

#6968

FORM 27 Rev 6/99

State of Colorado Oil and Gas Conservation Commission



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FOR OGCC USE ONLY RECEIVED 4/20/2012 OGCC Employee: 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: PO Box 6501 City: Englewood State: CO Zip: 80112 Contact Name and Telephone: Jessica Dooling No: 970-675-4122 Fax: 970-675-4150

API Number: 05-103-11138 County: Rio Blanco Facility Name: Freedom Unit Facility Number: Drilling Pit, Facility ID# 293831 Well Name: Freedom Unit Well Number: FRU 297-32A Location: (QtrQtr, Sec, Twp, Rng, Meridian): SE/NE, 32, 2S, 97W, 6th Latitude: 39.836116 Longitude: -108.298513

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.): non-cropland rangeland Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Rentsac Channery loam Potential receptors (water wells within 1/4 mi, surface waters, etc.): Dry Gulch Creek ~761 feet to N/NW

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

Impacted Media (check): Extent of Impact: How Determined: Soils sub-liner impacts: TPH, arsenic laboratory analysis Vegetation Groundwater Surface Water

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document): See Attachment I for details regarding initial action taken. Describe how source is to be removed: Impacted Reserve Pit materials currently stored in the Freshwater Pit will be transported offsite to a permitted disposal/recycling facility, treated onsite with a temporary Thermal Desorption Unit, and/or mix/blending to reduce hydrocarbons below Table 910-1 standards. 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.: Any remaining impacted soils will either be treated on-site or removed to a permitted disposal/recycling facility.

XTO FRU 297-32A

FORM 27 Rev 6/99

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: Location ID #335900 Facility Name & No: Pit Facility ID 293 831

Page 2

REMEDIATION 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 200 feet below the ground surface. Soil samples were/will be collected for laboratory analysis of sub-liner material to confirm no groundwater impact potential exists (see Tables 1 and 2).

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 Attachemnt II.

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? [X] Y [] N If yes, describe:

Based on subliner sample results no additional assessment will be necessary beneath the Reserve Pit and Cuttings Pits #1 & #2. Based upon subliner testing beneath the Freshwater Pit additional assessment and remediation may be necessary (see Tables 1 and 2).

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

Cuttings Pits #1 and #2 synthetic liners were removed and transported to a permitted disposal/recycling facility. Cuttings Pits #1 and #2 material was mix/blended with onsite spoils to be below Table 910-1 and will be used onsite for fill. Reserve Pit material currently stored in the Freshwater Pit will be treated on-site with a temporary Thermal Desorption Unit, mix/blending to reduce hydrocarbons, and/or removed and transported to a permitted off-site recycling/disposal facility. Upon removal of the Reserve Pit material, the Freshwater Pit liner will be removed and transported to a permitted disposal/recycling facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 11/4/11 Date Site Investigation Completed: in progress Date Remediation Plan Submitted: 4/20/2012 Remediation Start Date: pending approval Anticipated Completion Date: pending approval 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: Jessica Dooling Signed: [Signature] Title: Environmental Coordinator Date: 4/20/2012

OGCC Approved: [Signature] Title: FOR Chris Canfield Date: 04/24/2012 EPS NW Region

ATTACHMENT I

FRU 297-32A Pit Closure Workplan, Form 27 Page 1

Describe initial action taken:

- i. The site consists of a Freshwater Pit, Reserve Pit, Cuttings Pit #1 and Cuttings Pit #2 (see Figure 1).
- ii. De-Minimus Pit contents were present in the Freshwater Pit.
- iii. Reserve Pit solidified contents and impacted Reserve Pit West Berm sub-liner materials were removed and stored in the relined Freshwater Pit.
- iv. Reserve Pit contents were sampled and analyzed for full Table 910-1, results indicated that the material was in exceedance of Table 910-1 concentrations for TPH (10551 mg/kg), Benzene (3.58 mg/kg), SAR (48.3), pH (10.02), Arsenic (5.1 mg/kg) and Barium (34400 mg/kg).
- v. Reserve Pit synthetic liners were removed and transported to an off-site permitted disposal/recycling facility.
- vi. Reserve Pit sub-liner composite samples were collected and analyzed for full Table 910-1 parameters, results indicated that the material was in exceedance of Table 910-1 concentrations for TPH (1147 mg/kg), SAR (19.3), pH (10.26) and Arsenic (3.6 mg/kg).
- vii. Noticeable staining of the Reserve Pit West Berm sub-liner was sampled for TPH and BTEX parameters and was in exceedance of Table 910-1 for TPH (3740 mg/kg). Six inches of material was removed from the Reserve Pit West Berm sub-liner and placed into the Freshwater Pit for storage. The Reserve Pit West Berm sub-liner was sampled for TPH after removal of impacted material, results are below Table 910-1 for TPH (232 mg/kg).
- viii. Cuttings Pit #1 contents were solidified and sampled for full Table 910-1 parameters. Results exceeded Table 910-1 concentration levels for TPH (1445 mg/kg), Benzene (0.306 mg/kg), SAR (18.4), pH (9.13) and Arsenic (13.8 mg/kg). The contents were mix/blended with onsite spoils to below Table 910-1 parameters for TPH and Benzene (see Tables 1 & 2).

- ix. Cuttings Pit #1 sub-liner composite samples were collected and analyzed for full Table 910-1 parameters, results are below Table 910-1 concentrations with the exception of SAR (12.1), pH (9.47) and Arsenic (2.6 mg.kg).
- x. Cuttings Pit #2 contents were solidified and sampled for full Table 910-1 parameters. Results are in exceedence of Table 910-1 concentration levels for TPH (544 mg/kg), Benzene (0.944 mg/kg), Dibenzo (A,H) anthracene (0.0293 mg/kg), SAR (59.9) and Arsenic (6.6 mg/kg). The contents were mix/blended with onsite spoils to below Table 910-1 parameters for TPH, Benzene and Dibenzo (A,H) anthracene (see Tables 1 & 2).
- xi. Cuttings Pit #2 sub-liner composite samples were collected and analyzed for full Table 910-1 parameters, results are below Table 910-1 concentrations with the exception of pH (9.89) and Arsenic (3.6 mg/kg).
- xii. Cuttings Pits #1 and #2 mix/blend material will be used onsite for backfill.
- xiii. Cuttings Pits #1 and #2 synthetic liners were removed and transported to an off-site permitted disposal/recycling facility.
- xiv. Freshwater pit sub-liner composite samples will be collected and analyzed for full table 910-1 parameters.
- xv. Refer to Table 1 and Table 2 for a summary of laboratory results.
- xvi. Elevated arsenic levels above Table 910-1 concentration were detected beneath the Reserve Pit and Cuttings Pits #1 and #2. Please refer to the associated sundry requesting consideration of background arsenic levels.

ATTACHMENT II

FRU 297-32A Pit Closure Workplan, Form 27 Page 2

REMEDIATION WORKPLAN

Describe Reclamation Plan:

1. Fresh Water Pit

- The Reserve Pit material stored in the Freshwater Pit will be removed and transported to a permitted disposal facility, or treated to below Table 910-1 concentrations with a Thermal Desorption Unit (TDU), and/or mix/blending to reduce hydrocarbons. If the Reserve Pit material is treated onsite with TDU and/or mix/blending confirmation samples will be collected throughout the process to ensure compliance with Table 910-1.
- Sub-liner samples will be collected and analyzed for Table 910-1 constituents following removal of stored Reserve Pit solidified material. Based on sub-liner sample results from beneath the Fresh Water Pit, the need for additional remedial activities will be evaluated for the site. Identified impacted soils/rock above Table 910-1 concentration levels will either be treated on-site (in-situ bioremediation, mix/blending, thermal desorption) or excavated and transported to an off-site recycling/disposal facility.
- On completion of these remedial activities, appropriate confirmation samples will be collected to verify Table 910-1 compliance. Based on these results, the pit will either be closed or additional assessment and/or remediation plans will be determined.
- Backfilling of the Freshwater Pit will not be completed until assessment indicates conditions compliant with Table 910-1 concentration levels.

2. Reserve Pit

- The pit will be closed and backfilled with solidified material, native on-site material or material transported to the site.

3. Cuttings Pit #1

- The pit will be backfilled with solidified material, native on-site material or material transported to the site.

4. Cuttings Pit #2

- The pit will be backfilled with solidified material, native on-site material or material transported to the site.
- Elevated arsenic levels above the Table 910-1 concentration level were detected beneath the Reserve and Cuttings Pits #1 and #2. Please refer to associated sundry requesting consideration of background arsenic levels.
- Please refer to Table 1 and Table 2 for a summary of laboratory results, analytical reports are attached.
- Any remaining elevated levels of 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.
- On completion of required assessment and remedial activities, the pits will be backfilled. Material used to fill the pits will be derived from native on-site material or material transported to the site. Material used to fill the top three feet of each pit will be found on-site.
- Reclamation activities will be as specified in the Surface use Plan and BLM Conditions of Approval.

Table 1
Location: FRU 297-32A
Lab Summary

Last update 4/20/2012

| Analytical Parameter (with units) | Fresh Water Pit | | Reserve Pit | | | | | | Cuttings #1 | | Cuttings #2 | | Background 01/21/10 | | | | | | COGCC | Maximum based on Background | |
|--|-----------------|----------------------------|---------------------------|---------------------------------------|--|---------------------------|---------------------------------------|---|--|------------------------------|-----------------------------|------------------------------|------------------------------|------------|-----------|------------|------------|------------|------------|-----------------------------|----------------------------------|
| | FW Pit Contents | FW Pit Subliner (xx/xx/xx) | RES Pit Contents 11/04/11 | RES Pit Berm Subliner West 5 12/08/11 | RES Pit Berm Subliner West 5 (-6") 2/22/12 | RES Pit Subliner 12/12/11 | RES Pit Subliner (0' to -1') 02/02/12 | RES Pit Subliner (0' to -1') Post M/B 3/20/12 | RES Pit Subliner (-1' to -2') 02/02/12 | CUT #1 Pit Contents 11/22/11 | CUT #1 Pit Subliner 2/27/12 | CUT #2 Pit Contents 12/02/11 | CUT #2 Pit Subliner (3/7/12) | B1A @ 1.5' | B1B @ 10' | B2A @ 1.5' | B2B @ 3.5' | B3A @ 1.5' | B3B @ 8.5' | | Table 910-1 Concentration Levels |
| Accutest Job # | | | D29206 | D30146 | D32152 | D30326 | D31606 | D32939 | D31607 | D29744 | D32264 | D29943 | D32609 | D10554 | | | | | | - | - |
| Sample type (Composite/Discrete) | | | C | C | C | C | C | C | C | C | C | C | C | D | D | D | D | D | D | - | - |
| TPH (GRO) (mg/Kg) | | | 951 | ND | ND | 6.57 | ND | ND | ND | 135 | ND | 93.5 | 8.20 | - | - | - | - | - | - | - | - |
| TPH (DRO) (mg/Kg) | | | 9600 | 3740 | 232 | 1140 | 562 | 498 | 55.1 | 1310 | 54.2 | 450 | 115 | - | - | - | - | - | - | - | - |
| TPH (GRO + DRO) (mg/Kg) | | | 10551 | 3740 | 232 | 1147 | 562 | 498 | 55.1 | 1445 | 54.2 | 544 | 123 | - | - | - | - | - | - | - | 500 |
| Benzene (mg/Kg) | | | 3.58 | ND | - | ND | - | - | - | 0.306 | 0.0533 | 0.944 | 0.0469 | - | - | - | - | - | - | - | 0.170 |
| Toluene (mg/Kg) | | | 31.2 | ND | - | ND | - | - | - | 0.72 | 0.125 | 6.43 | 0.105 | - | - | - | - | - | - | - | 85 |
| Ethylbenzene (mg/Kg) | | | 6.04 | ND | - | ND | - | - | - | 0.924 | 0.0379 | 1.32 | ND | - | - | - | - | - | - | - | 100 |
| Xylenes (total) (mg/Kg) | | | 101 | ND | - | ND | - | - | - | 3.86 | 0.192 | 5.8 | 0.144 | - | - | - | - | - | - | - | 175 |
| Acenaphthene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 1000 |
| Anthracene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 1000 |
| Benzo(A)anthracene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 0.22 |
| Benzo(A)pyrene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 0.22 |
| Benzo(B)fluoranthene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 2.2 |
| Benzo(K)fluoranthene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | 0.0204 | ND | - | - | - | - | - | - | - | 0.022 |
| Chrysene (mg/Kg) | | | ND | - | - | 0.0164 | - | - | - | ND | ND | ND | ND | - | - | - | - | - | - | - | 22 |
| Dibenzo(A,H)anthracene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | 0.0293 | ND | - | - | - | - | - | - | - | 0.022 |
| Fluoranthene (mg/Kg) | | | ND | - | - | ND | - | - | - | 0.241 | ND | ND | ND | - | - | - | - | - | - | - | 1000 |
| Fluorene (mg/Kg) | | | 4.35 | - | - | 0.0663 | - | - | - | 0.0328 | ND | 0.296 | ND | - | - | - | - | - | - | - | 1000 |
| Indeno(1,2,3,C,D)pyrene (mg/Kg) | | | ND | - | - | ND | - | - | - | ND | ND | 0.0208 | ND | - | - | - | - | - | - | - | 0.22 |
| Naphthalene (mg/Kg) | | | 6.13 | - | - | 0.0096 | - | - | - | 0.196 | 0.0309 | 1 | 0.0327 | - | - | - | - | - | - | - | 23 |
| Pyrene (mg/Kg) | | | ND | - | - | 0.0079 | - | - | - | ND | ND | 0.0904 | ND | - | - | - | - | - | - | - | 1000 |
| Electrical Conductivity (mmhos/cm) | | | 2.77 | - | - | 1.58 | - | - | - | 1.49 | 1.480 | 3.86 | 1.340 | 7.7 | 2.55 | 0.356 | 6.63 | 0.545 | 1.94 | 4 | - |
| Sodium Adsorption Ratio (SAR) | | | 48.3 | - | - | 19.3 | - | - | - | 18.4 | 12.1 | 59.9 | 10.5 | 32.3 | 10.6 | 0.889 | 11.9 | 1.77 | 6.85 | 12 | - |
| pH | | | 10.02 | - | - | 10.26 | - | - | - | 9.13 | 9.47 | 8.69 | 9.89 | 9.77 | 9.63 | 9.10 | 9.26 | 9.20 | 9.37 | 6.9 | - |
| Arsenic (mg/kg) | | | 5.1 | - | - | 3.6 | - | - | - | 13.8 | 2.6 | 6.6 | 3.6 | 2.7 | 7.1 | 3.7 | 3.5 | 20.7 | 7.6 | 0.39 | 22.8 |
| Barium (mg/kg) | | | 34400 | - | - | 915 | - | - | - | 4780 | 1390 | 6190 | 2100 | - | - | - | - | - | - | - | 15000 |
| Cadmium (mg/kg) | | | <5.0 | - | - | <1.2 | - | - | - | <1.3 | <1.1 | <1.3 | <1.1 | - | - | - | - | - | - | - | 70 |
| Chromium (III) (mg/Kg) | | | 19.3 | - | - | 47.6 | - | - | - | 19.1 | 41.5 | 12.8 | 42.6 | - | - | - | - | - | - | - | 120000 |
| Chromium (VI) (mg/Kg) | | | 1.9 | - | - | <0.46 | - | - | - | <0.55 | <1.0 | <0.56 | <1.0 | - | - | - | - | - | - | - | 23 |
| Copper (mg/kg) | | | 111 | - | - | 9.3 | - | - | - | 32.3 | 12.0 | 27.5 | 13.5 | - | - | - | - | - | - | - | 3100 |
| Lead (inorganic) (mg/kg) | | | 89.7 | - | - | 11.3 | - | - | - | 16.3 | 10 | 16.4 | 11.1 | - | - | - | - | - | - | - | 400 |
| Mercury (mg/kg) | | | <0.48 | - | - | <0.12 | - | - | - | <0.15 | <0.11 | <0.14 | <0.11 | - | - | - | - | - | - | - | 23 |
| Nickel (mg/kg) | | | 16.4 | - | - | 17.3 | - | - | - | 18.1 | 17.4 | 15.1 | 19.8 | - | - | - | - | - | - | - | 1600 |
| Selenium (mg/kg) | | | <250 | - | - | <5.9 | - | - | - | <32 | <5.5 | <66 | <5.4 | - | - | - | - | - | - | - | 390 |
| Silver (mg/kg) | | | <15 | - | - | <3.5 | - | - | - | <3.8 | <3.3 | <3.9 | <3.2 | - | - | - | - | - | - | - | 390 |
| Zinc (mg/kg) | | | 51.1 | - | - | 41.9 | - | - | - | 56.8 | 42.3 | 49.9 | 43.1 | - | - | - | - | - | - | - | 23000 |
| % Solids | | | 20.6 | 84.6 | 87.0 | 86.3 | 87.9 | 88.5 | 87.9 | 72.1 | 91.6 | 71.1 | 94.4 | 84.6 | 89.8 | 90.7 | 85.2 | 84.2 | 85.6 | - | - |

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 at or below background levels.
- 3) "-" indicates no analysis.
- 4) See site map for sample locations.
- 5) Reserve pit west berm subliner was called Reserve pit south berm in Chain of Custody and laboratory reports.

Table 2
Location: FRU 297-32A
Lab Summary - Mix/Blend Results

Last update

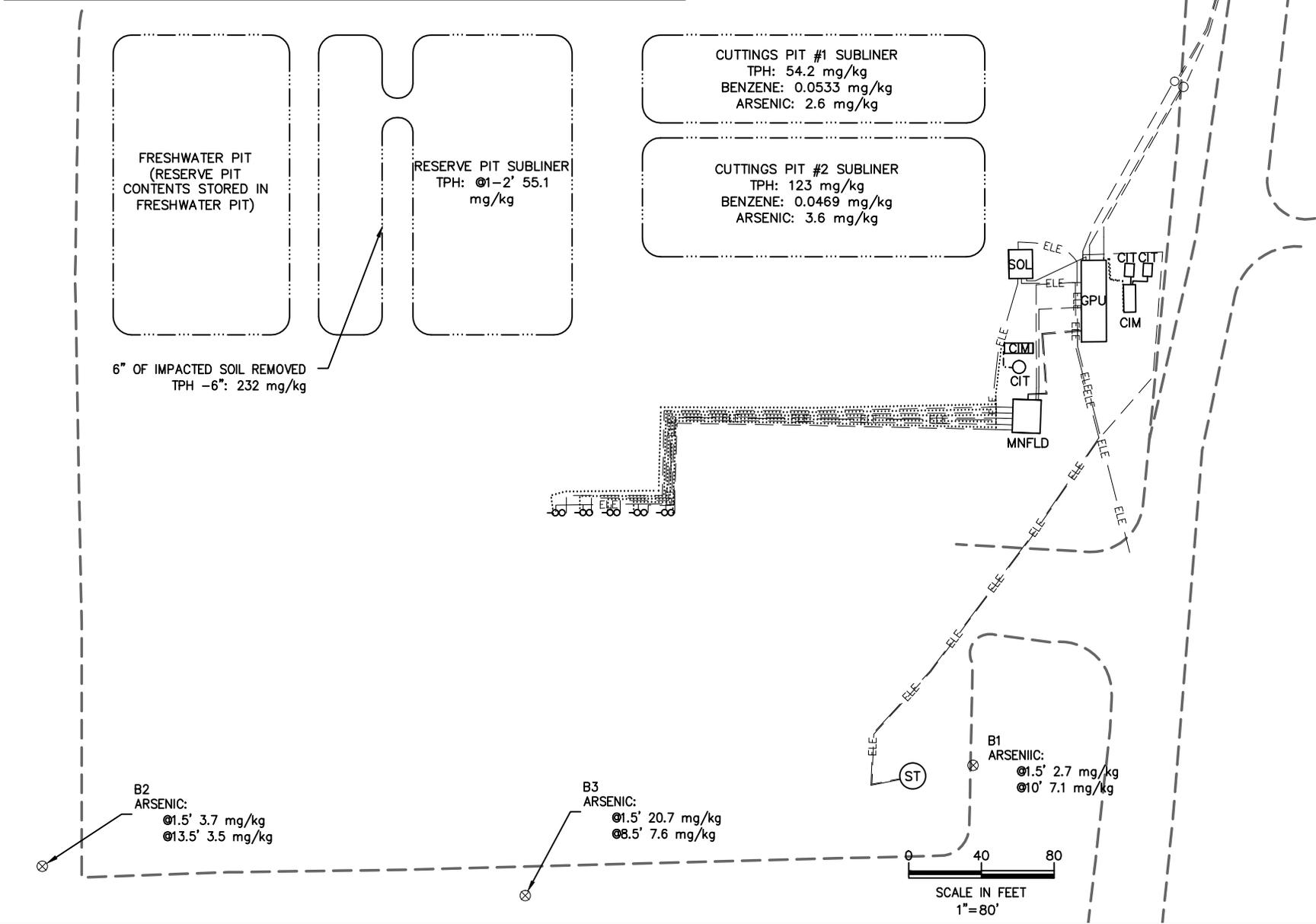
4/17/2012

| Analytical Parameter (with units) | Cuttings #1 | | | | | | | | | | Cuttings #2 | | | | | | COGCC Table 910-1 Concentration Levels | | |
|--|------------------------------------|---|---|---|---|---|---|---|--|---|--------------------------------------|---|---|---|------------------------------------|---------------------------------------|---|---------------------------------------|---|
| | CUT #1 Pit Contents 11/22/11 | Cut #1 MB Day 1 2/13 (2/16/12) | Cut #1 MB Day 2 2/14 (2/16/12) | Cut #1 MB Day 3 2/15 (2/16/12) | Cut #1 MB Day 4 2/16 (2/21/12) | Cut #1 MB Day 5 2/17 (2/21/12) | Cut #1 MB Day 6 2/20 (2/21/12) | Cut #1 MB Day 7 2/21 (2/21/12) | Cut #1 MB Day8&10 2/22&24 (2/24/12) | Cut #1 MB Day 9 2/23 (2/24/12) | CUT #2 Pit Contents (12/02/11) | Cut #2 MB Day 1 2/27 (2/29/12) | Cut #2 MB Day 2 2/28 (2/29/12) | Cut #2 MB Day 3 2/29 (2/29/12) | Cut #2 MB Day 4 3/2 (3/5/12) | Cut #2 MB Day 5 3/5 (3/5/12) | | Cut #2 MB Day 6 3/6 (3/7/12) | |
| Accutest Job # | D29744 | D32021 | | | D32156 | | | | | D32210 | | D29943 | D32371 | | | D32443 | | D32610 | - |
| Sample type (Composite/Discrete) | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | - |
| TPH (GRO) (mg/Kg) | 135 | 19.1 | 26.1 | 24.5 | 26.3 | 31.9 | 31.7 | 33.4 | 9.39 | 10.3 | 93.5 | 7.66 | 10.3 | 9.39 | 7.43 | 20.1 | 11.2 | - | |
| TPH (DRO) (mg/Kg) | 1310 | 208 | 202 | 366 | 194 | 318 | 186 | 237 | 178 | 169 | 450 | 111 | 145 | 160 | 85.0 | 154 | 121 | - | |
| TPH (GRO + DRO) (mg/Kg) | 1445 | 227 | 228 | 391 | 220 | 350 | 218 | 270 | 187 | 179 | 544 | 119 | 155 | 169 | 92.4 | 174 | 132 | 500 | |
| Benzene (mg/Kg) | 0.306 | 0.0540 | 0.0536 | 0.0416 | 0.0877 | 0.0998 | 0.0916 | 0.0827 | ND | ND | 0.944 | 0.141 | 0.130 | 0.0986 | 0.113 | 0.135 | 0.130 | 0.170 | |
| Toluene (mg/Kg) | 0.72 | - | - | - | - | - | - | - | - | - | 6.43 | - | - | - | - | - | - | 85 | |
| Ethylbenzene (mg/Kg) | 0.924 | - | - | - | - | - | - | - | - | - | 1.32 | - | - | - | - | - | - | 100 | |
| Xylenes (total) (mg/Kg) | 3.86 | - | - | - | - | - | - | - | - | - | 5.8 | - | - | - | - | - | - | 175 | |
| Acenaphthene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 1000 | |
| Anthracene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 1000 | |
| Benzo(A)anthracene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 0.22 | |
| Benzo(A)pyrene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 0.22 | |
| Benzo(B)fluoranthene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 2.2 | |
| Benzo(K)fluoranthene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | 0.0204 | - | - | - | - | - | - | 0.022 | |
| Chrysene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 22 | |
| Dibenzo(A,H)anthracene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | 0.0293 | ND | ND | ND | ND | ND | ND | 0.022 | |
| Fluoranthene (mg/Kg) | 0.241 | - | - | - | - | - | - | - | - | - | ND | - | - | - | - | - | - | 1000 | |
| Fluorene (mg/Kg) | 0.0328 | - | - | - | - | - | - | - | - | - | 0.296 | - | - | - | - | - | - | 1000 | |
| Indeno(1,2,3,C,D)pyrene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | 0.0208 | - | - | - | - | - | - | 0.22 | |
| Naphthalene (mg/Kg) | 0.196 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 23 | |
| Pyrene (mg/Kg) | ND | - | - | - | - | - | - | - | - | - | 0.0904 | - | - | - | - | - | - | 1000 | |
| Electrical Conductivity (mmhos/cm) | 1.49 | - | - | - | - | - | - | - | - | - | 3.86 | - | - | - | - | - | - | 4 | |
| Sodium Adsorption Ratio (SAR) | 18.4 | - | - | - | - | - | - | - | - | - | 59.9 | - | - | - | - | - | - | 12 | |
| pH | 9.13 | - | - | - | - | - | - | - | - | - | 8.69 | - | - | - | - | - | - | 6-9 | |
| Arsenic (mg/kg) | 13.8 | - | - | - | - | - | - | - | - | - | 6.6 | - | - | - | - | - | - | 0.39 | |
| Barium (mg/kg) | 4780 | - | - | - | - | - | - | - | - | - | 6190 | - | - | - | - | - | - | 15000 | |
| Cadmium (mg/kg) | <1.3 | - | - | - | - | - | - | - | - | - | <1.3 | - | - | - | - | - | - | 70 | |
| Chromium (III) (mg/Kg) | 19.1 | - | - | - | - | - | - | - | - | - | 12.8 | - | - | - | - | - | - | 120000 | |
| Chromium (VI) (mg/Kg) | <0.55 | - | - | - | - | - | - | - | - | - | <0.56 | - | - | - | - | - | - | 23 | |
| Copper (mg/kg) | 32.3 | - | - | - | - | - | - | - | - | - | 27.5 | - | - | - | - | - | - | 3100 | |
| Lead (inorganic) (mg/kg) | 16.3 | - | - | - | - | - | - | - | - | - | 16.4 | - | - | - | - | - | - | 400 | |
| Mercury (mg/kg) | <0.15 | - | - | - | - | - | - | - | - | - | <0.14 | - | - | - | - | - | - | 23 | |
| Nickel (mg/kg) | 18.1 | - | - | - | - | - | - | - | - | - | 15.1 | - | - | - | - | - | - | 1600 | |
| Selenium (mg/kg) | <32 | - | - | - | - | - | - | - | - | - | <66 | - | - | - | - | - | - | 390 | |
| Silver (mg/kg) | <3.8 | - | - | - | - | - | - | - | - | - | <3.9 | - | - | - | - | - | - | 390 | |
| Zinc (mg/kg) | 56.8 | - | - | - | - | - | - | - | - | - | 49.9 | - | - | - | - | - | - | 23000 | |
| % Solids | 72.1 | 83.8 | 86.2 | 85.2 | 82.4 | 82.7 | 85.2 | 85.2 | 86.9 | 91.5 | 71.1 | 86.8 | 86.9 | 86.0 | 90.4 | 86.1 | 87.3 | - | |

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 at or below background levels.
- 3) "-" indicates no analysis.
- 4) Maximum arsenic level based on background is 22.8
- 5) See site map for sample locations.

| LEGEND | | | |
|-----------|---------------------------|---------------|----------------------------|
| GPU | GAS PROCESSING UNIT | ———— | ABOVE GROUND FLOWLINE |
| CIM | CHEMICAL INJECTION MODULE | - - - - - | ABOVE GROUND CHEMICAL LINE |
| CIT | CHEMICAL INJECTION TANK | — ELE — | ELECTRIC LINE |
| MNFLD | MANIFOLD | - - - - - | EDGE OF PAD |
| ST | STORAGE TANK | - · - · - · - | POND / CUTTINGS |
| SOL | SOLAR UNIT | ⊖ | WELL HEAD |
| ····· | UNDERGROUND CHEMICAL LINE | ⊗ B2 | BACKGROUND SAMPLE LOCATION |
| - - - - - | UNDERGROUND FLOWLINE | | |



| | |
|--|-----------------------------------|
| FIGURE 1 PICEANCE CREEK FRU 297-32A SITE MAP WITH SELECT LAB RESULTS PREPARED FOR XTO ENERGY | |
| KRW CONSULTING, INC. 8000 W. 14TH AVENUE, SUITE 200 LAKEWOOD, COLORADO (303) 239-9011 | |
| NOTES: CUTTINGS TRENCHES TO SUBLINER DATA, RESERVE PIT BERM LAB DATA | REVISIONS DATE: 4/18/12 |
| FIGURE 1 | SHEET NO. 1 of 1 |
| CHECKED: CB | SCALE: 1" = 80' |
| DATE: 2/16/12 | PROJECT NO.: 1108-12A |
| FILE NAME: site select r1 | |