FORM 27 Rev 6/99

#6041

State of Colorado
Oil and Gas Conservation Commission

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

FOR OGCC USE ONLY

RECEIVED 8/24/2011

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

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): Pit Closure

OGCC Operator Number: 100264
Name of Operator: XTO Energy, Inc.
Address: 382 County Road 3100
City: Aztec State: NM Zip: 87410

Contact Name and Telephone:
Jody Mecham
No: (435) 722-4521
Fax: (435) 722-5004

API Number: 05-103-10991
Facility Name: Piceance Creek
Well Name: Federal # 2S-95-16-24AP
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SE/SW, 16, 2S, 95W, 6th PM

County: Rio Blanco
Facility Number: Lease # COC-061047
Well Number: Federal # 2S-95-16-24AP
Latitude: 39.870913 Longitude: 108.063682

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Drill cuttings and fluids

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.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Starman-Vandamore Complex

Potential receptors (water wells within 1/4 mi, surface waters, etc.): There are no water wells or surface waters within 1/4 mile of the location.

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

Impacted Media (check):	Extent of Impact:	How Determined:
☑ Soils	pH	Laboratory analyses on soil samples. The pH value exceeds Table 910-1 allowable levels (refer to Table 1 - Laboratory Results Summary).
☐ Vegetation		
☐ Groundwater		
☐ Surface Water		

REMEDIATION WORKPLAN

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

Assessment activities to determine Table 910-1 constituent concentrations of pit contents were initiated in preparation for pit closures. A composite sample of pit contents from Reserve Pits A and B was collected and submitted to an analytical laboratory for Table 910-1 constituent analyses. Additionally, five (5) soil samples were collected from undisturbed areas adjacent to the pit locations and submitted to an analytical laboratory to establish the background concentration level for Arsenic (see attached Table 1 - Laboratory Results Summary).

Describe how source is to be removed:

Laboratory results for TPH on the Reserve Pits A and B composite sample were 701 mg/Kg. Pit contents were mixed/blended with clean onsite spoils to reduce TPH concentrations. The mixed/blended material was placed in the empty Fresh Water Pit. Representative samples of the mixed/blended material were collected and submitted to a laboratory for Table 910-1 constituent analyses. Laboratory analyses indicate that TPH concentrations were below Table 910-1 clean-up levels and will be buried in place with a minimum 3-feet cover of clean native soils. Pit liners were removed and transported to Wray Gulch Landfill facility near Meeker, CO for disposal.

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.:

See attached Sundry Notice regarding Arsenic levels.

Submit Page 2 with Page 1

FORM 27 Rev 6/99

Page 2

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax:(303)894-2109

Tracking Number:
Name of Operator:
OGCC Operator No:
Received Date:
Well Name & No:
Facility Name & No:

REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

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

N/A

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.

A composite sample of pit contents from Reserve Pits A and B was collected and submitted to an analytical laboratory for TPH analysis. TPH concentrations exceeded Table 910-01 allowable concentrations (i.e., >500 mg/Kg). The pit contents were mixed/blended with clean onsite spoils material and placed in the empty Fresh Water Pit. Representative samples of the mixed/blended material were collected and submitted to a laboratory for Table 910-1 constituent analyses. Laboratory results for TPH on the mixed/blended material (344 mg/Kg) were below Table 910-1 cleanup levels (see attached Table 1 - Laboratory Results Summary). Additionally, sub-liner soil samples were collected from the Fresh Water Pit and Reserve Pits A and B and analyzed for Table 910-1 constituents. With the exception of elevated pH and Arsenic levels, laboratory analytical results for the pit sub-liner samples were below Table 910-1 cleanup criteria. Based on a 10% variability factor applied to background soil concentration values for Arsenic, the concentrations of Arsenic in the pit bottoms are below maximum background (see attached Sundry Notice). A minimum 3-feet cover of clean native soils will be placed over the pit contents; thereby, meeting the criteria to allow placement of soils exceeding Table 910-1 pH values.

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:

Soil samples were collected below each of the synthetic pit liners (Fresh Water, Reserve A & B) and submitted to an analytical laboratory for Table 910-1 constituent analyses. Additionally, five (5) soil samples were collected from undisturbed areas adjacent to the pit locations and submitted to a laboratory to establish the background concentration level for Arsenic. Analytical results are presented in the attached Laboratory Results Summary Table. With the exception of pH and Arsenic, underliner impacts were below Table 910-1 constituent levels; sub-liner Arsenic levels were below maximum allowable levels when the 10% variability factor is applied to the highest background concentration for Arsenic (7.5 mg/Kg x 1.1 = 8.3 mg/Kg). Complete laboratory reports are available upon request. A minimum 3-feet cover of clean native soils will be placed over the pit contents; thereby, meeting criteria to allow placement of soils exceeding Table 910-1 pH values.

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

Pit contents have been processed on-site by mix/blend methods to reduce TPH constituent concentrations below Table 910-1 levels and will be buried on-site. A minimum 3 feet of native clean soils will be placed over the buried material. The synthetic liners were removed from the each pit (Fresh Water, Reserve Pit A, and Reserve Pit B) and transported to Wray Gulch Landfill for disposal.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began:	Date Site Investigation Completed:	Date Remediation Plan Submitted:
Remediation Start Date:	Anticipated Completion Date:	Actual Completion Date:

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

Print Name: Jody Mecham Signed:

Title: Construction Coordinator Date: 8/24/2011

OGCC Approved: Title: FOR Chris Canfield Date: 08/24/2011

EPS NW Region

FORM 4
Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

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

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form). Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b).

1. OGCC Operator Number: 100264
2. Name of Operator: XTO Energy, Inc.
3. Address: 382 County Rd. 3100
   City: Aztec State: NM Zip: 87410
4. Contact Name: Jody Mecham
   Phone: (435) 722-4521
   Fax: (435) 722-5004

Complete the Attachment Checklist

OP OGCC

5. API Number: 05- 103-10991
6. Well/Facility Name: Federal #2S-95-1624AP
7. Well/Facility Number: Federal #2S-95-1624AP
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): SE/SW, 16, T2S, R95W, 6th PM
9. County: Rio Blanco
10. Field Name: Piceance Creek
11. Federal, Indian or State Lease Number: COC-061047

OGCC Facility ID Number

Attachment Checklist		
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page		
Other		

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage from Exterior Section Lines				
Change of **Surface** Footage to Exterior Section Lines				
Change of **Bottom**hole Footage from Exterior Section Lines				
Change of **Bottom**hole Footage to Exterior Section Lines				attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer:
Latitude: Longitude: Ground Elevation:
Distance to nearest property line: Distance to nearest lease line: Distance to nearest well same formation:
Distance to nearest bldg, public rd, utility or RR: Is location in a High Density Area (rule 603b)? Yes/No: Surface owner consultation date:

GPS DATA:
Date of Measurement: PDOP Reading: Instrument Operator's Name:

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond — Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling): Effective Date:
Plugging Bond ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME NUMBER
From:
To:
Effective Date:

☐ ABANDONED LOCATION:
Was location ever built? ☐ Yes ☐ No
Is site ready for inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT:

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004
Final reclamation will commence on approximately:
☐ Final reclamation is completed and site is ready for inspection

Technical Engineering/Environmental Notice

☐ Notice of Intent — Approximate Start Date:
☐ Report of Work Done — Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)	☐ Request to Vent or Flare	☐ E&P Waste Disposal
☐ Change Drilling Plans	☐ Repair Well	☐ Beneficial Reuse of E&P Waste
☐ Gross Interval Changed?	☐ Rule 502 variance requested	☐ Status Update/Change of Remediation Plans for Spills and Releases
☐ Casing/Cementing Program Change	☒ Other See page 2	

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

Signed: [signature] Date: 8/24/2011 Email: Jody_Mecham@xtoenergy.com
Print Name: Jody Mecham Title: Construction Coordinator

COGCC Approved: [signature] Title: FOR Chris Canfield EPS NW Region Date: 08/24/2011

CONDITIONS OF APPROVAL, IF ANY:

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 100264 API Number: 05-103-10991
2. Name of Operator: XTO Energy, Inc OGCC Facility ID #
3. Well/Facility Name: Federal #2S-95-1624AP Well/Facility Number: Federal #2S-95-
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): SE/SW, 16, T2S, R95W, 6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

The operator is respectfully requesting a change in the allowable arsenic concentration level at the subject location. Specifically, COGCC Table 910-1 Concentration Levels lists the allowable concentration level for arsenic in soil at 0.39 mg/kg. However, COGCC has allowed site specific changes to allowable concentration levels based upon background concentration levels. At other locations, COGCC has allowed the determination of allowable levels based upon a 10% variability factor applied to background soil concentration values, where the maximum allowable level is computed by multiplying the highest detected background concentration by 1.1 (e.g. 5.6 x 1.1 = 6.2). Five representative background samples were collected from undisturbed areas adjacent to the subject location. Arsenic concentrations in those samples ranged from 2.5 mg/kg to 7.5 mg/kg. Applying the 10% variability factor to the highest concentration detected, results in an allowable arsenic concentration level of 8.3 mg/kg for the subject location.

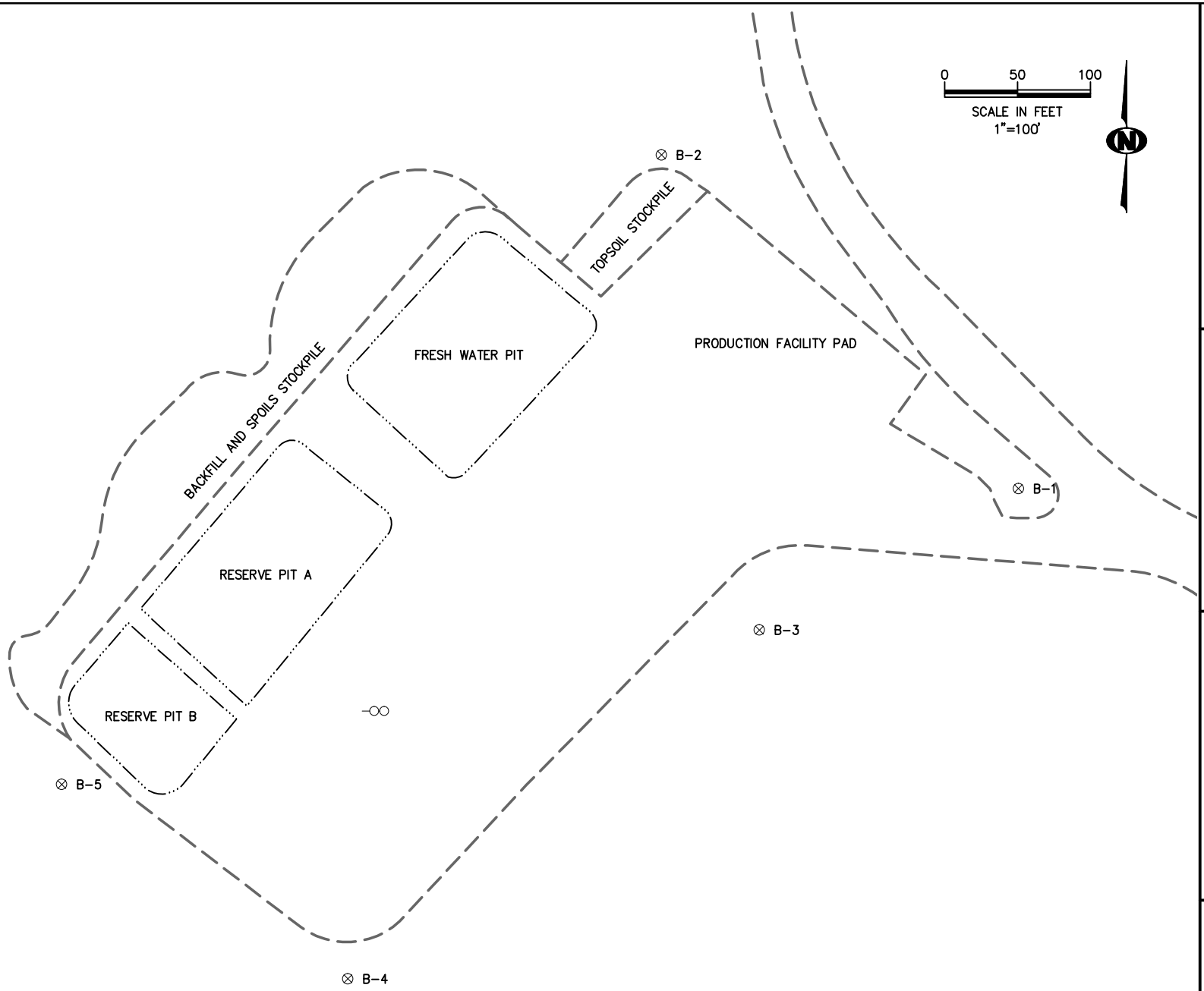

FIGURE 1
PICEANCE CREEK
16-24
SAMPLE LOCATIONS MAP
PREPARED FOR XTO ENERGY, INC.

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

NOTES:

DATE	REVISIONS

DESIGNED: DK	CHECKED: DK	FIGURE 1	
DATE: 7/18/11	DRAWN: DRF	SHEET NO. 1 of 1	
FILE NAME: samples		SCALE: 1"=100'	
PROJECT NO. 1105-05			

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Table 1 - Laboratory Results Summary
Pit Contents and Background Samples
XTO 16-24

Updated 07/18/2011

Analytical Parameter (with units)	16-24						BACKGROUND SAMPLES 16-24					COGCC	Maximum allowable based on background
	Reserve Pit A Subliner Confirmation 6/17/11	*Reserve Pit A Backfill Material*	*Reserve Pit B Subliner Confirmation 6/14/11*	*Reserve Pit B Backfill Material*	*Fresh Water Pit Subliner Confirmation 6/9/11*	*Fresh Water Pit Backfill Material*	*Back ground #1 6/3/11*	*Back ground #2 6/3/11*	*Back ground #3 6/3/11*	*Back ground #4 6/3/11*	*Back ground #5 6/3/11*	*Table 910-1 Allowable Levels*	
TPH (TVH and TEPH) (mg/Kg)	149	[same as	67.5	[same as	96.9	344.0	-	-	-	-	-	500	-
Benzene (mg/Kg)	ND	FW backfill	ND	FW backfill	ND	ND	-	-	-	-	-	0.17	-
Toluene (mg/Kg)	ND	material]	ND	material]	ND	0.024	-	-	-	-	-	85	-
Ethylbenzene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	100	-
Xylenes (total) (mg/Kg)	ND		ND		ND	0.039	-	-	-	-	-	175	-
Acenaphthene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	1,000	-
Anthracene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	1,000	-
Benzo(A)anthracene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	0.22	-
Benzo(B)fluoranthene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	0.22	-
Benzo(K)fuoranthene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	2.2	-
Benzo(A)pyrene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	0.022	-
Chrysene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	22	-
Dibenzo(A,H)anthracene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	0.022	-
Fluoranthene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	1,000	-
Fluorene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	1,000	-
Indo(1,2,3,C,D)pyrene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	0.22	-
Napthalene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	23	-
Pyrene (mg/Kg)	ND		ND		ND	ND	-	-	-	-	-	1,000	-
Electrical Conductivity (mmhos/cm)	0.774		0.218		0.250	0.236	-	-	-	-	-	<4 or 2X background	-
Sodium Adsorption Ratio (SAR)	5.94		1.21		2.44	6.13	-	-	-	-	-	<12	-
pH	10.16		9.47		9.58	9.62	-	-	-	-	-	6-9	-
Arsenic (mg/Kg)	2.4		1.6		2.2	3.9	2.9	7.5	4.2	2.9	2.5	0.39	8.25
Barium (mg/Kg)	1,590		415		1,200	3,010	-	-	-	-	-	15,000	-
Boron (mg/Kg)	-		-		-	-	-	-	-	-	-	2	-
Cadmium (mg/Kg)	<1.2		<1.1		<1.0	<0.95	-	-	-	-	-	70	-
Chromium (III) (mg/Kg)	35.7		38.0		31	24.2	-	-	-	-	-	120,000	-
Chromium (VI) (mg/Kg)	0.58		<0.46		0.41	0.62	-	-	-	-	-	23	-
Copper (mg/Kg)	20.2		28.8		24.1	18.5	-	-	-	-	-	3,100	-
Lead (inorganic) (mg/Kg)	10.2		12.9		14.6	14.1	-	-	-	-	-	400	-
Mercury (mg/Kg)	<0.097		<0.10		<0.10	<0.094	-	-	-	-	-	23	-
Nickel (mg/Kg)	34.9		26.2		22.6	15.4	-	-	-	-	-	1,600	-
Selenium (mg/Kg)	<5.8		<5.7		<5.1	<24	-	-	-	-	-	390	-
Silver (mg/Kg)	<3.5		<3.4		<3.0	<2.8	-	-	-	-	-	390	-
Zinc (mg/Kg)	36.8		52.6		43.3	46.9	-	-	-	-	-	23,000	-

Notes:
1) "-" indicates no analysis.
2) ND = not detectible to the laboratory detection limit.
3) Results highlighted in yellow exceed Table 910-1 parameters. Results highlighted in Gray exceed Table 910 but are below maximum background levels.
4) Refer to the attached site map for approximate sample locations.
5) Refer to Appendix B for the complete laboratory results.