were detected beneath the Freshwater, Reserve and Cuttings Pits #1, #2 and #3. Please

refer to the associated sundry requesting consideration of background Arsenic levels.

- Any remaining elevated levels of Electrical Conductivity, SAR and pH detected beneath the pits or in material used for backfill will be covered with a minimum 3 feet of clean, native soils per COGCC guidance. No additional treatment of these soils will be required.
- Material used to fill the top 3 feet of each pit will be found onsite.
- Reclamation activities will be performed in accordance with applicable COGCC 900, 1000 Series rules and as specified in the Surface Use Plan and BLM Conditions of Approval.

Table 1
Location: PCU 296-6A
Lab Summary

Last update 2/19/2013

Analytical Parameter	Fresh Water Pit	Reserve Pit				Cuttings #1		Cuttings #2		Cuttings #3		Background									COGCC	Maximum based on Background	
(with units)	FW Pit Contents	FW Pit Subliner 11/26/12	RP Settling Chamber 11/29/12	RP Post Solid. 12/17/12	RP Subliner 1/7/13	Cut #1 Post Solid. 11/6/12	Cut #1 Subliner 11/6/12	Cut #2 Post Solid. 11/6/12	Cut #2 Subliner 11/8/12	Cut #3 Post Solid. 11/6/12	Cut #3 Subliner 11/6/12	#1	#2	#3	#4	#5	#6	#7	#8	#9	Table 910-1 Concentration Levels		
Accutest Job #	Pit Contents De Minimis	D41248	D41382	D42001	D42445	D40712	D40714	D40712	D40798	D40712	D40713	D20596 (1/21/11)					D40717 (11/6/12)				-	-	
Sample type (Composite/Discrete)		C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	-	-
TPH (GRO) (mg/Kg)		ND	ND	ND	ND	17.7	ND	9.39	ND	11.7	ND	ND	-	-	-	-	-	-	-	-	-	-	-
TPH (DRO) (mg/Kg)		ND	21.8	738	14.9	536	74.7	350	ND	545	ND	ND	-	-	-	-	-	-	-	-	-	-	-
TPH (GRO + DRO) (mg/Kg)		ND	21.8	738	14.9	554	74.7	359	ND	557	ND	ND	-	-	-	-	-	-	-	-	-	500	-
Benzene (mg/Kg)		ND	ND	ND	ND	0.805	0.0959	1.35	ND	0.939	ND	ND	-	-	-	-	-	-	-	-	-	0.170	-
Toluene (mg/Kg)		ND	ND	ND	ND	2.92	0.384	2.79	ND	3.78	ND	ND	-	-	-	-	-	-	-	-	-	85	-
Ethylbenzene (mg/Kg)		ND	ND	ND	ND	0.661	0.0926	0.496	ND	0.779	ND	ND	-	-	-	-	-	-	-	-	-	100	-
Xylenes (total) (mg/Kg)		ND	ND	ND	ND	3.22	0.438	2.34	ND	4.24	ND	ND	-	-	-	-	-	-	-	-	-	175	-
Acenaphthene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	1000	-
Anthracene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	1000	-
Benzo(A)anthracene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	0.22	-
Benzo(B)fluoranthene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	0.22	-
Benzo(K)fluoranthene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	2.2	-
Benzo(A)pyrene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	0.022	-
Chrysene (mg/Kg)		ND	ND	ND	ND	0.0377	ND	0.0616	ND	0.0435	ND	ND	-	-	-	-	-	-	-	-	-	22	-
Dibenzo(A,H)anthracene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	0.022	-
Fluoranthene (mg/Kg)		ND	ND	ND	ND	ND	ND	0.0223	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	1000	-
Fluorene (mg/Kg)		ND	ND	ND	ND	0.0710	0.0130	0.113	ND	0.0783	ND	ND	-	-	-	-	-	-	-	-	-	1000	-
Indeno(1,2,3,C,D)pyrene (mg/Kg)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	0.22	-
Naphthalene (mg/Kg)		ND	ND	0.0384	ND	0.437	0.0703	0.659	ND	0.522	ND	ND	-	-	-	-	-	-	-	-	-	23	-
Pyrene (mg/Kg)		ND	ND	ND	ND	0.0332	0.0057	0.0432	ND	0.0457	ND	ND	-	-	-	-	-	-	-	-	-	1000	-
Electrical Conductivity (mmhos/cm)		0.365	1.010	9.990	0.579	3.630	1.010	4.640	0.377	5.090	0.491	ND	-	-	-	-	-	-	-	-	-	4	-
Sodium Adsorption Ratio (SAR)		3.11	6.16	8.20	6.65	17.9	17.6	56.6	3.41	97.4	5.44	ND	-	-	-	-	-	-	-	-	-	12	-
pH		9.57	9.67	12.68	10.23	12.14	10.87	11.46	9.75	11.40	10.05	ND	-	-	-	-	-	-	-	-	-	6-9	-
Arsenic (mg/kg)		7.6	5.9	14.2	7.7	9.6	6.0	12.6	6.4	13.9	9.2	ND	4.8	6.0	6.3	7.8	4.6	4.2	5.3	6.8	6.1	0.39	8.6
Barium (mg/kg)		354	9810	8360	5470	8010	2570	8180	438	5840	192	ND	-	-	-	-	-	-	-	-	-	15000	-
Cadmium (mg/kg)		<1.2	<1.2	<1.8	<1.2	<1.2	<1.1	<1.2	<1.1	<1.2	<1.2	ND	-	-	-	-	-	-	-	-	-	70	-
Chromium (III) (mg/Kg)		40.6	36.9	14.4	38.2	18.5	42.2	12.5	41.8	14.9	38.9	ND	-	-	-	-	-	-	-	-	-	120000	-
Chromium (VI) (mg/Kg)		<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	-	-	-	-	-	-	-	-	-	23	-
Copper (mg/kg)		8.4	11.1	17.7	9.3	28.0	10.1	29.5	7.3	30.1	10.5	ND	-	-	-	-	-	-	-	-	-	3100	-
Lead (inorganic) (mg/kg)		9.4	8.2	10.0	9.4	14.0	8.1	19.5	7.7	18.0	8.9	ND	-	-	-	-	-	-	-	-	-	400	-
Mercury (mg/kg)		<0.099	<0.11	<0.14	<0.10	<0.092	<0.096	<0.094	<0.091	<0.10	<0.089	ND	-	-	-	-	-	-	-	-	-	23	-
Nickel (mg/kg)		15.1	14.3	139	17.7	12.5	14.4	12.9	13.9	14.5	14.4	ND	-	-	-	-	-	-	-	-	-	1600	-
Selenium (mg/kg)		<5.9	<6.2	<9.1	<5.8	<5.8	<5.5	<6.0	<5.5	<6.1	<5.9	ND	-	-	-	-	-	-	-	-	-	390	-
Silver (mg/kg)		<3.5	<3.7	<5.5	<3.5	<3.5	<3.3	<3.6	<3.3	<3.6	<3.6	ND	-	-	-	-	-	-	-	-	-	390	-
Zinc (mg/kg)	40.2	35.4	32.4	38.2	47.2	36.8	36.8	40.0	43.5	37.9	ND	-	-	-	-	-	-	-	-	-	23000	-	
% Solids	87.1	80.5	55.2	83.4	83.4	88.0	83.1	89.6	84.0	87.9	ND	81.1	81.1	76.3	82.1	83.6	87.3	87.0	87.7	89.0	-	-	

Notes:

1) ND = not detectable to the laboratory detection limit.

2) Results highlighted in yellow exceed Table 910-1 concentration levels. Results highlighted in Gray exceed Table 910-1, but are below background levels.

3) "-" indicates no analysis.

4) See site map for sample locations.

Table 2
Location: PCU 296-6A
Lab Summary - Arsenic Summary

Last update 2/19/2013

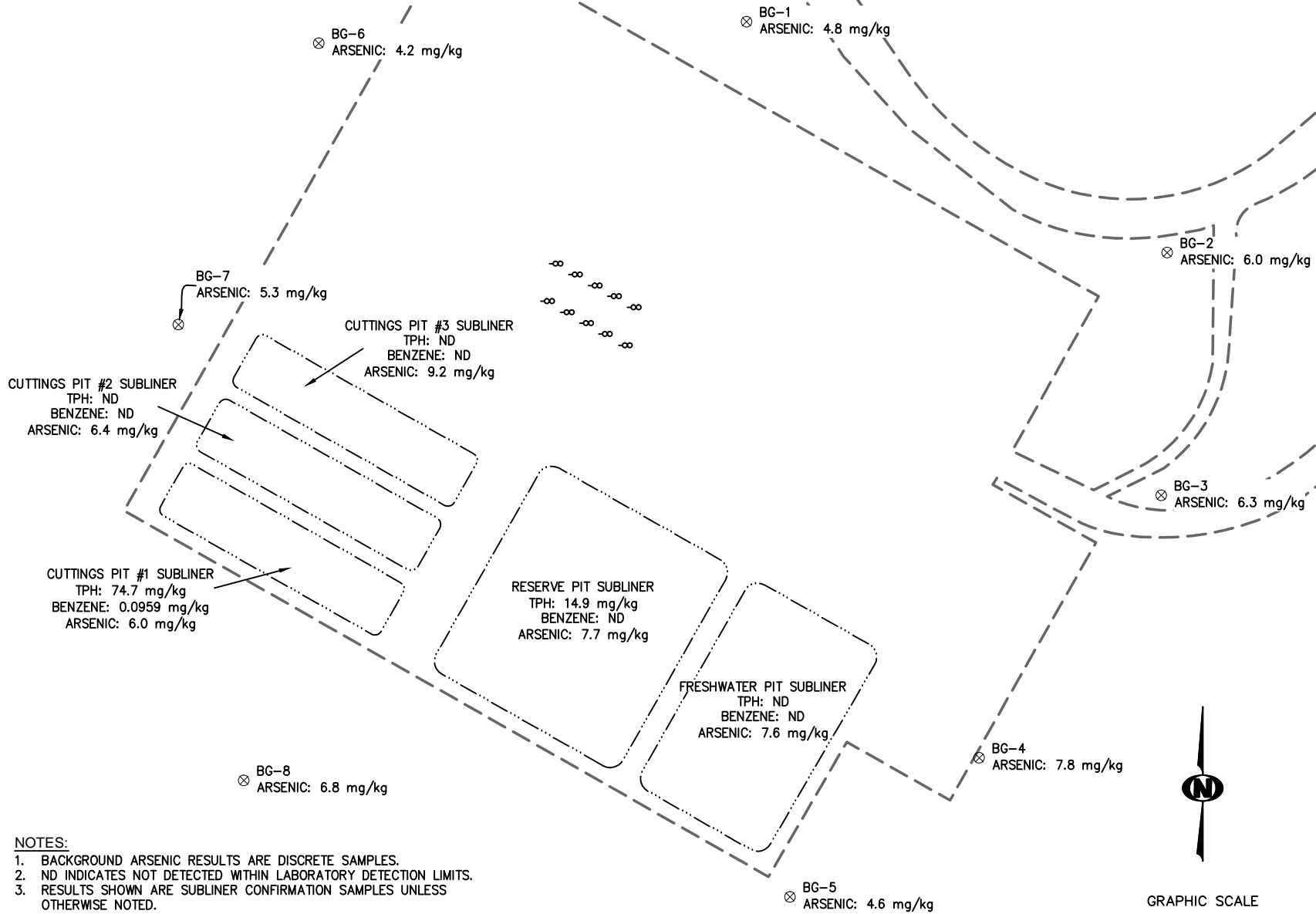
Analytical Parameter (with units)	Reserve Pit					Cuttings #1					Cuttings #2					Cuttings #3					Background									COGCC Table 910-1 Concentration Levels	Maximum based on Background
	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#6	#7	#8	#9		
Accutest Job #	D42434 (1/4/13)					D41649 (12/5/12)					D41651 (12/5/12)					D41650 (12/5/12)					D20596 (1/21/11)					D40717 (11/6/12)				-	-
Sample type (Composite/Discrete)	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	-	-
TPH (GRO) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH (DRO) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH (GRO + DRO) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-
Benzene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.170	-
Toluene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	-
Ethylbenzene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
Xylenes (total) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	-
Acenaphthene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-
Anthracene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-
Benzo(A)anthracene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-
Benzo(B)fluoranthene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-
Benzo(K)fluoranthene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-
Benzo(A)pyrene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.022	-
Chrysene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-
Dibenzo(A,H)anthracene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.022	-
Fluoranthene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-
Fluorene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-
Indeno(1,2,3,C,D)pyrene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-
Naphthalene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-
Pyrene (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-
Electrical Conductivity (mmhos/cm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
Sodium Adsorption Ratio (SAR)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-
pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6-9	-
Arsenic (mg/kg)	5.6	8.9	14.0	17.6	6.6	9.0	11.9	8.8	9.0	11.4	6.4	7.7	8.9	7.7	6.8	9.6	9.8	11.4	9.6	12.0	4.8	6.0	6.3	7.8	4.6	4.2	5.3	6.8	6.1	0.39	8.6
Barium (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15000	-
Cadmium (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-
Chromium (III) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120000	-
Chromium (VI) (mg/Kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-
Copper (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3100	-
Lead (inorganic) (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	-
Mercury (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-
Nickel (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600	-
Selenium (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	390	-
Silver (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	390	-
Zinc (mg/kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23000	-
% Solids	67.4	54.1	61.5	62.8	75.5	85.2	83.7	81.5	85.4	87.5	84.6	86.0	84.1	84.9	85.8	88.0	81.5	82.0	83.9	86.1	81.1	81.1	76.3	82.1	83.6	87.3	87.0	87.7	89.0	-	-

Notes:

1) ND = not detectable to the laboratory detection limit.

2) Results highlighted in yellow exceed Table 910-1 concentration levels. Results highlighted in Gray exceed Table 910-1, but are below background levels.

3) "-" indicates no analysis.



- NOTES:
- 1. BACKGROUND ARSENIC RESULTS ARE DISCRETE SAMPLES.
 - 2. ND INDICATES NOT DETECTED WITHIN LABORATORY DETECTION LIMITS.
 - 3. RESULTS SHOWN ARE SUBLINER CONFIRMATION SAMPLES UNLESS OTHERWISE NOTED.

LEGEND	
	EDGE OF PAD
	APPROX. PIT LOCATION
	WELL HEAD

GPS: TRIMBLE		CHECKED: DK	FIGURE 1	DATE	REVISIONS	
DATE: 2/20/13	DRAWN: DRF					
FILE NAME: samples		SHEET NO. 1 of 1				
PROJECT NO. 1211-02		SCALE: 1" = 100'				

KRW CONSULTING, INC.
8000 W. 14TH AVENUE, SUITE 200
LAKEWOOD, COLORADO
(303) 239-9011

FIGURE 1
PICEANCE CREEK
PCU 296-6A
SAMPLE LOCATIONS MAP
WITH ARSENIC LEVELS
PREPARED FOR XTO ENERGY