*Please note – on May 11, 2011, Intermountain Power Agency ("IPA") acquired the Wildcat Loadout from Andalex Resources, Inc. ("Andalex"). References to Andalex will therefore occur herein. However, permit actions from May 11, 2011 forward will be the responsibility of IPA, regardless whether Andalex is referenced as the responsible party for such actions.
## CHAPTER 5

### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>R645-301-500.</td>
<td>ENGINEERING</td>
<td>5-1</td>
</tr>
<tr>
<td>R645-301-510.</td>
<td>INTRODUCTION</td>
<td>5-1</td>
</tr>
<tr>
<td>R645-301-511.</td>
<td>GENERAL REQUIREMENTS</td>
<td>5-6</td>
</tr>
<tr>
<td>R645-301-512.</td>
<td>CERTIFICATION</td>
<td>5-6</td>
</tr>
<tr>
<td>R645-301-513.</td>
<td>COMPLIANCE WITH MSHA REGULATIONS AND MSHA APPROVALS</td>
<td>5-21</td>
</tr>
<tr>
<td>R645-301-514.</td>
<td>INSPECTIONS</td>
<td>5-23</td>
</tr>
<tr>
<td>R645-301-515.</td>
<td>REPORTING AND EMERGENCY PROCEDURES</td>
<td>5-25</td>
</tr>
<tr>
<td>R645-301-516.</td>
<td>PREVENTION OF SLIDES</td>
<td>5-26</td>
</tr>
<tr>
<td>R645-301-520.</td>
<td>OPERATION PLAN</td>
<td>5-26</td>
</tr>
<tr>
<td>R645-301-521.</td>
<td>GENERAL</td>
<td>5-26</td>
</tr>
<tr>
<td>R645-301-522.</td>
<td>COAL RECOVERY</td>
<td>5-42</td>
</tr>
<tr>
<td>R645-301-523.</td>
<td>MINING METHOD(S)</td>
<td>5-42</td>
</tr>
<tr>
<td>R645-301-524.</td>
<td>BLASTING AND EXPLOSIVES</td>
<td>5-43</td>
</tr>
<tr>
<td>R645-301-525.</td>
<td>SUBSIDENCE</td>
<td>5-43</td>
</tr>
<tr>
<td>R645-301-526.</td>
<td>MINE FACILITIES</td>
<td>5-43</td>
</tr>
<tr>
<td>R645-301-527.</td>
<td>TRANSPORTATION FACILITIES</td>
<td>5-45</td>
</tr>
<tr>
<td>R645-301-528.</td>
<td>HANDLING AND DISPOSAL OF COAL, OVERBURDEN, EXCESS SPOIL, AND COAL MINE WASTE</td>
<td>5-47</td>
</tr>
</tbody>
</table>

**INTEGRATED SYSTEMS CORPORATION**

**JUL 09 2013**

**Div. of Oil, Gas & Mining**
R645-301-529. MANAGEMENT OF MINE OPENINGS ................. 5-50
R645-301-530. OPERATIONAL DESIGN CRITERIA AND PLANS ... 5-50
R645-301-531. GENERAL ........................................... 5-50
R645-301-532. SEDIMENT CONTROL ............................ 5-51
R645-301-533. IMPOUNDMENTS .................................. 5-51
R645-301-534. ROADS ........................................... 5-53
R645-301-535. SPOIL ........................................... 5-55
R645-301-536. COAL MINE WASTE ......................... 5-56
R645-301-537. REGRADED SLOPES .......................... 5-59
R645-301-540. RECLAMATION PLAN ....................... 5-59
R645-301-541. GENERAL ........................................... 5-59
R645-301-542. NARRATIVES, MAPS AND PLANS .......... 5-65
R645-301-550. RECLAMATION DESIGN CRITERIA AND PLANS ......................................................... 5-70
R645-301-551. CASING AND SEALING OF UNDERGROUND OPENINGS ........................................ 5-71
R645-301-552. PERMANENT FEATURES ....................... 5-71
R645-301-553. BACKFILLING AND GRADING .................. 5-71
R645-301-560. PERFORMANCE STANDARDS .................. 5-77

APPENDIX A

Spill Prevention, Control & Countermeasure Plan
HISTORICAL NOTE: In 2004, the Division issued an Order DO-04 for wind-blown fines which had accumulated outside the disturbed area, primarily in the area southwest of the main coal storage pile below sediment included in Appendix F.

A proposed crude oil unloading station, storage system, and railcar loading stations will be located on the west side of the Utah Railroad tracks. These facilities will be bonded before any implementation or construction is started.

R645-301-500. ENGINEERING

R645-301-510. INTRODUCTION

Volume II of this PAP contains plates which support the narrative of Volume I. These maps include, but are not limited to, contiguous surface and subsurface owners, the permit boundary including the area to be affected over the life of the project, a plate depicting all buildings and structures within 1,000 feet of the permit area and any surface or subsurface man-made features (powerline). Much of this information is combined on individual maps, e.g., the man-made features are on Plate 1 which also depicts buildings within 1,000 feet.

The location and boundaries of the revegetation reference area are shown on Plate 1.

Figure VII-2 depicts surface waters and receiving waters in the vicinity of the permit area. The Gordon Creek Road (County Road 139) is also depicted as it relates to the permit area on the surface facilities map.

Cross Sections, Maps, and Plans (Also R645-301-511, 521. 140, 521.150, 521.160, 521.170, 521.180 and R645-301-722)

Many of the plans of this section are not applicable to the Wildcat Loadout Facility as it is strictly a surface facility and plans showing core samples, nature of coal seams, outcrops, active underground and abandoned workings or any others pertaining to mining (surface or underground) are not included.

5-1

INCORPORATED

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Div. of Oil, Gas & Mining
Surface water monitoring stations are included on Plate 2A.

Subsurface water has not been encountered within the permit area and the only surface water would consist of sediment ponds and diversion ditches which become surface waters only in direct response to a precipitation event. These, along with the one spring located southwest of the permit area, are shown on Plate 2A and Plate 15 and Figure VII-2 respectively.

There is a gas well drill site located near the southeast part of the facility, adjacent to the public road, which is partially within the permit area. The drillhole has been capped and the site has been reclaimed. This work was done by Conoco-Phillips under their own right-of-way issued by BLM.

Slopes are represented by topographic maps (Plate 1) and final reclamation contours (Plate 9). The cross-sections, through these two topographic maps, are shown on Plate 10. From this, a mass balance was developed.

**Operation Plan: Maps and Plans**

The lands affected by this operation (surface only) are clearly shown on Plate 1. Plate 1 depicts all buildings, utilities, and facilities. This is a surface facility only and involves no underground workings. The bond required by the Division is for the entire affected area including all the surface facilities.

The permit area shown on Plates 1, 1A and 16 contains 100.19 acres, and is included within the 270 acre BLM right-of-way (U-48027) boundary. It is important to note that this is a non-exclusive areal right-of-way, and that there are numerous other equally valid rights-of-way which occupy much of this same area. For example, overlapping rights-of-ways exist for the Utah Railway tracks, the Consumers Road, the Carbon County Consumers Road, the bypass road, the Trestle public road, Rocky Mountain Power 46 KV powerline, Phillip Petroleum’s gas well and pipeline corridor, and Hidden Splendor shop facility. BLM determined the final 270 acre configuration in part to
"square up" the boundary for administrative purposes. Being a non-exclusive right-of-way means there is no conflict among grantees, and no inherent liability from one grantee to the next, as long as each grantee’s activities are within the terms of their respective right-of-way.)

The disturbed area shown on Plates 1B is 74.46 acres, which includes 26.11 acres on the west side of the railroad tracks and 48.35 acres on the east side of the tracks. This acreage represents all actual disturbed areas within the site, and does not include the ASCA’s or the Utah Railway track.

Coal storage, topsoil storage, loading areas, coal preparation waste areas are all depicted on the surface facilities map. Additional detail on topsoil, diversions, and ponds can be found on Plates 1, 2, 13, and 3A-3H.

There is no storage of explosives at the Wildcat Loadout.

The final surface configurations will be similar to the surface prior to Andalex’s involvement at Wildcat. Cross sections and a surface configuration plate are included in Volume II as 10 and 9 respectively.

Surface water monitoring locations are shown on Plate 2A.

After the completion of activities at this facility, no structures will remain with the exception of the railroad grade, the tracks, and it’s associated drainage structures.

All maps requiring certifications by a registered person have been done so. Included are stamps from experts in related fields such as surveying.

Associated Energy Services (AES) has an oil loading facility on the Utah Railway. This facility is called AES Oil Loading Terminal. AES proposes to bring crude oil from the Uintah Basin and Central Utah to this terminal. Trucks loaded with approximately 280 barrels (bbls) come to this site. This oil is then loaded into rail tankers which hold 530-650 bbls. Due to difficulty in getting rail tankers in a timely manner, some oil may be
temporarily stored in mobile tanks. These tanks are used in the oilfield and have a capacity of approximately 500 bbls. When rail tankers are delivered to the terminal, the oil from these tanks is loaded back into trucks and delivered to the rail tankers which are located adjacent to the coal loading tracks on the Utah Railway. Presently the terminal is loading approximately 2,000 bbls per day. AES anticipates eventually loading 3,000-6000 bbls/day from this terminal.

Refer to Plate 1 Existing Surface Facility Map, for the location of the AES Oil Loading Terminal.

**Maps and Plans**

The following is a list of maps and plans included with this application as Volume II. Those maps which require certification by a registered professional engineer bear that mark. These maps and plans, when used in conjunction with Volume I (the text), will constitute a complete plan for the Wildcat Loadout Facility. As this facility has already been completely constructed, the maps do not include any "as proposed" facilities, only existing ones. Along with the facilities, plates are included, environmental resource maps, and reclamation plans. It should be noted that a wildlife distribution map is not included based on the State Division of Wildlife Resources' comments (please see Appendix F).
## PLATES

<table>
<thead>
<tr>
<th>PLATE #</th>
<th>PLATE TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate 1</td>
<td>Existing Surface Facility Map</td>
</tr>
<tr>
<td>Plate 1A</td>
<td>Proposed Surface Facility Map, Response to DO-04</td>
</tr>
<tr>
<td>Plate 1B</td>
<td>Disturbed Areas</td>
</tr>
<tr>
<td>Plate 2</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 2A</td>
<td>Drainage Map, Response to Division Order</td>
</tr>
<tr>
<td>Plate 3A</td>
<td>Sediment Pond A</td>
</tr>
<tr>
<td>Plate 3B</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 3C</td>
<td>Sediment Pond C</td>
</tr>
<tr>
<td>Plate 3D</td>
<td>Sediment Pond D</td>
</tr>
<tr>
<td>Plate 3E</td>
<td>Sediment Pond E</td>
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<tr>
<td>Plate 3F</td>
<td>Sediment Pond F</td>
</tr>
<tr>
<td>Plate 3G</td>
<td>Sediment Pond G</td>
</tr>
<tr>
<td>Plate 3H</td>
<td>Permanent Impoundment</td>
</tr>
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<td>Deleted</td>
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<tr>
<td>Plate 5</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 6</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 7</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 8</td>
<td>Final Reclamation Hydrology, Phase 1</td>
</tr>
<tr>
<td>Plate 9</td>
<td>Final Reclamation Contours &amp; Revegetation, Phase 2</td>
</tr>
<tr>
<td>Plate 10</td>
<td>Cross Sections</td>
</tr>
<tr>
<td>Plate 11</td>
<td>Soils Map</td>
</tr>
<tr>
<td>Plate 12</td>
<td>Geology Map</td>
</tr>
<tr>
<td>Plate 13</td>
<td>Topsoil Piles</td>
</tr>
<tr>
<td>Plate 14</td>
<td>Cross Section Reference Map</td>
</tr>
<tr>
<td>Plate 15</td>
<td>Watershed Map</td>
</tr>
<tr>
<td>Plate 16</td>
<td>Surface and Subsurface Ownership Map</td>
</tr>
<tr>
<td>Plate 17</td>
<td>Typical Road Cross-sections</td>
</tr>
<tr>
<td>Plate 18</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 19</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 20</td>
<td>Deleted</td>
</tr>
</tbody>
</table>
R64S-301-S11. GENERAL REQUIREMENTS
See R64S-301-510.

R64S-301-S11.100. PROPOSED COAL MINING AND RECLAMATION OPERATIONS
See R64S-301-510.

R64S-301-S11.200. POTENTIAL IMPACTS TO THE ENVIRONMENT
See R64S-301-510.

R64S-301-S11.300. RECLAMATION
See R64S-301-240.

R64S-301-S12. CERTIFICATION
See R64S-301-512.
See Volume II and R64S-301-510.

R64S-301-S12.100. CROSS SECTIONS AND MAPS
See R64S-301-512.

R64S-301-S12.110. MINE WORKINGS TO THE EXTENT KNOWN
N/A - There are no mine workings associated with this project.

R64S-301-S12.120. SURFACE FACILITIES AND OPERATIONS
See Volume II, Plates 1 and 2. All applicable maps are certified.

R64S-301-S12.130. SURFACE CONFIGURATIONS
See Volume II, Plates 1 and 2. All applicable maps are certified.

R64S-301-S12.140. HYDROLOGY
(Also R64S-301-722)
Refer to Appendix R
R645-301-512.150. GEOLOGIC CROSS SECTIONS AND MAPS

See Volume II, Plate 12. All applicable maps are certified.

R645-301-512.200. PLANS AND ENGINEERING DESIGNS

Applicable plans, such as for impoundments and primary roads have been certified by a qualified, registered professional engineer and are included in the following sections.

R645-301-512.210. EXCESS SPOIL

N/A - There are no plans for excess spoil at this facility.

R645-301-512.220. DURABLE ROCK FILLS

N/A - There are no plans for durable rock fills at this facility.

R645-301-512.230. COAL MINE WASTE

This is strictly a surface facility, there will be no underground development wastes.

Coal Processing Waste (Also R645-301-513.800, 536, and relevant portions of Sections R645-301-735, 736, 737, 745, 746, 747, and 754)

During processing, a small amount of boney material and rock is removed from the lump coal product. It is currently proposed to dispose of this material on the west side of Wildcat in a previously disturbed area which reports to the sedimentation ponds.

In accordance with requirements of 30 CFR 77.215-2, a refuse disposal plan has been filed with MSHA. An MSHA I.D. number has been issued for this pile - 1211-UT-09-01864-01. The required disposal plan and maps are included as Appendix O of this M.R.P.

If it is determined through testing that this material is acid- or toxic-forming, then the disposal will consist of burial on the west side of Wildcat (Plate 1) or haulage to another approved coal processing waste disposal area. The Division will be notified if the coal processing waste is to be moved off at another approved disposal area. All coal processing...
shall be inspected at least quarterly, by a qualified registered engineer. This person will be responsible for inspecting visual factors such as steepness of slopes and seepage. Copies of inspections will be maintained at the site and should any potential hazards be observed, the Division shall be notified and remedial action taken. The coal processing waste piles shall be spread in layers no more than 24 inches in thickness; however, because of the nature of this "boney" material and its size (5 to 8 inches in diameter) compaction is not possible. Observations will be made regarding stability of the pile. This section shall comply with UMC 817.81-.88. IPA's coal processing waste is very small in volume. Andalex's hydrologic studies have indicated that groundwater does not exist within a zone of impact created by this facility. Drainage from coal processing waste, until such time as the material is buried with four feet of the best available non-toxic and non-combustible material and revegetation has occurred, will report to sedimentation ponds as shown on the surface drainage map. Drainage from the pile is carried to Pond F via disturbed ditch D-32, D-33, and D-34, which is sized to carry runoff from the pile from a 100 year - 6 hour event as required. Slope protection will be provided as required and banks will have a minimum static safety factor of 1.5. In the unlikely event spontaneous combustion occurs within the coal processing waste pile, the fire will be extinguished through means of compaction which is standard operating procedure (not to imply that the waste pile will be compacted as it is built). All personnel at Wildcat Loadout are familiar with this procedure. No burned coal processing waste or coal refuse will be removed from the disposal area except if it is moved to another approved coal processing disposal area. Coal processing waste from the Wildcat Loadout will not be returned to underground mine workings.

This material has been tested according to requirements for acid and toxic-forming materials and the results of these tests have been submitted to the Division. The intention of the testing was to determine whether the material had any toxic or acid-forming characteristics. Our results show that this material may be used in fill situations within our approved permit area. It is IPA's intention to use this material as substitute fill for the expansion plans at the Wildcat loadout. It is clear that this material will have to be reclaimed as a separate operation from an ordinary fill situation. IPA has committed to covering this material with four feet of native fill prior to topsoil. This refuse material, which is used in
situation, will be reclaimed separately and covered with native material. IPA makes this commitment for all of the refuse material which is used as fill.

It should be emphasized that upon final reclamation any refuse material which has been used in a fill situation will be removed and placed in the approved refuse disposal area. It will not be reclaimed in-place.

It is estimated that there are presently approximately 54,500 cubic yards of coal waste material on site. Of this, approximately 10,000 cubic yards of material were used in fills, and the remaining 44,500 cubic yards are in the refuse pile.

R645-301-512.240. IMPOUNDMENTS

Complete sizing and design details for all impoundments are included in Appendix R, "Wildcat Loadout Sedimentation and Drainage Control Plan". All impoundments are shown on Plates 2. Impoundment plans and details are shown on Plates 3A through 3H.

Water Monitoring Plans

(Also R645-301-722.300, 723, 724, 731.200)

Four surface water monitoring stations will be established as shown on Plate 15. Two of the stations will be located in undisturbed drainage above the site and two stations will be in the same drainages below the site. This configuration will show any affects of the operation on the drainage of the area.

Since this is a new permit and no baseline data has been gathered, the stations will be monitored according to the Baseline Criteria (parameters and frequency) listed in Table V-10, "Surface Water Baseline and Operational Water Quality Parameter List", for the first two years. After that time, the stations will be monitored according to the parameter and frequency requirements of the operational portion of Table V-10. Reclamation monitoring will also follow the requirements of the Postmining portion of Table V-11.

Water monitoring stations will be designated as WCW-1 through WCW-4 for surface monitoring points. In addition, each pond discharge will be monitored according to N.P.D.E.S. require
station numbers will be designated WCW-A through WCW-F for Ponds A through F respectively (see Plates 2A and 15).

Monitoring results will be submitted to the Division quarterly, within sixty days following the end of the reporting quarter.

Samples will be collected during or shortly after precipitation events to establish baseline parameters.

Baseline monitoring will consist of eight samples analyzed for the baseline chemical parameters on Table IV-10 (four per annum, collected quarterly during precipitation events). A rain gauge will also be installed at the site, and a log of precipitation events will be maintained on site.

It should be noted that IPA and its designated laboratory will follow the "Standard Methods for the Examination of Water and Wastewater" for all of the above water samples.
TABLE V-10

Surface Water Baseline and Operational Water Quality Parameter List

Field Measurements:

* - Water Levels or Flow
* - pH
* - Specific Conductivity (umhos/cm)
* - Temperature (°C)

Laboratory Measurements: (mg/l) IONS AND METALS ANALYSES ARE DISSOLVED, EXCEPT AS NOTED

* - Total Settleable Solids
* - Total Suspended Solids
* - Total Dissolved Solids
* - Total Hardness (as CaCO₃)
* - Acidity
  - Aluminum (Al)
  - Arsenic (As)
  - Barium (Ba)
  - Boron (B)
* - Carbonate (CO₃²⁻)
* - Bicarbonate (HCO₃⁻)
  - Cadmium (Cd)
* - Calcium (Ca)
* - Chloride (Cl⁻)
  - Chromium (Cr)
  - Copper (Cu)
  - Fluoride (F⁻)
* - Iron (Fe) (TOTAL)
* - Iron (Fe) (DISSOLVED)
  - Lead (Pb)
* - Magnesium (Mg)
* - Manganese (Mn) (Total)
* - MANGANESE (MN) (Dissolved)
  - Mercury (Hg)
  - Molybdenum (Mo)
  - Nickel (Ni)
  - Nitrogen: Ammonia (NH₃)
  - Nitrate (NO₃⁻)
  - Nitrite (NO₂⁻)
* - Potassium (K)
- Phosphate (PO₄³⁻)
- Selenium (Se)
  * - Sodium (Na)
  * - Sulfate (SO₄²⁻)
  - Sulfide (S⁻)
  - Zinc (Zn)
  * - Oil and Grease
  * - Cation-Anion Balance

-Baseline   *Operational
<table>
<thead>
<tr>
<th>Type of Sampling Site</th>
<th>Baseline</th>
<th>Operational</th>
<th>Postmining</th>
</tr>
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<tr>
<td>Surface Water Bodies</td>
<td>Surface Water Bodies</td>
<td>Surface Water Bodies</td>
<td></td>
</tr>
<tr>
<td>Field Measurements (See Table V-10)</td>
<td>Performed during water level/flow measurements</td>
<td>Performed during water level/flow measurements</td>
<td>Performed during water level/flow measurements</td>
</tr>
<tr>
<td>Sample Frequency</td>
<td>Quarterly for lakes, reservoirs, and impoundments (water level and quality); monthly flow measurements and quarterly water quality measurements (one sample at low flow and high flow each) for perennial streams.</td>
<td>Quarterly for lakes, reservoirs, and impoundments (water level and quality); monthly flow measurements and quarterly water quality measurements (one sample at low flow and high flow each) for perennial streams.</td>
<td>Two per annum for perennial streams (high &amp; low flow); two per annum during snowmelt and rainfall for intermittent streams.</td>
</tr>
<tr>
<td></td>
<td>Monthly flow and water quality measurements during period of flow for intermittent streams.</td>
<td>Monthly flow and water quality measurements during period of flow for intermittent streams.</td>
<td>Sampling for ephemeral streams deter-</td>
</tr>
</tbody>
</table>

**TABLE V-11**

**Surface Water Sampling**

<table>
<thead>
<tr>
<th>Type of Sampling Site</th>
<th>Baseline</th>
<th>Operational</th>
<th>Postmining</th>
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<tr>
<td>Surface Water Bodies</td>
<td>Surface Water Bodies</td>
<td>Surface Water Bodies</td>
<td></td>
</tr>
<tr>
<td>Field Measurements (See Table V-10)</td>
<td>Performed during water level/flow measurements</td>
<td>Performed during water level/flow measurements</td>
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</tr>
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<td>Two per annum for perennial streams (high &amp; low flow); two per annum during snowmelt and rainfall for intermittent streams.</td>
</tr>
<tr>
<td></td>
<td>Monthly flow and water quality measurements during period of flow for intermittent streams.</td>
<td>Monthly flow and water quality measurements during period of flow for intermittent streams.</td>
<td>Sampling for ephemeral streams deter-</td>
</tr>
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</table>

**INCORPORATED**

**SEPTEMBER 14, 2012**

**DIVISION OIL, GAS & MINING**
mined at pre-design conference.
<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Operational</th>
<th>Postmining</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sampling Duration</strong></td>
<td>Two years (one complete year of data before submission of PAP.)</td>
<td>Yearly until two years after surface reclamation activities have ceased.</td>
<td>Until termination of bonding.</td>
</tr>
<tr>
<td><strong>Type of Data Collected &amp; Reported</strong></td>
<td>Flow and/or water levels and water quality.</td>
<td>Flow and/or water levels and water quality.</td>
<td>Flow and/or water levels and water quality per operational parameters.</td>
</tr>
<tr>
<td><strong>Comments</strong></td>
<td>All field measurements should be performed concurrently with water level/flow measurements.</td>
<td>All field measurements should be performed concurrently with water level/flow measurements.</td>
<td>All field measurements should be performed concurrently with water level/flow measurements.</td>
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<td><strong>Comments</strong></td>
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**Reclamation Water Monitoring**

5-16
Water monitoring of the surface stations and remaining ponds will continue after reclamation, until bond release. The frequency of monitoring will be as shown on Table V-11 for "Postmining". Parameters monitored will be the same as those for operational sampling.
All roads within the permit area are classified as "Primary Roads" in accordance with R614-301-527.100. Primary roads on the site are of 2 typical designs:

1. Single-lane, gravel-surfaced roads approximately 16' wide; and

2. Double-lane, either gravel or asphalt surfaced roads, approximately 26' wide.

Although all roads on site are not used for coal hauling, each road is constructed to the respective typical design and dimensions shown on Plates 17.

Because of the variance in road types, widths and lengths, the primary roads have been designated on Plate 1 with numbers (i.e. PR-1= Primary Road 1) to facilitate the description of each:

**Primary Road 1 (PR-1)** - This section is a double-lane, asphalt surfaced road connecting the county road to the Wildcat Facilities. The road serves as both a main access and a coal haul road. This section of road is approximately 800' long and runs on a grade of approximately 4.875%. The finished width of the road is approximately 26', as shown on the typical section on Plate 17.

**Primary Road 2 (PR-2)** - This section is a single-lane, gravel surfaced road connecting the Mine Run Coal Storage Truck Loop to the previously described Primary Road 1. This road is used primarily by coal trucks bringing coal onto the site. This road section is approximately 2050' long and runs on a grade of 1.25% to a maximum of 8,000% a the top of the loop. The top width of the road is approximately 16' as shown on Plate 17.

**Primary Road 3 (PR-3)** - This section of road is a double-lane, asphalt surfaced road connecting the truck scale area to the county road on the northeast end of the site. The road is used primarily for coal haulage exiting the site; however, it is also used as a secondary access to the property. The road is approximately 490' long and is on a grade of approximately 0.20%. The finished width of the road is approximately 26' as shown on Plate 17.

**Primary Road 4 (PR-4)** - This section is a double-lane...
surfaced road leading from the Beaver Creek Shop/Warehouse Road to the northern truck dump at the Wildcat Facility, and single-lane around the truck loop. This road is used primarily for coal haulage, but also provides access to the permit area north of the railroad. The double-lane portion of the road is approximately 700' long and is on a grade averaging less the 2.10%. The single-lane portion is approximately 550' long around the truck loop, and also averages less than 4% in grade, with the maximum grade at 7.06%. The double-lane road width is approximately 26' as shown on Plate 17, and the single-lane portion is approximately 16' wide as shown on Plate 17.

Primary Road 5 (PR-5) - This road leads from the Primary Road 2 (Mine Run Truck Loop) along the eastern perimeter of the main coal pile to the Loadout Tower. Much of the road is used primarily for access by support equipment. This is a single-lane road, approximately 2100' long and runs on an average grade of 2.5%. The finished road width is approximately 16' as shown on Plate 17.

Primary Road 6 (PR-6) - This road runs from the Loadout Tower area along the east edge of the railroad to the Truck Scale Area. This road is also used primarily for access by support equipment, although the northern portion is occasionally used for coal haulage. This is a single-lane, gravel-surfaced road, approximately 2150' long and runs on an average grade of 2.26%, with a maximum grade of 9.80% for less than 100'.

Primary Road 7 (PR-7) - This road lends from the northern truck dump around to the Permanent Impoundment Area and south to the Waste Coal Storage Area. This road is used primarily for support equipment access and occasionally for waste coal haulage. The road is approximately 1300' long and runs on a grade of a minimum of 0.09% on the southern area to a maximum of 2.00% between the truck dump and impoundment area. The road width is approximately 16' as shown on Plate 17.

Primary Road 8 (PR-8) - This road leads from the northern truck dump, through the "Depression Area" and connects to Primary Road 7 near the southern end. The road is used primarily for access to the west property and "Depression Area" by support vehicles and loaders; however, coal and coal refuse are also occasionally hauled here. The road is approximately 800' long and runs on a grade from a minimum of 0% on the southern end to a maximum of 9.26% for approximately 100' near the truck loop. The road width is approximately 16', single-lane, gravel-surface.
Primary Road 9 (PR-9) - This road runs between Primary Road 5 and Primary Road 6, and provides access to the Coal Stockpile as well as to other facilities. The road is used primarily for access by support vehicles. The road is approximately 740' long and runs on an average grade of 2.00%. Road width is approximately 16'; single-lane, grave-surfaced as shown on Plate 17.

Primary Road 10 (PR-10) - This road connects Primary Road 5 to Primary Road 6 near the Loadout Tower. This is a single-lane, gravel-surfaced road, approximately 380' long. The grade on this road runs from 0% to a maximum of 2.86%. The road is used primarily for support vehicle access. Road width is approximately 16' as shown on Plate 17.

Actual coal haul roads are those designated Primary Roads 1 through 5; however, since all roads are classified as primary, and since each was constructed according to a standard design as shown on Plates 17, the following information is applicable to all roads at this site.

All primary roads at this site have been designed and constructed to meet the requirements of R614-301-534.300 and R614-301-742.420, and are certified as such.

All roads are located on the most stable surface available, generally on natural ground. There are no stream fords at this site; however, ephemeral channel crossings are provided by approved, adequately sized culverts. Drainage control is provided along all roads by the use of adequately sized ditches and culverts as necessary.

All roads are constructed and maintained to minimize disturbance and adverse impacts on fish, wildlife and related environmental values. This is accomplished through the use of current, prudent engineering design practices, proper drainage control, dust control, speed control and frequent maintenance. Roads are maintained to meet applicable design standards throughout their use by blading, watering, treatment with dust control agents such as magnesium chloride, and resurfacing as necessary.

Roads are located, designed, constructed, used, maintained, and will be reclaimed so as to prevent or control damage...
private property; they will use non-acid and non-toxic forming substances in surfacing; and they will have a static safety factor or 1.3 or greater for all embankments.

Roads will be reclaimed immediately after they are no longer required for the operations. Road reclamation will take place simultaneously with the property reclamation, during Phases I and II. Roads will be reclaimed as per the plan, including: (1) Restoring natural drainage patterns; (2) Reshaping cut fill slopes to be compatible with the post-mining land use; (3) Removal of all structures (culverts, bridges, etc.); (4) Revegetation. No roads are planned to be left at this site after final reclamation.

R645-301-512.260. VARIANCE FROM APPROXIMATE ORIGINAL CONTOUR

N/A - The site will be reclaimed to approximate original contour.

R645-301-513. COMPLIANCE WITH MSHA REGULATIONS AND MSHA APPROVALS

A great emphasis is put on assuring a safe mine operation and the mine and surface facilities will be operated within prudent standards to insure the health and safety of all employees. The facilities will be carefully inspected by company-trained safety engineers and state and federal mine inspectors.

The operation will abide by Utah State Coal Mine Regulations and the 1969 Federal Coal Mine Health and Safety Act. In addition, these regulations will be supplemented by a company safety policy. Various training programs will be utilized such as the following:

- Methane Measurements
- Roof and Rib Control
- Oxygen Deficiency Testing
- Ventilation
- First Aid
- Mine Rescue
- Mine Electrical Certification
- Self Rescue Training
- Use of Personal Protective Equipment
- Recognition of Electrical Hazards
- General Accident Prevention
- Mine Communications
- Job Safety Training
Many of the training programs will run continuously, such as those involving roof control and ventilation. Other programs are held annually with many oriented toward new employees.

**R645-301-513.100. COAL PROCESSING WASTE DAMS AND EMBANKMENTS**

N/A - See R645-301-512.230

**R645-301-513.200. IMPOUNDMENTS AND SEDIMENTATION PONDS MEETING MSHA CRITERIA**

N/A

**R645-301-513.300. WASTE DISPOSED IN UNDERGROUND MINE WORKINGS**

N/A

**R645-301-513.400. REFUSE PILES**

A refuse pile is permitted at the Wildcat Loadout facility for disposal of coal processing waste and sediment cleaned from sediment ponds. This pile is permitted by MSHA with I.D. number 1211-UT-09-01864-01.

The pile is constructed, maintained and inspected in accordance with MSHA regulations, 30 CFR 77.214 and CFR 77.215.

Pile design and operation are detailed in Section R645-301-512-230 and Appendix O.

**R645-301-513.500. MINE OPENINGS**

N/A

**R645-301-513.600. DISCHARGES INTO AN UNDERGROUND MINE**

N/A

**R645-301-513.700. SURFACE COAL MINING CLOSER THAN 500 FEET TO AN ACTIVE UNDERGROUND MINE**

N/A

**R645-301-513.800. COAL MINE WASTE FIRES**
R645-301-514. INSPECTIONS

All engineering inspections, excepting those described under R645-301-514.330, will be conducted by a qualified registered professional engineer or other qualified professional specialist under the direction of the professional engineer.

R645-301-514.100. EXCESS SPOIL

N/A - There are no excess spoil piles.

R645-301-514.200. REFUSE PILES

The refuse pile is inspected quarterly by a registered professional engineer in accordance with this section and as required by 30 CFR 77.215.2. The disposal plan is detailed in Appendix O.

R645-301-514.210. REGULAR INSPECTIONS

See R645-301-514.200 and Appendix O.

R645-301-514.220. CRITICAL CONSTRUCTION PERIODS

See R645-301-514.200 and Appendix O.

R645-301-514.221. FOUNDATION PREPARATION AND TOPSOIL REMOVAL

Completed. There are no plans for additional foundation preparation or topsoil removal.

R645-301-514.222. UNDERDRAINS

N/A - There are no underdrains.

R645-301-514.223. FINAL SURFACE DRAINAGE SYSTEMS


R645-301-514.224. FINAL GRADING AND REVEGATATION

A certified report is provided for Division review promptly after each inspection. The report includes appearances of instability, structural weakness and other hazardous conditions, as well as condition of surface drainage.

N/A - There are no underdrains or protective filters.

A copy of each inspection report is maintained on-site.

See R645-301-512.240.

This is performed annually by a registered P.E.

See R645-301-514.310.

Certified reports are kept on-site, and submitted with Annual Reports.

See R645-301-514.312.

N/A
R645-301-515. REPORTING AND EMERGENCY PROCEDURES

R645-301-515.100. SLIDES AND OTHER DAMAGE

The Wildcat Loadout is located on relatively flat ground, making the probability of a slide extremely remote.

If a slide should occur which may have a potential adverse effect on public, property, health, safety, or the environment, IPA will notify the Division by the fastest available means and comply with any remedial measures required by the Division.

R645-301-515.200. IMPOUNDMENT HAZARDS

Safety Precautions

The ponds were built as per specifications and under supervision of a qualified, registered professional engineer. The ponds are inspected quarterly for safety and compliance. Inspection reports are maintained on-site, and submitted to the Division on an annual basis. Ponds will be cleaned at minimum when sediment reaches 60% of designed sediment volume. Measuring devices will be installed in the ponds to show when the ponds have filled with sediment to the clean-out level.

R645-301-515.300. TEMPORARY CESSION OF OPERATIONS

Whenever it is known that operations are to be temporarily ceased for more than 30 days, IPA will submit to the Division a notice of intention to cease or abandon the operations, in accordance with R645-301-515.320 and to MSHA standards.

This notice will describe mitigation measures to be employed in accordance with the terms and conditions of the permit approval, such as a statement of the number of surface areas involved in the cessation, prior reclamation efforts accomplished on the property, and identification of all backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

R645-301-515.310. TEMPORARY ABANDONMENT

INTEGRATED
SEPTEMBER 14, 2012
DIVISION OIL, GAS & MINING
See R645-301-515.300.

R645-301-515.311. SUPPORT AND MAINTENANCE
N/A

R645-301-515.312. SECURING SURFACE FACILITIES
Locked gates will be employed to prevent access to the site during temporary closures.

R645-301-515.320. NOTICE OF INTENT TO CEASE OR ABANDON OPERATIONS
See R645-301-515.300.

R645-301-515.321. STATEMENT OF CONDITIONS PRIOR TO CESSATION OR ABANDONMENT, UNDERGROUND
See R645-301-515.300.

R645-301-515.322. STATEMENT OF CONDITIONS PRIOR TO CESSATION OR ABANDONMENT, SURFACE
See R645-301-515.300.

R645-301-516. PREVENTION OF SLIDES
Andalex has agreed to interim stabilization of all slopes and embankments within the disturbed area and has done so. IPA will notify the Division in the event of any slides or other damage.

R645-301-520. OPERATION PLAN (Also R645-301-526)

R645-301-521. GENERAL

Overview of Project

General Description
The new unit train loadout facility at Wildcat Junction is approaching the three million ton mark. To date,
trains have been loaded with no operating failures or significant difficulties.

The facility is designed to provide rapid train loading with an automatic sampling system meeting ASTM standards. The sampling system is a Redding Three Stage Sampler. The bulk weighing system is accurate to 0.1% and is certified by the State of Utah, Bureau of Weights and Measures every six months.

The stockpiling and reclaim system is designed to reduce handling and consequently degradation. It provides segregated stockpiles for each of the three seams which will be mined simultaneously from Andalex's Centennial Project. With segregated stockpiles, IPA will have the capability of meeting any customer's requirements. The stockpile has been designed to provide adequate live storage to allow multiple unit-trains to be discharged from Wildcat successively in order to meet the demands of ship-loading and the export market.

Summary Description

Loadout Structure

5,000 tph loading rate, 300 ton surge bin, 120 ton weigh bin, programmable batch weighing system, 3 stage automatic sampler, operator control room.

Reclaim Conveyor

72" belt, 815 fpm, 1,200 hp, length = 1,035'. Four each 100' truss sections, 2 each support bents, vertical gravity take-up tower.

Reclaim Transfer Conveyor (3 each)

54" belt, 75 hp, length = 75'

Under-pile Reclaim

Nine each storage pile activators, 2,500 tph capacity each, flow control by double bladed slide gates, 30' diameter inlet cones, pile activators connected by 13' diameter multiplate tunnel. Total tunnel length = 700'.

Storage Pile
Height = 85', crest length = 468'. Three segregated piles:
total storage = 106,000 t, live storage = 55,000 t. Extended
(co-mingled) pile: total storage = 135,000 t, live storage =
70,000 t.

Radial Stacker

Underslung truss design, 110° arc of swing, 247' long, 36"
Conv, 600 tph, 600 fpm, 100 hp drive.

Yard Conveyor From Crusher to Stacker
Building (Conv Y)

36" belt. 600 tph, 450 fpm, 75 hp drive, length = 470',
transfer structure at radial stacker supporting drive unit and
electrical control room.

Crusher Building

600 tph impact crusher (125 hp), 2" x 0" product, 4' x 14'
double deck screen, Conv T drive unit, electrical control
room.

Conveyor From Truck Dump To Crusher Building
(Conv T)

48" belt, 600 tph, 250 fpm, 75 hp, length = 150'. Belt scale,
metal detector, tramp iron magnet.

Truck Dump

100 ton surge capacity, drive-over grizzley for end or bottom
dump trucks, dozer trap opening for reclaim of run of mine
storage area with a capacity of 150,000 tons.

Unit-Train Loading Track

115 lb. rail, total length = 10,133', 1 each turnout, 3 each
cross overs, 1 each bumper, 2 each high stand throw switches,
3 each spring switches.

Office Building

30' x 40' containing office, small warehouse, and lab.
A small temporary change room trailer is located in office.
Scale House

14' x 60' trailer, 60' platform scales.

Shop Building

40' x 40' metal building, concrete foundation

Magnesium Chloride Storage Tank

8' x 20' metal tank, concrete stand

Electrical

Substation

2,500 KVA, 46,000 V to 4,160 V transformers, capacitors for power factor correction, designed to comply with appropriate MSHA and UP&L requirements

Yard Power

4,160 V distribution reduced to 480 V at crusher building, stacker, reclaim tunnel exit and loadout structure, transmission line = 2,600', 45' poles.

Electrical Control Rooms

Crusher Building

Motor controls, switchgear, and associated electrical controls for crusher, screen, Conv "T" drive, reclaim vent fan, scale, magnet, metal detector, water pump, and area lighting

Stacker Area (Control Room Located On Transfer Structure)

Motor controls, switchgear, and associated electrical controls for Conv "Y" drive, conveyor "S" drive, stacker propelling drive, water pump, office building, mobile equipment servicing station and area lighting

Reclaim Area (Control Room Located Near Tunnel Exit On West Side of Conv "R")
Motor controls, switchgear, and associated electrical controls for Conv "RT" drive, all storage pile activators, hydraulic power pack drives (for gate actuation), reclaim sensor scale, gate position feedback controls, methane monitors, and area lighting (including reclaim tunnel)

Loadout Area (Electrical Controls Located In Operators Control Room)

Motor controls, switchgear, and associated electrical controls for Conv "R" drive (4,160 V), batch weighing system, sampling system, car spotter, and area lighting

Electrical Class

All motors, starters, switchgear, and controls can be Class II, Div. II, even in the reclaim tunnel. However, 2 each methane monitors are to be installed in the reclaim tunnel and 1 each in the truck dump which will deactivate all electrics in the tunnel if methane is detected. Lighting in the tunnels must meet Class I, Div. I requirements.

Office Trailer

A 40’x 10’ office and change room trailer will be placed on the west side of the facility. See Plate 1.

Water

Tanks

2 ea., 10,000 gal., treated for culinary, 35 hp centrifugal pump, enclosed tankside pump houses

Tank Location

- At crusher building to serve crusher building and truck dump
  - At office building (culinary usage)

Area of Operations

Proposed Permit Area

The proposed permit area is located within BLM right-of-way U-48027 and is shown on Plates 1 and 1A.

Surface Area to be Disturbed
The permit area has been previously impacted by mining and loading. The entire permit area at Wildcat has been used for loading and coal storage previously. The total existing surface area disturbed is 75.67 acres excluding the ASCA Areas and Utah Railway Tracks. Facilities are indicated on Plate 1.

The disturbed area boundary has been modified to include additional area to the east of the main stockpile (radial stacker) in order to accommodate the cleanup of wind-blown fines as required by Division Order DO-04. Additional details regarding this cleanup plan can be found in Appendix P.

Life of Project

The life of the project has been estimated at 30 years.

Schedule of Construction, Mine Development, Mining, and Reclamation

All surface facilities have been constructed for the Wildcat Loadout. Reclamation efforts, including, but not limited to, backfilling, grading, topsoil replacement, and revegetation, of all land that is disturbed by surface operations shall occur as contemporaneously as practicable with mining operations. Upon the conclusion of loading activities, the scheduled reclamation phase will begin immediately. Please refer to Part F of this Chapter for Reclamation.

Cessation of Operations

Temporary

IPA will inform the division if it intends to cease operations for a period of more than thirty days. This notice will include information on any activities which may continue while the facility is not in use (water monitoring, etc.).

Permanent

Upon permanent cessation of operations, IPA will reclaim all affected areas according to its' approved MRP and return the land to its' pre-mining conditions.

Wildcat Operations

Exploration and Development Drill Sites
Shallow holes for bedrock determination were drilled for foundation studies. Please see Appendix C.

Blasting

No blasting will occur at this facility.

Water Supply

Water is trucked into the facility by a local contractor and stored in 2 - 10,000 gallon storage tanks. One tank is used to supply culinary water to the bathhouse facilities and the other tank provides water for dust suppression for the preparation and loading operations.

There is no on-site development of surface or underground water for this facility. There are no wells.

Power Supply and Communication Facilities

Power and communications were pre-existing at this location. Andalex tapped the 46 KV powerline serving Beaver Creek Coal Company's mines and via an onsite substation, distributing 4160, 440, 220, and 110 V lines throughout the facility.

Landscaping

All disturbed areas are relatively flat, and vegetative cover has been promptly re-established to stabilize erosion.

Signs, Markers, Fences, and Gates

Signs of a uniform design, showing the company name, business address, and telephone number as well as the identification number of the current regulatory program permit authorizing the underground mining activities, have been placed at all access points to the permit area. These signs have been placed to be easily seen, are made of a durable material, and conform to local laws and regulations. The topsoil storage area is clearly marked.

As there are no perennial streams or a stream with a biological community on the permit area, buffer zone markers will not be necessary. The perimeters of all areas affected by surface operations and facilities are clearly marked. These signs and markers shall be maintained during all activities.
maintained until after the release of all bonds for the permit area.

Coal Handling Facilities

Please refer to this chapter, re: Description of Facilities.

Removal of Surface Structures

Upon completion of activities, all surface facilities will be removed. This includes all the facilities outlined in this chapter, re: Description of Facilities. Please refer to this chapter, re: Reclamation for the detailed plans. Also refer to this chapter, re: Reclamation Hydrology.

Operation Plan: Existing Structures

Construction and Design of Surface Facilities

Existing Structures

All existing structures are situated on Right-of-Way U-48027. Please refer to this chapter, re: Description of Facilities. Upon completion of loading activities, all buildings and structures not being utilized as part of the reclamation sequence, will be removed, according to the Reclamation Plan outlined in this chapter.

Construction

All of the above structures have been completed. Construction began in the spring of 1984 and was completed in the spring of 1985. Construction has been located and carried out so as to prevent and control erosion, siltation, water pollution, and damage to property in accordance with the regulations. All facilities have been designed and constructed and will be maintained and used in a manner which prevents damage to wildlife and related environmental values (particularly as this relates to powerline structures, regarding Fish and Wildlife). IPA will maintain all facilities in a manner which prevents additional contributions of suspended solids outside the permit area. All activities shall be conducted in a manner which minimizes damage to railroads, electric and telephone lines, and water and sewage lines, which pass over or through the permit area. IPA realizes that maintenance of the facilities is a key to optimum operation. Constant upkeep of a...
surface facilities and structures has resulted in their maintaining excellent condition.

Construction Methods

Major Equipment

The building sites were leveled using dozers and graders. Excavations for foundations was accomplished with backhoes and scrapers. Leveling was required at all the building sites; however, cut and fill was not implemented to a large degree because the area is relatively flat lying. Topsoil was removed and transported to a nearby area for storage. Topsoil was gathered using scrapers and graders. All topsoil storage piles are located within the permit area.

All surface pads have been stabilized and all other disturbed areas (pond embankments, other slopes, etc.) have been reseeded. Where possible, a rangeland seed drill was used.

R645-301-521.100. CROSS SECTIONS AND MAPS

See R645-301-510, Volume II

R645-301-532.110. PREVIOUSLY MINED AREAS

See R645-301-510, Volume II

R645-301-521.111. LOCATION AND EXTENT OF KNOWN WORKINGS

N/A

R645-301-521.112. EXISTING OR PREVIOUSLY SURFACE MINED AREAS

See R645-301-510 and Volume II.

R645-301-521.120. EXISTING SURFACE AND SUBSURFACE FACILITIES AND FEATURES

See R645-301-510.

R645-301-521.121. BUILDINGS IN AND WITHIN 1000 FEET OF THE PERMIT AREA
There are no buildings within 1,000 feet of the permit area except those used as part of the operation. They are shown on Plates 1 and 2.

R645-301-521.122. SURFACE AND SUBSURFACE MAN-MADE FEATURES WITHIN THE PERMIT AREA

There are no surface or subsurface man-made features within, passing through or passing over the permit area except the railroad, powerline, telephone cables, culverts, and etc., installed for the operation of this mine. See Plates 1 and 2 for their locations.

R645-301-521.123. PUBLIC ROADS IN OR WITHIN 100 FEET OF THE PERMIT AREA

The Consumers county road (Formerly State Highway 139) starts at highway 6 in Gordon Creek and bypasses the IPA's Wildcat Loadout (Plate 1). There are 2 entrances from the County Road into the permit area, as shown on Plate 1.

R645-301-521.124. EXISTING FACILITIES WITHIN THE PERMIT AREAS

There are no surface or subsurface man-made features within, passing through or passing over the permit area except the powerline, telephone cables, culverts, and etc., installed for the operation of this mine. See Plates 1 and 2 for their locations.

R645-301-521.125. SEDIMENTATION PONDS AND IMPOUNDMENTS

See R645-301-512.240.

R645-301-521.130. LANDOWNERS AND RIGHT OF ENTRY AND PUBLIC INTEREST MAPS

The right-of-way for which we have the legal right of entry is shown on Plate 1.

R645-301-521.131. SURFACE AND SUBSURFACE OWNERS

Owners of Record of Surface and Subsurface Contiguous Areas

All surface and subsurface areas contiguous to the permit area are
owned by the United States. The name and address of the responsible authority representing the federal government is as follows:

Bureau of Land Management
Utah State Office
Federal Building
Salt Lake City, Utah 84111
(801) 524-3004

R645-301-521.132. RIGHT TO ENTER AND CONDUCT MINING ACTIVITIES
See R645-301-114.230.

R645-301-521.133.1 OPERATIONS WITHIN 100 FEET OF ROAD RIGHT-OF-WAY
See R645-301-521.123.

R645-301-521.133.2 RELOCATING A PUBLIC ROAD
N/A

R645-301-521.140. MINE AND PERMIT AREA MAPS
Cross Sections, Maps, and Plans (Also R645-301-510 and Volume II)

The lands affected by this operation (surface only) are clearly shown on Plate 1. Plate 1 depicts all buildings, utilities, and facilities. All of the land within this permit area which is to be affected already has been. This is a surface facility only and involves no underground workings. The bond required by the Division is for the entire affected area including all the surface facilities.

Coal storage, topsoil storage, loading areas, coal preparation waste areas are all depicted on the surface facilities map. Additional detail on topsoil, diversions, and ponds can be found in Volume II on Plates 13, 2, and 3 respectively.

There is no storage of explosives at the Wildcat Loadout.

The final surface configurations will be similar to the surface prior to Andalex's involvement at Wildcat.
Surface water monitoring locations are shown on Plate 15.

After the completion of activities at this facility, no structures will remain with the exception of the railroad grade, the tracks, and its associated drainage structures.

All maps requiring certifications by a registered person have been done so. Included are stamps from experts in related fields such as surveying.
<table>
<thead>
<tr>
<th>PLATE #</th>
<th>PLATE TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate 1</td>
<td>Existing Surface Facility Map</td>
</tr>
<tr>
<td>Plate 1A</td>
<td>Proposed Surface Facility Map, Response to DO-04</td>
</tr>
<tr>
<td>Plate 1B</td>
<td>Disturbed Areas</td>
</tr>
<tr>
<td>Plate 2</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 2A</td>
<td>Drainage Map, Response to Division Order</td>
</tr>
<tr>
<td>Plate 3A</td>
<td>Sediment Pond A</td>
</tr>
<tr>
<td>Plate 3B</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 3C</td>
<td>Sediment Pond C</td>
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<td>Plate 3D</td>
<td>Sediment Pond D</td>
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<tr>
<td>Plate 3E</td>
<td>Sediment Pond E</td>
</tr>
<tr>
<td>Plate 3F</td>
<td>Sediment Pond F</td>
</tr>
<tr>
<td>Plate 3G</td>
<td>Sediment Pond G</td>
</tr>
<tr>
<td>Plate 3H</td>
<td>Permanent Impoundment</td>
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<tr>
<td>Plate 4</td>
<td>Deleted</td>
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<td>Plate 7</td>
<td>Deleted</td>
</tr>
<tr>
<td>Plate 8</td>
<td>Final Reclamation Hydrology, Phase 1</td>
</tr>
<tr>
<td>Plate 9</td>
<td>Final Reclamation Contours &amp; Revegetation, Phase 2</td>
</tr>
<tr>
<td>Plate 10</td>
<td>Cross Sections</td>
</tr>
<tr>
<td>Plate 11</td>
<td>Soils Map</td>
</tr>
<tr>
<td>Plate 12</td>
<td>Geology Map</td>
</tr>
<tr>
<td>Plate 13</td>
<td>Topsoil Piles</td>
</tr>
<tr>
<td>Plate 14</td>
<td>Cross Section Reference Map</td>
</tr>
<tr>
<td>Plate 15</td>
<td>Watershed Map</td>
</tr>
<tr>
<td>Plate 16</td>
<td>Surface and Subsurface Ownership Map</td>
</tr>
<tr>
<td>Plate 17</td>
<td>Typical Road Cross-sections</td>
</tr>
<tr>
<td>Plate 18</td>
<td>Deleted</td>
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R645-301-521.141. AFFECTED AREA

R645-301-521.142. UNDERGROUND WORKINGS AND SUBSIDENCE AREAS

N/A

R645-301-521.143. WASTE DISPOSAL SITES

See R645-301-510, Volume II.

R645-301-521.150. LAND SURFACE CONFIGURATION MAPS

See R645-301-510, Volume II.

R645-301-521.151. REQUIREMENTS

See R645-301-510, Volume II.

R645-301-521.152. PREVIOUSLY MINED AREAS

See R645-301-510, Volume II.

R645-301-521.160. MAPS OR CROSS SECTIONS OR PROPOSED FEATURES

See R645-301-510, Volume II.

R645-301-521.161. BUILDINGS, UTILITY CORRIDORS AND FACILITIES

See R645-301-510, Volume II.

R645-301-521.162. AREA AFFECTED ACCORDING TO SEQUENCE AND TIMING OF OPERATIONS

See R645-301-510, Volume II.

R645-301-521.163. BONDED AREA

See R645-301-510, Volume II.

R645-301-521.164. COAL HANDLING FACILITIES

See R645-301-510, Volume II.
R645-301-521.165. TOPSOIL AND WASTE STORAGE AREAS
See R645-301-510, Volume II.

R645-301-521.166. WASTE SOURCES AND DISPOSAL FACILITIES
See R645-301-510, Volume II.

R645-301-521.167. EXPLOSIVES STORAGE AND HANDLING FACILITIES
N/A

R645-301-521.168. AIR POLLUTION CONTROL FACILITIES
N/A

R645-301-521.169. COAL PROCESSING WASTE FACILITIES
See R645-301-510, Volume II.

R645-301-521.170. TRANSPORTATION FACILITIES MAPS
See R645-301-510, Volume II.

R645-301-521.180. OTHER INFORMATION
See R645-301-510, Volume II.

R645-301-521.190. OTHER RELEVANT INFORMATION REQUIRED BY THE DIVISION.

At this time, there has been no other information required by the division.

R645-301-521.200. SIGNS AND MARKERS SPECIFICATIONS

Signs of a uniform design, showing the company name, business address, and telephone number as well as the identification number of the current regulatory program permit authorizing the underground mining activities, have been placed at all access points to the permit area. These signs have been placed to be easily seen, are made of a durable material, and conform to local laws and regulations. The topsoil storage area is clearly marked.
As there are no perennial streams or a stream with a biological community on the permit area, buffer zone markers will not be necessary. The perimeters of all areas affected by surface operations and facilities are clearly marked. These signs and markers shall be maintained during all activities and retained and maintained until after the release of all bonds for the permit area.

R645-301-521.210. PLACEMENT AND REMOVAL

See R645-301-521.200.

R645-301-521.220. DESIGN

See R645-301-521.200.

R645-301-521.230. MAINTENANCE

See R645-301-521.200.

R645-301-521.240. MINE AND PERMIT IDENTIFICATION SIGNS

See R645-301-521.200.

R645-301-521.241. LOCATION, UNDERGROUND MINING

See R645-301-521.200.

R645-301-521.242. LOCATION, SURFACE MINING

N/A

R645-301-521.243. INFORMATION

See R645-301-521.200.

R645-301-521.244. REQUIREMENTS

See R645-301-521.200.

R645-301-521.250. PERIMETER MARKERS
See R645-301-521.200.

**R645-301-521.251. SURFACE AFFECTED AREAS FOR UNDERGROUND MINING OPERATIONS**

See R645-301-521.200.

**R645-301-521.252. PERMIT AREA PERIMETER FOR SURFACE MINING OPERATIONS**

N/A

**R645-301-521.260. BUFFER ZONE MARKERS**

N/A

**R645-301-521.261. BOUNDARY MARKERS FOR SURFACE ACTIVITIES OF UNDERGROUND OPERATIONS**

They consist of orange "Tee" posts which are clearly visible from one marker to the next.

**R645-301-521.262. BOUNDARY MARKERS FOR SURFACE MINING OPERATIONS**

N/A

**R645-301-521.270. TOPSOIL MARKERS**

See R645-301-521.200.

**R645-301-522. COAL RECOVERY**

N/A

**R645-301-523. MINING METHOD**

N/A

**R645-301-523.100. SURFACE MINING OPERATIONS WITHIN 500 FEET OF AN UNDERGROUND MINE**

N/A
R645-301-523.200. EXCEPTIONS TO SURFACE MINING OPERATIONS WITHIN 500 FEET OF UNDERGROUND WORKINGS

N/A

R645-301-523.210. RESOURCE RECOVERY OF ELIMINATION OF HAZARDS

N/A

R645-301-523.220. APPROVAL BY DIVISION AND MSHA

Appendix B; Appendix O

R645-301-524. BLASTING AND EXPLOSIVES

N/A - There will be no blasting conducted at this site.

R645-301-525. SUBSIDENCE

N/A - There is no mining at this location.

R645-301-526. MINE FACILITIES

See R645-301-520 and Volume II.

R645-301-526.100. MINE STRUCTURES AND FACILITIES

See R645-301-520 and Volume II.

R645-301-526.110. EXISTING STRUCTURES

See R645-301-520 and Volume II.

R645-301-526.111. LOCATION

See R645-301-520 and Volume II.

R645-301-526.112. PLANS OR PHOTOGRAPHS

See R645-301-520.
645-301-526.113. DATES OF CONSTRUCTION OF EXISTING STRUCTURES

See R645-301-520.

R645-301-526.114. MONITORING DATA

N/A

R645-301-526.115. COMPLIANCE PLAN

N/A

R645-301-526.115.1 DESIGN SPECIFICATION

See R645-301-520.

R645-301-526.115.2 CONSTRUCTION SCHEDULE

See R645-301-520.

R645-301-526.115.3 MONITORING SCHEDULES

N/A

R645-301-526.115.4 MINIMIZING RISK OR HARM TO ENVIRONMENT, HEALTH OR PUBLIC SAFETY

N/A

R645-301-526.116. PROTECTION OF PUBLIC AND LANDOWNERS

See R645-301-510 and R645-301-520.

R645-301-526.116.1 MINING OPERATIONS WITHIN 100 FEET OF THE RIGHT-OF-WAY OF A PUBLIC ROAD

N/A

R645-301-526.116.2 RELOCATING A PUBLIC ROAD
N/A

R645-301-526.200. UTILITY INSTALLATION AND SUPPORT FACILITIES

See R645-301-520.

R645-301-526.210. DESCRIPTION

See R645-301-520.

R645-301-526.220. COMPLIANCE REQUIREMENTS

See R645-301-520.

R645-301-526.221. PROTECTION

See R645-301-520.

R645-301-526.222. MINIMIZATION OF ENVIRONMENTAL IMPACT AND COMPLIANCE WITH EFFLUENT LIMITATIONS


R645-301-526.300. WATER POLLUTION CONTROL FACILITIES

See R645-301-520.

R645-301-526.400. AIR POLLUTION CONTROL FACILITIES

Appendix B - Air Quality Permit.

R645-301-527. TRANSPORTATION FACILITIES

Roads

All roads within the permit area are classified as "Primary Roads" in accordance with R614-301-527.100.

See R645-301-512.250 for details.
Railroad

The rail siding roughly bisects the permit area and runs in a north-south direction. The siding is part of a Utah Railroad lease agreement with the B.L.M.

Other Transportation Facilities

Transportation facilities will be designed, constructed, or reconstructed, and maintained to prevent, to the extent possible, damage to fish, wildlife, and related environmental values; and will control to the extent possible, additional contributions outside the permit area. This has been accomplished on the railroad siding through slope stabilization, revegetation, and adequate drainage. IPA will minimize diminution or degradation of water quality and quantity; control and minimize erosion and siltation; control and minimize pollution; and prevent damage to public or private property to the extent possible. Please note that IPA’s rail siding parallels the existing Utah Railroad mainline and is owned by the Utah Railroad.

Construction of Rail Siding:

General

Wildcat Midstream, an oil transloading company, is requiring side trackage to accommodate their operation at the Wildcat Loadout. One side track is needed to be installed and is reflected on Plate 1. The side track will be located on the 130 feet to the west side of the main tracks. The side track will be used in a noncoal capacity, helping to coordinate oil tanker cars and rail power for transloading of oil.

Modifications

The track bed of the side track will be installed on existing grade. No other grading modifications to the site will be required. Site drainage will remain the same, with runoff of any storm event reporting to the same pre-modification locations as approved within the MRP. Drainage surface area will remain the same.

2,121 feet of steel rail will be installed for the side track within the permit boundary. The side track will be connected with the Utah Railway Main Line as depicted on Plate 1. The reclamation bond calculations contained in Appendix B, Part D have been updated to reflect removal of this additional track and track bed during reclamation. No other changes to the reclamation plan are required.

Bonding

Bonding calculations have been completed using RS Means and are included in revised pages 1-42, 2-42, and 3-42 of “Bonding” Appendix B Part D. Also included is an additional spread sheet, page 43 reflecting the breakdown of reclamation costs as pertaining to the side track.

Conclusion

The construction and installation of the side trackage will be at the existing surface grade in disturbed surface area. Surface drainage will still be routed to the same drainage structures. The volume of surface drainage will not change.
R645-301-527.100. ROAD CLASSIFICATION
R645-301-527.110. DESIGNATION OF ALL ROADS
See R645-301-527.
R645-301-527.120. PRIMARY ROADS
See R645-301-527.
R645-301-527.121. USED FOR TRANSPORTING COAL OR SPOIL;
See R645-301-527
R645-301-527.122. FREQUENT USE OR FOR PERIODS IN EXCESS OF 6 MONTHS
See R645-301-527.
R645-301-527.123. RETAINED FOR POSTMINING LAND USE

INCORPORATED
December 22, 2021
Division of Oil, Gas & Mining
See R645-301-527.

R645-301-527.130. ANCILLARY ROADS

See R645-301-527.

R645-301-527.200. TRANSPORTATION FACILITIES

See R645-301-527.

R645-301-527.210. DESIGNS AND SPECIFICATIONS

See R645-301-527.

R645-301-527.220. RELOCATION OF A NATURAL DRAINAGEWAY

N/A

R645-301-527.230. MAINTENANCE AND REPAIRS

N/A

R645-301-527.240. GEOTECHNICAL ANALYSIS

N/A

R645-301-527.250. ALTERNATE SPECIFICATIONS OR STEEP CUT SLOPES

N/A

R645-301-528. HANDLING AND DISPOSAL OF COAL, OVERBURDEN, EXCESS SPOIL, AND COAL MINE WASTE

See R645-301-512.230 and R645-301-520.

R645-301-528.100. COAL REMOVAL, HANDLING, STORAGE, CLEANING, AND TRANSPORTATION AREAS AND STRUCTURES

See R645-301-512.230.

R645-301-528.200. OVERBURDEN
R645-301-528.300. SPOIL, COAL PROCESSING WASTE, MINE DEVELOPMENT WASTE, AND NON-COAL WASTE REMOVAL

Coal Refuse

See R645-301-512.230

Acid and Toxic-Forming Materials (Also R645-301-711.100 and R645-301-731.300)

Please refer to Section R645-301-512-230, re: coal processing waste and re: leachate testing for potential acid- and toxic-forming materials. If it is determined through leach testing that the coal processing waste material is acid- or toxic-forming, then the disposal will consist of burial on the west side of Wildcat under four feet of fill material or haulage to another approved coal processing waste disposal area. Disposal will take place within 30 days after the acid or toxic forming materials are identified. The Division will be notified if the coal processing waste is to be moved off-site to another approved disposal area. If acid or toxic forming material is identified it will be buried as described above within 60 days of its discovery. There is no potential for any other acid- or toxic-forming materials within this permit area.

Non-Coal Waste

All combustibles (paper, garbage, paints, wood, etc.) are collected in trash containers and hauled to the local land fill. Non-coal wastes will be placed and stored in a controlled manner in a designated position of the permit area and will comply with R645 regulation. Please refer to Plate 1 for dumpster location.

Contingency Plans to Prevent Sustained Combustion

All which could burn would be small in quantity and consist of normal trash (cardboard, paper, etc.). The quantity would not exceed the volume of a small dumpster. The trash facility is segregated from any buildings or other structures and if ignited accidentally, could be extinguished quickly using either water or fire extinguishers. Spontaneous coal stockpile fires are generally quite small and are extinguished by front end loaders.
immediately.

R645-301-528.310. EXCESS SPOIL
N/A

R645-301-528.320. COAL MINE WASTE
See R645-301-528.300.

R645-301-528.321. RETURN OF COAL PROCESSING WASTE TO ABANDONED UNDERGROUND WORKINGS
N/A

R645-301-528.322. REFUSE PILES
See R645-301-512.230 and R645-301-528.300.

R645-301-528.323. BURNING AND BURNED WASTE UTILIZATION
N/A

R645-301-528.323.1 COAL MINE WASTE FIRES
See R645-301-512.230.

R645-301-528.323.2 BURNING OR BURNED COAL MINE WASTE REMOVAL PLAN
See R645-301-512.230.

R645-301-528.330. NON-COAL MINE WASTE
See R645-301-528.300.

R645-301-528.331. DESIGNATION OF NON-COAL MINE WASTE MATERIALS
See R645-301-528.300.

R645-301-528.332. FINAL DISPOSAL OF NON-COAL MINE WASTES
See R645-301-528.300.
R645-301-528.333. RESTRICTIONS ON DISPOSAL ON NON-COAL MINE WASTE MATERIAL

See R645-301-528.300.

R645-301-528.334. HAZARDOUS WASTE MATERIALS

See R645-301-528.300.

R645-301-528.340. UNDERGROUND DEVELOPMENT WASTE

N/A

R645-301-528.350. DISPOSAL REQUIREMENTS

N/A

R645-301-528.400. DAMS, EMBANKMENTS AND OTHER IMPOUNDMENTS

See R645-301-512.240.

R645-301-529. MANAGEMENT OF MINE OPENINGS

N/A

R645-301-529.400. SURFACE MINING OPERATIONS

N/A

R645-301-530. OPERATIONAL DESIGN CRITERIA AND PLANS

All required surface structures for the Wildcat Loadout are presently in place and operating. Any additions, modifications or deletions will be submitted as amendments or revisions to this plan.

R645-301-531. GENERAL

All structures have been properly designed, approved and constructed. Sediment ponds, dams and impoundments are detailed in Section R645-301-512.240. Roads are discussed in Section...
R645-301-512.250. Refuse disposal is detailed in Section R645-301-512.230 and Appendix O.

R645-301-532. SEDIMENT CONTROL

See Appendix R

R645-301-532.100. MINIMIZING DISTURBANCES

The permit area has been previously impacted by mining-related and processing activities. The present disturbed acreage at this site is 60.94 74.46 acres. This site represents a very compact and efficient use of space when compared to similar processing sites in the area. This is also the smallest practicable area of disturbance for the existing operations.

R645-301-532.200. STABILIZING BACKFILLED MATERIAL

Whenever possible, areas such as embankments, topsoil piles and other non-traffic sites, area revegetated to stabilize the site and reduce runoff.

All disturbed areas will be backfilled and graded to as near as possible the approximate original contour, and to the most moderate slope possible. Slopes shall not exceed the angle of repose or such lessor slopes as required by the regulatory authority to maintain stability. Fill material will be compacted except for the last few lifts, to assure stability.

R645-301-533. IMPOUNDMENTS

See Appendix R

R645-301-533.100. STABILITY

See Appendix R

R645-301-533.110. MSHA IMPOUNDMENTS

N/A

R645-301-533.200. FOUNDATION DESIGN
Appendix C

R645-301-533.210. STABILITY

Appendix C

R645-301-533.220. PREPARATION

Appendix C

R645-301-533.300. SLOPE PROTECTION

See R645-301-532.200.

R645-301-533.400. VEGETATION OF EMBANKMENTS

See R645-301-532.200.

R645-301-533.500. SUBMERGED HIGHWALLS

N/A

R645-301-533.600. MSHA IMPOUNDMENTS

N/A

R645-301-533.610. GEOTECHNICAL INVESTIGATIONS

N/A

R645-301-533.611. CERTIFICATION

N/A

R645-301-533.612. DESIGN AND CONSTRUCTION REQUIREMENTS

N/A

R645-301-533.613. OPERATION AND MAINTENANCE

N/A
R645-301-533.614. PLANS FOR REMOVAL

N/A

R645-301-533.620. ENGINEERING DESIGN

See R645-301-512.240 and Appendix R

R645-301-533.700. NON-MSHA IMPOUNDMENTS DESIGN REQUIREMENTS

See R645-301-512.240 and Appendix R

R645-301-533.710. DESIGN PLAN FOR NON-MSHA IMPOUNDMENTS

See Appendix R

R645-301-533.711. CERTIFICATION

See Plates 3A through 3H, and see Appendix R

R645-301-533.712. DESIGN AND CONSTRUCTION REQUIREMENTS

See Appendix R

R645-301-533.713. OPERATION AND MAINTENANCE

See Appendix R

R645-301-533.714. PLANS FOR REMOVAL

See Appendix R

R645-301-534. ROADS

See R645-301-512.250.

R645-301-534.100. DESIGN, USE AND RECLAMATION

See R645-301-512.250.

R645-301-534.110. DAMAGE TO PUBLIC OR PRIVATE PROPERTY
R645-301-534.120. NON-ACID OR NONTOXIC FORMING SUBSTANCES IN ROAD SURFACING

No acid or toxic-forming substances will be used for road surfacing.

R645-301-534.130. FACTOR OF SAFETY FOR ROAD EMBANKMENTS

See R645-301-512.250.

R645-301-534.140. REMOVAL AND RECLAMATION OF ROADS

See R645-301-512.250.

R645-301-534.150. VEGETATION/STABILIZATION EXPOSED SURFACES

See R645-301-512.250.

R645-301-534.200. SAFETY AND ENVIRONMENTAL PROTECTION

See R645-301-512.250.

R645-301-534.300. PRIMARY ROADS

See R645-301-512.250.

R645-301-534.310. LOCATION

See R645-301-512.250.

R645-301-534.320. SURFACING

See R645-301-512.250.

R645-301-534.330. MAINTENANCE

See R645-301-512.250.

R645-301-534.340. CULVERT DESIGN
See R645-301-512.240 and R645-301-512.250.

**R645-301-535. SPOIL**

N/A

**R645-301-535.100. DISPOSAL OF EXCESS SPOIL**

N/A

**R645-301-535.110. MINIMUM FACTOR OF SAFETY**

N/A

**R645-301-535.111. LOCATION**

N/A

**R645-301-535.112. FOUNDATION INVESTIGATIONS**

N/A

**R645-301-535.113. KEYWAY CUTS OR ROCK TOE BUTTRESSES**

N/A

**R645-301-535.120. EXCESS SPOIL DISPOSED OF IN UNDERGROUND MINE WORKINGS**

N/A

**R645-301-535.130. PLACEMENT OF EXCESS SPOIL**

The only spoil material generated at the Wildcat Loadout is coal processing waste or refuse and sediment cleaned from the ponds. This material is placed in the refuse pile as described in Section R645-301-512.230 and Appendix O.

**R645-301-535.140. SURFACE COAL OPERATIONS**
N/A

R645-301-536. COAL MINE WASTE
See R645-301-512.230.

R645-301-536.100. DISPOSAL FACILITY
See R645-301-512.230.

R645-301-536.110. STABILITY
See R645-301-512.230.

R645-301-536.120. FOUNDATION DESIGN
See R645-301-512.230.

R645-301-536.200. PLACEMENT
See R645-301-512.230.

R645-301-536.210. CONSTRUCTION
See R645-301-512.230.

R645-301-536.220. PUBLIC HAZARDS
R645-301-536.230. PREVENT COMBUSTION

See R645-301-512.230.

R645-301-536.300. COAL MINE WASTE DISPOSED OF IN EXCESS SPOIL FILLS

N/A

R645-301-536.310. REQUIREMENTS

N/A

R645-301-536.320. NONTOXIC AND NON-ACID FORMING

N/A

R645-301-536.330. DESIGN STABILITY

N/A

R645-301-536.400. OTHER REQUIREMENTS

N/A

R645-301-536.410. RESTRICTIONS

N/A

R645-301-536.420. DESIGN PLAN

N/A

R645-301-536.500. DISPOSAL OF COAL MINE WASTE IN SPECIAL AREAS

See R645-301-512.230.

R645-301-536.510. OUTSIDE A PERMIT AREA
R645-301-536.520. UNDERGROUND DISPOSAL

R645-301-536.600. UNDERGROUND DEVELOPMENT WASTE

R645-301-536.700. COAL PROCESSING WASTE

See R645-301-512.230.

R645-301-536.800. COAL PROCESSING WASTE EMBANKMENTS

See R645-301-512.230.

R645-301-536.810. REQUIREMENTS

See R645-301-512.230.

R645-301-536.820. MSHA REQUIREMENTS

See R645-301-512.230 and Appendix O.

R645-301-536.821. BORINGS AND TEST PITS

N/A

R645-301-536.822. FOUNDATION DESIGN

See R645-301-512.230.

R645-301-536.823. SEEP AND SPRING SURVEYS

See R645-301-512.230.

R645-301-536.824. HAZARDS

See R645-301-512.230.
R645-301-536.900. REFUSE PILES

See R645-301-512.230 and Appendix O.

R645-301-537. REGRADED SLOPES

N/A

R645-301-540. RECLAMATION PLAN

R645-301-541. GENERAL (Also R645-301-533)

Reclamation will be uncomplicated since this area is flat lying and topographically simple. All disturbed areas no longer required for the conduct of operations were immediately revegetated. In the future, any areas no longer required for operations will also be immediately revegetated.

When buildings and final site preparation was completed, the topsoil was revegetated to prevent erosion.

When the project is expired, perhaps in 30 years, extraneous material will be removed. Roads will be regraded and using the most advanced technology at the time, IPA will re-establish the terrain to as nearly the original as practical.

Reclamation Timetable

Reclamation will be accomplished in two phases. Phase I will commence immediately after the project has expired. Phase I involves the majority of the reclamation steps. It will bring the site to nearly complete with the exception of sedimentation ponds which will be left in place until revegetation has been determined complete. Prior to revegetation being complete, there is a possibility for runoff within the disturbed area to accumulate a sediment load. These ponds left in place will prevent this runoff from leaving the disturbed area. Once the vegetation has been established which will probably take a minimum of two
years, Phase II of the reclamation will commence. This phase involves the removal of the four sediment ponds which were left, regrading, and revegetating these areas, and finally, IPA's commitment to monitoring.

Phase I

The first step will be to remove structures. Since none of the structures will remain on site, this will be the largest part of the Phase I effort and will also be the most expensive. The following is a list of structures which will be brought down and removed either complete or as scrap/salvage.

1. 14 x 60 Scale House Trailer
2. Truck Scales
3. Substation
4. Truck Dump (west side)*
5. Crushing Plant (west side)*
6. Radial Stacker (west side)*
7. Reclaim Tunnel (west side)
8. Loadout Conveyor (west side)*
9. Control Building (west side)
10. Truck Dump & Reclaim (2 each)
11. Conveyor T
12. Crusher and Screening Plant
13. Lump Coal Belt
14. Stoker Radial Stacker
15. Conveyor Y, Y-1
16. Main Radial Stacker (2 each)
17. Loadout Reclaim Tunnel, port supports, hoppers
18. Conveyor R
19. Loadout Tower
20. Miscellaneous (Guard Rails, Office, Water Tanks, Motor Control Centers)
21. Powerline
22. 40' x 40' Shop Building and foundation
23. 40' x 10' Office Trailer
* Portable

The next step will be to remove any coal remaining on the various storage areas. This will not amount to a large volume of material and it will either be hauled to an
approved storage area off-site or it will be disposed of within the loadout permit area by burial. This will include the coal refuse pile currently stored at Wildcat. The refuse pile will be flattened and buried according to the reclamation plan regarding coal mine refuse.

Once the coal has been removed, then the recontouring and regrading portion will commence. It is anticipated that the structure removal will take approximately one year to complete so at this point, we would be into the reclamation about thirteen months. The first step in the recontouring and regrading would be the removal of the culverts. They have been left in until this point so the disturbed area would drain properly. The recontouring would primarily involve the primary and secondary roads, the loadout pad, and the coal stockpile areas. The undisturbed diversion west of the facility would become permanent at this point and would be capable of passing a 100 year precipitation event. The original natural drainage could not be restored because of the Utah Railroad. This natural drainage has been either blocked or diverted for the last 30 years by predecessors to Andalex.

It is estimated by the cross sections that approximately 74,000 cubic yards of material will have to be moved in this process of recontouring and grading (please see Tables II-1 and II-1A re Mass Balance Summary). This part of Phase I will include the removal of ponds G and E and establishing new drainages to Ponds A, C, and D. Recontouring will take one month.
### TABLE V-1

Mass Balance Summary

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**Total** 73,709.6 74,635.6

Note: Refer to Plate 14 for cross-section locations.
### TABLE V-1A

#### Mass Balance

Expanded Wildcat Pad Cross Sections

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**Totals**

2,429.6 \( \times 20\%\) swell = 485.9

\[
\frac{2,429.6}{2,915.5} = 0.83
\]

3,109.0
At the request of the Division, no extraordinary compaction will be applied to the last few lifts during the recontouring/grading, to provide a relatively loose rooting zone of four feet. This loose application of fill will eliminate the need for ripping prior to topsoil placement. During this operation, if it is determined that additional sediment control measures are needed for the diversions leading to the four ponds, they will be put in at this time. These measures might include rock check dams or straw dikes.

The next steps in Phase I will not take place until the fall of whatever year we are in at this point. So far the project has taken 14 to 15 months. The next two steps in the process are topsoil redistribution, where additional substitute will be hauled in if necessary, and revegetation. Once the topsoil is spread, the area will be roughened by gouging, and the area will be hydroteed and hydromulched. The entire revegetation procedure is described in this chapter.

Finally in Phase I, monitoring will commence. Observations of revegetation success and slope stability will be observed. If any part of this is unsuccessful, corrective measures will be taken.

Since Andalex estimates a minimum of two years before vegetation has taken hold to prevent erosion, then the entire Phase I project will take at least 3-1/2 years.

Phase II

Phase II of the reclamation will commence as soon as the monitoring of Phase I allows.

All that is left at this point is the removal (recontouring) of Ponds A, C, D, and F and the removal of the field fence.
surrounding the permit area. Once the areas have been graded, they will be prepared with loose filling of the upper lifts, (as described in Phase I above), prior to topsoil redistribution. At this point, if it is not already the fall season, IPA will wait before redistributing the topsoil and revegetating. The same methods for revegetation will be used as in the Phase I reclamation.

Monitoring will then continue until the release of the bond.

Please note that earthwork will be done in both Phase I and II as much as possible during the dry seasons to avoid unnecessary erosion to the regraded areas. If dust becomes a problem, water will be used to control it.

Reclamation Cost and Bonding

Bond information and detailed costs are provided in Appendix B.

R645-301-541.100. CESSATION OF MINING OPERATIONS

See R645-301-541.

R645-301-541.200. REMOVAL OF FACILITIES

See R645-301-541.

R645-301-541.300. POSTMINING FACILITIES AND MONITORING

See R645-301-541.

R645-301-541.400. COMPLIANCE REQUIREMENTS FOR RECLAMATION

See R645-301-240.

R645-301-542. NARRATIVES, MAPS AND PLANS

See R645-301-510.

R645-301-542.100. TIMETABLE
See R645-301-240 and R645-301-541.

R645-301-542.200. BACKFILLING AND GRADING PLAN

See R645-301-532.200.

R645-301-542.300. FINAL SURFACE CONFIGURATION MAPS

Plates 8,9 and 10.

R645-301-542.310. CERTIFICATION REQUIREMENTS

See R645-301-510 and Volume II.

R645-301-542.320. PERMANENT FACILITIES

The only permanent facilities to remain at the Wildcat Loadout after reclamation will be the Undisturbed Diversion (UD-1), Permanent Impoundment and the railroad. The undisturbed diversion and permanent impoundment are being left to provide drainage control for a drainage that was blocked off over 30 years ago by the railroad.

These structures are sized to carry runoff from a 100 year - 24 hour storm, as detailed in Appendix R.

R645-301-542.400. FINAL ABANDONMENT OR BOND RELEASE

Reclamation Cost and Bonding

Cost of Reclamation

Introduction

The major elements in the reclamation of Wildcat will be the dismantling and removal of the large structures. This will be accomplished primarily with manpower and some large equipment including cranes. The major structures to be removed are the loadout tower, the two loadout conveyors, the reclaim tunnel, the two radial stackers, the yard conveyor, the crushing and screening plant, and the truck dump. Also, the coal refuse pile...
will be flattened and covered with suitable fill material.

IPA forsees that the removal of these structures will be done in conjunction with a salvaging project as these structures and equipment will retain a great deal of value after they are dismantled. Therefore, the cost of removing these structures may be largely absorbed by the person or persons participating in the salvage operation. However, this savings was not considered in the bond estimate.

Bond or Surety Arrangement

IPA has procured a reclamation bond (Irrevocable Letter of Credit) in the amount of $651,000, as established by the Division. (See Appendix B) This bond is based on detailed calculations provided by the Division. A copy of the calculations are also included in Appendix B.

Wildcat Loadout Facility

Restoration to the pre-mining land use will require:

PHASE I:

A. Removal of Structures:
   1. 14 x 60 Scale House Trailer and Truck Scales
   2. Substation
   3. Truck Dump (west side)
   4. Crushing Plant (west side)*
   5. Radial Stacker (west side)*
   6. Reclaim Tunnel (west side)
   7. Loadout Conveyor (west side)*
   8. Control Building (west side)
   9. Truck Dump & Reclaim
  10. Conveyor T
  11. Crusher and Screening Plant
  12. Lump Coal Belt
  13. Stoker Radial Stacker
  14. Conveyor Y
  15. Main Radial Stacker
  16. Loadout Reclaim Tunnel, port supports,
  17. Conveyor R
17. Conveyor R
18. Loadout Tower
19. Miscellaneous (Guard Rails, Office, Water and Mag. Tanks, Motor Control Centers)
20. Powerline
21. 40" x 40" Shop
22. 40' x 10' Office Trailer
   * Portable

B. Cleanup Coal Piles:
   1. Radial Stacker
   2. Stoker, Lump
   3. Mine Run and Lump
   4. West Side Stoker
   5. West Side Storage Pad

C. Recontouring and Regrading:
   (including covering of coal refuse storage pile)
   1. Culvert Removal
   2. Removal of sediment ponds
   3. Move 77,000 yds.³

D. Compaction and Scarification:

E. Topsoil Redistribution:

F. Revegetation:

G. Monitoring Costs:
   Years 1, 2, 3, 5, 9, and 10
   Water
   Revegetation
   Erosion

Phase II:

A. Recontouring, Grading, Compaction, Topsoil Redistribution, Revegetation
   1. Ponds A, C, D, G and F

B. Monitoring Costs:
   Years 9 and 10
   Revegetation

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MAR 21 2014
Div. of Oil, Gas & Mining
Erosion

Productivity will be sampled only during years 9 and 10. The reference area will be sampled during years 9 and 10.

Casing and Sealing of Drill Holes

All drill holes within the permit area have been sealed with cement from bottom to top (eight test holes referred to in Appendix C). No new holes will be drilled.

**R645-301-542.500. IMPOUNDMENTS AND EMBANKMENTS**

See R645-301-512.240, R645-301-541, and Appendix R

**R645-301-542.600. ROADS**

All roads will be removed and reclaimed per Section R645-301-541.

**R645-301-542.610. CLOSURE**

See R645-301-541.

**R645-301-542.620. REMOVAL OF BRIDGES AND CULVERTS**

See R645-301-541.

**R645-301-542.630. TOPSOIL REPLACEMENT AND REVEGATATION**

See R645-301-541.

**R645-301-542.640. REMOVAL OF ROAD SURFACING MATERIALS**

See R645-301-541

**R645-301-542.700. FINAL ABANDONMENT OF MINE OPENINGS AND DISPOSAL AREAS**

Plates 8 & 9.

**R645-301-542.710. DESCRIPTION**

5-69
N/A

R645-301-542.720. DISPOSAL OF EXCESS SPOIL
N/A

R645-301-542.730. DISPOSAL OF COAL MINE WASTE
See R645-301-512.230.

R645-301-542.740. DISPOSAL OF NON-COAL MINE WASTES
See R645-301-541.

R645-301-542.741. PLACEMENT AND STORAGE
See R645-301-541.

R645-301-542.742. FINAL DISPOSAL
See R645-301-541.

R645-301-542.800. RECLAMATION COST ESTIMATE
See R645-301-240, R645-301-542.400 and Appendix B.

R645-301-550. RECLAMATION DESIGN CRITERIA AND PLANS
See R645-301-240.
R645-301-551. CASING AND SEALING OF UNDERGROUND OPENINGS
N/A

R645-301-552. PERMANENT FEATURES
See Section R645-301-542.320.

R645-301-552.100. SMALL DEPRESSIONS
See Section R645-301-542.320.

R645-301-552.200. PERMANENT IMPOUNDMENTS
See Sections R645-301-512.240, R645-301-542.320 and Appendix R

R645-301-553. BACKFILLING AND GRADING
See Section R645-301-541.

R645-301-553.100. DISTURBED AREAS
See Section R645-301-541.

R645-301-553.110. AOC REQUIREMENTS
See Section R645-301-541.

R645-301-553.120. HIGHWALL AND SPOILS PILE ELIMINATION
See Section R645-301-541.

R645-301-553.130. SLOPE PROTECTION AND STABILITY
See Section R645-301-541.

R645-301-553.140. EROSION AND WATER POLLUTION
See Section R645-301-541.

R645-301-553.150. SUPPORT POSTMINING LAND USE
Upon completion of IPA's mining operation, the land will continue to be used for grazing and hunting. The limited resources, both physical and scenic, will dictate no future change in the land status. The nature of an underground mine of this size requires minimal surface disturbance. All disturbed areas shall be restored in a timely manner to conditions that are capable of supporting the uses which they were capable of supporting before any mining including high priority wildlife habitat. IPA is not proposing an alternate post-mining land use. IPA is not requesting an approval for an alternate post-mining land use. The anticipated post-mining land use is likely to be achieved and does not present any actual or probable hazard to public health or safety or threat of water diminution or pollution. The post-mining land use is practical and can be implemented immediately following reclamation and will not result in any violation of federal, state, or local law.

R645-301-553.200. SPOIL AND WASTE

N/A

R645-301-553.210. REQUIREMENTS FOR DISPOSAL

N/A

R645-301-553.220. SPOIL PLACEMENT OUTSIDE MINED-OUT AREA

N/A

R645-301-553.221. CLEARING AND GRUBBING

N/A

R645-301-553.222. TOPSOIL REMOVAL AND STORAGE

N/A

R645-301-553.223. BACKFILLING AND GRADING

N/A
R645-301-553.230. FINAL SURFACE GRADING
See R645-301-541.

R645-301-553.240. FINAL CONFIGURATION
Plates 8 & 9.

R645-301-553.250. REFUSE PILES
See section R645-301-512.230; Plates 8 & 9.

R645-301-553.251. FINAL CONFIGURATION
See section R645-301-512.230 and Appendix O.

R645-301-553.252. COVER REQUIREMENTS
See section R645-301-512.230 and Appendix O.

R645-301-553.260. DISPOSAL OF COAL PROCESSING WASTES IN MINED-OUT SURFACE AREAS
N/A

R645-301-553.300. RESTRICTIONS AND REQUIREMENTS
N/A

R645-301-553.400. CUT-AND-FILL TERRACES
N/A

R645-301-553.410. COMPATIBILITY
N/A

R645-301-553.420. SPECIALIZED FACILITIES FOR IMPLEMENTING POSTMINING LAND USE
N/A
R645-301-553.500. PREVIOUSLY MINED AREAS

N/A

R645-301-553.510. RE-MINING AREAS CONTAINING HIGHWALLS

N/A
R645-301-553.520. HIGHWALL ELIMINATION
N/A

R645-301-553.530. REMAINING HIGHWALLS
N/A

R645-301-553.540. SPOIL ON OUTSLOPES
N/A

R645-301-553.600. APPROXIMATE ORIGINAL CONTOUR
See R645-301-523.200.

R645-301-553.610. HIGHWALL VARIANCE REQUIREMENTS
N/A

R645-301-553.611. SPOIL AND BACKFILL
N/A

R645-301-553.612. AVAILABLE SPOIL
N/A

R645-301-553.650. HIGHWALL MANAGEMENT
See R645-301-511.100.

R645-301-553.650.100 REMAINING HIGHWALL - SIZE
N/A

R645-301-553.650.200 REMAINING HIGHWALL - APPEARANCE
N/A

R645-301-553.650.300 REMAINING HIGHWALL - MODIFICATION
N/A

R645-301-560. PERFORMANCE STANDARDS

See R645-301-510 and R645-301-541.
Environmental Protection Agency
Spill Prevention, Control & Countermeasure Plan
AES Oil Loading Terminal (AES)
Wildcat Loadout
Carbon County, Utah

MANAGEMENT APPROVAL AND CERTIFICATION
This SPCC Plan will be implemented as herein described.

____________________
Lee Abrams
Name of Management Official

____________________
Director of Wild West Equipment & Hauling, LLC
Title

____________________
Signature

Note: A complete copy of this plan will be maintained at the facility if it is normally attended at least four hours per day or at the nearest field office if the facility is not so attended. 112.3(e)(1)

CERTIFICATION
I hereby certify that I have examined the facility, and being familiar with the provisions of CFR. Part 112. Attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Date of Inspection: February 22, 2013

____________________
Signature of Registered Professional Engineer

____________________
J. Thomas Paluso
Printed Name of Registered Professional Engineer

Registration No. 22-150267-2203 State Utah

INCORPORATED
JULY 9, 2013
DIVISION OIL, GAS & MINING
CERTIFICATION OF THE APPLICABILITY
OF THE SUBSTANTIAL HARM CRITERIA CHECKLIST

1. Does the facility transfer oil over water to or from vessels and does the facility have a total storage capacity greater than or equal to 42,000 gallons (1,000 Bbls.)?

Yes  ____  No  X

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons (23,810 Bbls.) and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes  ____  No  X

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons (23,810 Bbls.) and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes  ____  No  X

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons (23,810 Bbls.) and is the facility located at a distance such that a discharge from the facility would shut down a public water intake?

Yes  ____  No  X

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons (23,810 Bbls.) and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last five years?

Yes  ____  No  X

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information. I believe that the submitted information is true, accurate, and complete.

__________________________  __________________________
Name                      Signature

__________________________  __________________________
Title                     Date

INCORPORATED
JULY 9, 2013
DIVISION OIL, GAS & MINING
Environmental Protection Agency
Spill Prevention Control & Countermeasure Plan
AES Oil Loading Terminal Wildcat Loadout
Carbon County, Utah

This SPCC Plan was prepared for the exclusive use and benefit of Associated Energy Services (AES) and Wild West Equipment and Hauling, LLC’s crew at the Wildcat Loadout. Any questions or comments in regard to the contents of this SPCC Plan or the provisions of 40 CFR, Part 112 should be directed to:

Environmental Industrial Services
31 North Main Street
Helper, Utah 84526
J.T. “Tom” Paluso, P.E.

Phone Number: 435-472-3814
Fax Number: 435-472-8780
E-mail: elsec@preciscom.net

Wild West Equipment & Hauling, LLC
P. O. Box 1
Price, Utah 84501

Lee Abrams
Phone Number: 208-860-7325
Fax Number: 435-472-3968
E-mail: abramisle@hotmail.com

INCORPORATED
JULY 9, 2013
DIVISION OIL, GAS & MINING
1.0 FACILITY INFORMATION

1.1 Facility Type and Location

Facility: Wildcat Loadout
Type Facility: Coal Loadout
State Identification: MSHA ID 42-01864
Facility Location: Consumer's Road & Utah Railway
Location: Carbon County, Utah
Directions to Facility: The loadout is located 3.2 miles west of the Consumers Road (State Highway 139) junction with State Highway 6

1.2 Facility Owner and Operator

Name and address of owner: Intermountain Power Agency
Address: 10653 South Riverfront Parkway, Suite 120
         South Jordan, UT 84095
Telephone: 801-938-1333
Fax: 801-938-1330

Name and address of operator: Wild West Equipment & Hauling, LLC
Address: P. O. Box 1
         Price, Utah 84501
Telephone: 208-860-7325 (cell)
Fax: 435-472-3988

1.3 Designated Person Accountable for Oil Spill Prevention at Facility

Name: Scott Dimick (Onsite)
      Loadout Manager & Facility Manager
Address: Consumers Road
Telephone: 435-472-3987 or Fax 435-472-3988

Name: Brian Hess (Off-Site)
      AES Manager, Crude Oil Logistic & Optimization
Address: 117 West 200 South, Ste. 121
         Farmington, UT 84025
Telephone: 801-388-1861, Fax 832-320-2973
1.4 Plan Review and Amendment (40 CFR 112.5) for:

Environmental Protection Agency
Spill Prevention, Control & Countermeasure Plan

Company: Wild West Equipment & Hauling, LLC/AES
Facility/Location: Wildcat Loadout

In accordance with 40 CFR 112.5 (b) a review and evaluation of this SPCC plan is conducted at least once every five years. As a result of this review and evaluation, Wild West Equipment & Hauling/AES will amend the plan to include the following:

Technical amendments to this SPCC plan shall be reviewed within six months if modifications to the facility materially affect the potential for discharges of oil into or upon navigable waters. Modifications which may require plan amendments and certification include:

1) Commissioning or decommissioning of containers
2) Replacement, reconstruction or movement of containers
3) Reconstruction, replacement or installation of piping systems
4) Construction or demolition actions that may alter secondary containment structures
5) Changes in products or type of equipment service
6) Changes in operating and maintenance procedures

Administrative or non-technical amendments changes include, but are not limited to, phone numbers, name changes or any non-technical test revisions.

Review Summary

Original Date of Plan: March 2013

By my signature below, I attest that I have completed a review and evaluation of this SPCC plan for (Wild West Hauling & Equipment, Wildcat Loadout, Carbon County, Utah)

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<th>Signature</th>
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<td>02/22/2013</td>
<td>J.T. Paluso</td>
<td>Chief Engineer</td>
<td>No</td>
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Amendment Summary

Amendments to this plan are required whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility’s potential for the discharge of oil into or upon navigable waters of the United States. Such amendments shall be implemented as soon as possible, but no later than six months after such changes occur.
This SPCC plan for Wildcat Loadout facility has been amended as follows:

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<th>Purpose and Description of Amendment</th>
<th>Amendment Type (Administrative or Technical)</th>
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<td>General Requirements – Management Approval</td>
<td>Page 2</td>
</tr>
<tr>
<td>§ 112.7</td>
<td>General Requirements – Sequence or Cross-Reference</td>
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<td>§ 112.7</td>
<td>General Requirements – Discussion of Facilities Not Fully Operational</td>
<td>NA</td>
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<td>§ 112.7 (a) (2)</td>
<td>Deviation from Requirements: Reasons/Methods/Equiv. Protect</td>
<td>8.2</td>
</tr>
<tr>
<td>§ 112.7 (a) (3)</td>
<td>Physical Layout and Facility Diagram</td>
<td>Figure 1 &amp; 2</td>
</tr>
<tr>
<td>§ 112.7 (a) (3) (i)</td>
<td>Container Capacity and Type of Oil</td>
<td>2.1, 2.3</td>
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<tr>
<td>§ 112.7 (a) (3) (ii)</td>
<td>Discharge Prevention Measures</td>
<td>4.0, 10.0</td>
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<td>§ 112.7 (a) (3) (iii)</td>
<td>Discharge or Drainage Controls</td>
<td>4.0, 5.0</td>
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<tr>
<td>§ 112.7 (a) (3) (iv)</td>
<td>Countermeasures: Discover, Response, and Cleanup</td>
<td>10.0, 11.0</td>
</tr>
<tr>
<td>§ 112.7 (a) (3) (v)</td>
<td>Disposal: Legal Requirements</td>
<td>11.3</td>
</tr>
<tr>
<td>§ 112.7 (a) (3) (vi)</td>
<td>Notification Phone Lists</td>
<td>Appendix A</td>
</tr>
<tr>
<td>§ 112.7 (a) (4)</td>
<td>Discharge Notification Form</td>
<td>10.0, Appendix B</td>
</tr>
<tr>
<td>§ 112.7 (a) (5)</td>
<td>Discharge Procedures Organized</td>
<td>11.4</td>
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<tr>
<td>§ 112.7 (b)</td>
<td>Fault Analysis</td>
<td>4.0</td>
</tr>
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<td>§ 112.7 (c)</td>
<td>Adequate Secondary Containment</td>
<td>4.0</td>
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<tr>
<td>§ 112.7 (d) (1)</td>
<td>Contingency Planning</td>
<td>10.1</td>
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<tr>
<td>§ 112.7 (d) (2)</td>
<td>Commitment of Resources</td>
<td>9.0</td>
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<tr>
<td>§ 112.7 (e)</td>
<td>Inspections, Tests, and Records – Written Procedures</td>
<td>Appendix D</td>
</tr>
<tr>
<td>§ 112.7 (e)</td>
<td>Inspections, Tests, and Records – Records of Inspections/Tests/</td>
<td>Appendix D</td>
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<td>§ 112.7 (e)</td>
<td>Inspections, Tests, and Records – Records Maintenance</td>
<td>Appendix D</td>
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<td>§ 112.7 (f) (1)</td>
<td>Personnel Training</td>
<td>Appendix F</td>
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<td>§ 112.7 (f) (2)</td>
<td>Designated Person Accountable for Spill Prevention</td>
<td>1.3</td>
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<td>§ 112.7 (f) (3)</td>
<td>Spill Prevention Briefings</td>
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<td>§ 112.7 (g) (1)</td>
<td>Security</td>
<td>8.0</td>
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<tr>
<td>§ 112.7 (g) (2)</td>
<td>Flow and Drain Valves Secured</td>
<td>7.0</td>
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<tr>
<td>§ 112.7 (g) (3)</td>
<td>Pump Controls Locked Off; Facility Access Secured</td>
<td>8.0</td>
</tr>
<tr>
<td>§ 112.7 (g) (4)</td>
<td>Loading/Unloading Connections Secured</td>
<td>7.0</td>
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<tr>
<td>§ 112.7 (g) (5)</td>
<td>Lighting Appropriate for Facility</td>
<td>8.0</td>
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<tr>
<td>§ 112.7 (h)</td>
<td>Tank Truck Loading/Unloading Area</td>
<td>7.0</td>
</tr>
<tr>
<td>§ 112.7 (i)</td>
<td>Brittle Fracture Evaluation</td>
<td>NA</td>
</tr>
<tr>
<td>§ 112.7 (j)</td>
<td>Conformance with State Requirements</td>
<td>8.1</td>
</tr>
<tr>
<td>§ 112.8</td>
<td>SPCC Plan Requirements: Offshore Facilities</td>
<td>8.2</td>
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<tr>
<td>§ 112.9 (b)</td>
<td>Oil production facility drainage</td>
<td>2.0, 4.0</td>
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<tr>
<td>§ 112.9 (c)</td>
<td>Oil production facility bulk storage containers</td>
<td>2.1</td>
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<tr>
<td>§ 112.9 (d)</td>
<td>Facility transfer operations, oil production facility</td>
<td>7.0</td>
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<tr>
<td>§ 112.10 (b)</td>
<td>Mobile Facilities</td>
<td>2.0</td>
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<tr>
<td>§ 112.10 (c)</td>
<td>Secondary Containment, catchment basins or diversion structures</td>
<td>4.0</td>
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<tr>
<td>§ 112.10 (d)</td>
<td>Blowout prevention (BOP)</td>
<td>2.1</td>
</tr>
<tr>
<td>§ 112.11</td>
<td>Plan Requirements: Offshore oil drilling, production or workover</td>
<td>NA</td>
</tr>
<tr>
<td>§ 112.12</td>
<td>SPCC plan requirements for onshore facilities</td>
<td>8.2</td>
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<tr>
<td>§ 112.13</td>
<td>SPCC plan requirements for onshore oil production facilities</td>
<td>8.2</td>
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<tr>
<td>§ 112.14</td>
<td>SPCC plan requirements for onshore oil drilling facilities</td>
<td>8.2</td>
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<tr>
<td>§ 112.15</td>
<td>SPCC plan requirements for offshore oil drilling facilities</td>
<td>NA</td>
</tr>
<tr>
<td>§ 112.20</td>
<td>Facility Response Plans/Cert. Of Applicability of Substantial</td>
<td>Pg 2</td>
</tr>
</tbody>
</table>

Also please see the Corporation Discharge Prevention Plan and Emergency Response Plan.
2.0 DESCRIPTION OF FACILITY OPERATIONS

The Wildcat Loadout is located in the Wasatch Plateau area of Carbon County, Utah. High quality bituminous coal is mined underground at the Horizon Mine and is shipped by truck to the Wildcat Loadout where it is processed and primarily shipped on unit trains to its final destination. Associated Energy Services (AES) also has an oil loading facility on the Utah Railway. This facility is called AES Oil Loading Terminal.

AES proposes to bring crude oil from the Uintah Basin and Central Utah to this terminal. Trucks loaded with approximately 280 barrels (bbls) come to this site. This oil is then loaded into rail tankers which hold 530-650 bbls. Due to difficulty in getting rail tankers in a timely manner, some oil may be temporarily stored in mobile tanks. These tanks are used in the oilfield and have a capacity of approximately 500 bbls. When rail tankers are delivered to the terminal, the oil from these tanks is loaded back into trucks and delivered to the rail tankers which are located adjacent to the coal loading tracks on the Utah Railway.

Presently the terminal is loading approximately 2,000 bbls per day. AES anticipates eventually loading 3,000-6000 bbls/day from this terminal.

2.1 STORAGE TANKS

There are no permanent storage tanks at this facility. As mentioned is Section 2.0, mobile tanks may be brought in on an as needed basis. Presently, the tanks being used are made by Baker Corporation (Baker or frac) and are constructed from material (steel) that is compatible with the fluids to be stored in each tank as detailed in Table 1 below. Each tank is equipped with pressure relief valves and vacuum breaker valves to prevent tank rupture or collapse during filling or unloading operations. The integrity of the tanks will be inspected on a regular schedule. A description of the secondary structure for this tank battery facility is included in Section 4 below.

<table>
<thead>
<tr>
<th>Contents Of Tank</th>
<th>Tank Construction Material</th>
<th>Total Volume (bbls)</th>
<th>Condition</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Oil</td>
<td>Steel</td>
<td>500</td>
<td>NA</td>
<td>Above Ground</td>
</tr>
</tbody>
</table>

2.2 DESCRIPTION OF FLOW LINES

Flow lines used for tank filling and railroad tanker filling are flexible rubber hose. These flow lines are used only when filling and removing crude oil from the storage tanks and railroad tankers.
2.3 TYPES OF OIL HANDLED AND STORED AT FACILITY

Gravity of Oil: 29-49 API @ 60°F

3.0 LOCAL WEATHER FACTORS

Tank installations should include a means of secondary containment sufficient to contain the contents of the largest single tank with sufficient freeboard to allow for precipitation. The precipitation in this area is usually as follows:

- Reporting Station: Price Warehouse, Utah (427026)
- Reporting Period: 9/1/1988 to 12/31/2010
- Annual Precipitation: 9.28 inches
- Average Snowfall: 18.3 inches
- Average Temperature: Degrees F High: 63.7°, Degrees F Low: 36.1°

4.0 DESCRIPTION OF SECONDARY CONTAINMENT

The mobile oil storage tanks (Baker frac tanks) will be located in a natural depression area, please refer to Figure 2 and the photographs. This depression area is approximately 6' deep with a radius of 150'. This depression area would hold approximately 75,000 bbls. The maximum number of frac tanks, as of March 1, 2013, that was installed in this depression area was thirty (30). With a capacity of 500 bbls/tank, the total possible spill would be 15,000 bbls. Therefore, the secondary containment is five times larger than the maximum spill.

5.0 PROBABLE DIRECTION AND FLOW RATE OF FLOW OF DISCHARGES

The Wildcat Loadout is located in the Wasatch Plateau area of Carbon County, Utah. The drainage from the Wildcat Loadout will ultimately reach the Price River which flows into the Green and Colorado rivers, respectively. However, due to the remote location of the site, it is highly unlikely that runoff from a spill event would ever reach the Price River. The drainages are ephemeral.

The Wildcat Loadout is located approximately twelve (12) miles northwest of Price, Utah. The loadout is located between Wildcat Canyon and Garley Canyon. The washes near the loadout are considered ephemeral drainages. These drainage channels eventually reach the Price River to the east. Runoff from this site would pass through deeply eroded natural channels, which are also dry except during storm events, for approximately three miles before reaching the Price River. Due to the excessive length of travel in normally dry channels, it is unlikely that a spill or even runoff from the Wildcat Loadout would reach the Price River in all but extreme storm events. In addition, runoff from the Loadout is directed through a series of sediment ponds prior to the occurrence of any discharge from the site.

Areas were potential for an oil spill to exist are:

1. Loading Rail Tankers - Leak while loading rail cars.
2. Baker Tanks (Frac Tanks) - Leak while loading or unload tanks.
Table 2
Storage Capacity and Potential Discharge

<table>
<thead>
<tr>
<th>Source</th>
<th>Contents Of Vessel</th>
<th>Total Volume (bbls)</th>
<th>Leak Rate (Gals./Hr.)</th>
<th>Direction Of Flow</th>
<th>Secondary Containment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haulage Truck</td>
<td>Crude Oil</td>
<td>180(1)</td>
<td>200</td>
<td>East &amp; West</td>
<td>Yes</td>
</tr>
<tr>
<td>Baker Tank</td>
<td>Oil</td>
<td>500</td>
<td></td>
<td>East</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(1) Largest compartment of haulage trucks is 180 bbls

6.0 ENVIRONMENTALLY SENSITIVE AREAS

N/A

7.0 PLANS FOR THE PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS

The following procedures have been implemented to maximize prevention of spills:

1. Truckers have been trained on proper loading and unloading safety procedures of crude oil.
2. Railroad tank cars are inspected before loading operations begin. This includes closing all valves and tagging them.
3. While the railroad tank cars are being loaded, dip stick measurement are being taken by a person situated on top of the car. This insures the cars are not over filled during loading. There is constant communication between the truck driver and the loading operator during the loading process.
4. Prior to starting pumping operations, all equipment is grounded. This includes the truck, loading platform, and railcar. This procedure eliminates the potential of fire due to static charge.
5. Drip pans are used during the filling operation. These drip pans prevent small amount of crude oil from reaching the ground.
6. Discharge hoses are prevented from coming apart with compression cords. These cords prevent the accidental opening of mechanical clamps.
7. Upon the completion of pumping operations from the truck, the pump direction is reversed. This procedure sucks all remaining oil in the hose back into the truck. This prevents minor spills from reaching the ground.
8. All personnel are properly instructed in the operations and maintenance of the loading equipment to prevent discharges of oil.
9. The same safety procedures are followed when oil is being loaded/unloaded from the frac tanks when in use. The main goal is to prevent oil spills and to maximize safety.
10. All applicable federal and state regulations regarding oil pollution control shall be strictly enforced.
8.0 SECURITY

All entrances to the property are locked or guarded when the facility is not in operation. Facility lighting is provided during operating procedures and is commensurate with the type and location of the facility that will assist in the discovery of discharges occurring during hours of darkness, both by operating personnel, if present and by non-operating personnel and prevention of discharges occurring through acts of vandalism.

Metal tags are placed on rail tanker cars discharge lines to prevent opening of the valves.

8.1 Regulatory Conformance With State Requirements

The subject properties are/are not subject to any state regulated discharge prevention and containment requirements beyond those specified by federal regulation.

8.2 Regulatory Exclusions

The subject properties are classified as onshore production facilities which store only petroleum based oils. Furthermore, the properties are not expected to cause substantial harm to the environment as demonstrated by the completed Certification of Substantial Harm Determination form contained on page 2 of this plan. As such, the subject properties are excluded from the following regulations:

Subpart A: General Requirements
40 CFR 112.7(g) Security

Subpart B: Requirements for Petroleum Oils and Non-Petroleum Oils except Animal Fats
40 CFR 112.8 SPCC plan requirements for onshore facilities (excluding production)
40 CFR 112.11 SPCC Plan Requirements for offshore oil facilities

Subpart C: Requirements for Animal Fats and Oils, Greases, Fish and Marine Oils
40 CFR 112.12 SPCC plan requirements for onshore facilities (excluding production)
40 CFR 112.13 SPCC plan requirements for onshore oil production facilities
40 CFR 112.14 SPCC plan requirements for onshore oil drilling facilities
40 CFR 112.15 SPCC plan requirements for offshore oil drilling facilities

Subpart D: Response Requirements
40 CFR 112.20 Facility response plans
40 CFR 112.21 Facility response training and drills/exercises

9.0 PERSONNEL AND EQUIPMENT AVAILABLE FOR RESPONSE

Refer to Appendix A for the list of personnel and agencies available for response. The AES Oil Loading Terminal (AES) is adjacent to the Wildcat Coal Loading Facility (Wildcat). Wildcat has various types of heavy equipment used in the loading and moving of coal. This equipment would be available for use at the AES Oil Loading Terminal if it became necessary to prevent the spread of an oil spill.
10.0 DISCHARGE PREVENTION PLAN

10.1 Facility Drainage

Any runoff from the loading area or frac tank storage area will mainly report to the depression area, refer to Figure 2. Any runoff not reporting to the depression area will report to one of six(6) sediment ponds located throughout the property.

10.2 Secondary Containment

As describe in Section 4.0, the secondary containment for the frac tanks is much greater than the anticipated storage capacity from of all of the frac tanks. It is anticipated to have a maximum of 30 tanks at this facility.

10.3 Inspections

Daily inspections of all of the equipment are made by the personnel working at the site. There is constant safety communications between the truck drivers and the site loading team. Monthly reports are sent to the home office of Associated Energy Services (AES). Along with production numbers, these reports indicate any spills or other safety incidents that occurred during the month. See Appendix D for the Production facility Inspection Form.

11.0 EMERGENCY RESPONSE PLAN

This section describes response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water or soil is prohibited by State and Federal laws. Immediate action must be taken to control, contain and recover discharged product.

Emergency spill containment supply kits are stored on site. Emergency spill containment supply kits are also stored on all oil transport trucks. The onsite emergency spill containment supply kits contain petroleum absorbent pillows, absorbent pads and bags of absorbent material.

11.1 Response to Minor Discharges

A minor discharge is defined as on that poses no significant harm or threat to human health and safety or to the environment. Minor discharges are generally those where:

1. The quantity of product discharged is small (1 to 25 gallons).
2. The discharged material is easily stopped and controlled at the time of the discharge.
3. The discharge is localized near the source.
4. The discharge material is not likely to reach water.
5. There is little risk to human health and safety.
6. There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by onsite personnel. The following guidelines apply:

1. Immediately notify the Facility Manager.
2. Under direction of the Facility Manager, contain the discharge with discharge response materials and equipment.
3. The Facility Manager will complete the Release Notification Form in Appendix B.
4. If the discharge involves more than 25 gallons of oil or cannot be cleanup within 24 hours,
The Facility Manager will call the Utah Department of Environmental Response and Remediation (DERR) spill response division (801-536-4123).

11.2 Response to a Major Discharge

1. The discharge is greater than 25 gallons.
2. The discharge is large enough to spread beyond the immediate discharge area.
3. The discharged material enters water.
4. The discharge requires special equipment or training to clean up.
5. The discharged material poses a hazard to human health or safety.
6. There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

1. All workers must immediately evacuate the discharge site.
2. If the Facility Manager is not present, the senior on-site person notifies the Facility Manager of the discharge and has the authority to initiate notification and response.
3. The Facility Manager (or senior on-site person) must call for medical assistance if workers are injured.
4. The Facility Manager (or senior on-site person) must notify the fire department or police department.
5. The Facility Manager (or senior on-site person) must call a spill response and cleanup contractor listed in the emergency contacts list in Appendix A.
6. The Facility Manager (or senior on-site person) must immediately contact the Utah DERR spill response division (801-536-4123) and the National Response Center (800-424-8802).
7. The Facility Manager (or senior on-site person) must record the call on the Release Notification Form in Appendix B and attach a copy to this Plan.
8. The Facility Manager (or senior on-site person) coordinates cleanup and obtains assistance from the cleanup contractor or other response organizations as necessary.

11.3 Waste Disposal

Wastes resulting from a minor discharge will be placed in impervious containers (e.g. bags, drums, or buckets). The Facility Manager will characterize the waste for proper disposal and ensure that it is removed from the site by a licensed waste hauler within 60 days. Wastes resulting from a minor discharge response will be removed and disposed of by a cleanup contractor.

11.4 Discharge Notification

Any size discharge that creates a sheen, emulsion or sludge that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (800-424-8802). The center is staffed 24 hours a day.

Contact information for reporting a discharge to the appropriate authorities is listed in Appendix A.

A summary sheet is included in Appendix B to facilitate reporting. The person reporting the discharge must provide the following information:

1. Name, location, organization and telephone number.
2. Date and time of the incident.
3. Location of the incident.
4. Source and cause of the discharge.
5. Types of material(s) discharged.
6. Quantity of materials discharged.
7. Danger or threat posed by the discharge.
8. Number and types of injuries, if any.
9. Media affected or threatened by the discharge (i.e., water, land, air).
10. Weather conditions at the incident location.
11. Any other information that may help emergency personnel respond to the incident.

In addition to the above report, 40 CFR part 112.4 requires that information be submitted to the U.S. Environmental Protection Agency (EPA) Regional Administrator and the Utah DERR (See contact information in Appendix A) whenever the site discharges (as defined in 40 CFR 112.1 (b)) more than 1,000 gallons of oil in a single event, or discharges (as defined in 40 CFR 112.1 (b)) more than 42 gallons of oil in each of two discharge incidents within a 12-month period.

The Utah DERR also requires reporting of any spill over 25 gallons or any spill, regardless of volume, that cannot be cleaned up within 24 hours. The following information must be submitted to the EPA Regional Administrator and the Utah DERR within 60 days:

1. Name of facility.
2. Name of owner/operator.
3. Location of the facility.
4. Maximum storage or handling capacity.
5. Corrective action and countermeasures taken, including a description of equipment repairs and replacements.
6. Description of the facility, including maps, flow diagrams and topographical maps.
7. Cause of the discharge to navigable waters and adjoining shorelines, including a failure analysis of the system in which the failure occurred.
8. Additional preventive measures taken to minimize the possibility of recurrence.
9. Other pertinent information requested by the regional administrator.

A standard report for submitting this information is included in Appendix C of this plan.

11.5 Cleanup Contractors

Contact information for specialized spill response and cleanup contractors is provided in Appendix A.
APPENDIX A

SPCC NOTIFICATION LIST
FEDERAL, STATE AND LOCAL AGENCY CALL LIST
Appendix A

SPCC NOTIFICATION LIST
FEDERAL, STATE AND LOCAL AGENCY CALL LIST

If any oil contacts surface water, whether flowing or not, or an intermittent drainage, and results in a "visible sheen" on the water, the following phone contacts must be made as soon as possible following the discovery of the spill. The contacts must be made regardless of the quantity discharged.

1) National Response Center (The NRC should automatically contact the EPA)
2) The Regional office of the EPA
3) State Water Quality Control Division
4) State Oil and Gas Regulatory Agency
5) Any other state agencies with responsibility for oil pollution control
6) Affected land owners

FOLLOW COMPANY REPORTING PROCEDURES SHOULD IT BECOME NECESSARY TO CONTACT ANY OF THE ABOVE AGENCIES. USE THE RELEASE NOTIFICATION FORM ON THE FOLLOWING PAGE TO ORGANIZE AND AGENCY NOTIFICATION STANDARY FORM TO COMMUNICATE INFORMATION CONCERNING THE SPILL.

In the event of a spill, the Loadout Manager/Facility Manager shall be contacted.

<table>
<thead>
<tr>
<th>Person</th>
<th>Office Number</th>
<th>Cell Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Dimick</td>
<td>435-472-3988</td>
<td>435-630-3221</td>
</tr>
<tr>
<td></td>
<td>435-472-3987</td>
<td></td>
</tr>
</tbody>
</table>

It will be the responsibility of the above personnel to report the spill event to the State of Utah, EPA and any other agencies which may be involved in the impact of such events (i.e. Forest Service, BLM, private landowners, etc.)

In the absence of the above personnel, the following person(s), in the order listed, shall be responsible for assuming the duties of reporting the spill and supervision of containment and clean up:

<table>
<thead>
<tr>
<th>Location</th>
<th>Person</th>
<th>Office Number</th>
<th>Cell Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Office</td>
<td>Lee Abrams</td>
<td>435-472-3988</td>
<td>208-860-7325</td>
</tr>
</tbody>
</table>

Reports on the spill event shall be made to the EPA and the State at the following telephone numbers:
U.S. Environmental Protection Agency (EPA)
Denver, Colorado 800-227-8917 or 800-424-8802 (24 Hr. Contact)

STATE AGENCIES
Utah Division of Oil, Gas, & Mining: 801-538-5340
Utah Department of Environmental Quality: 800-458-0145 (Hot Line)

Utah Division of Oil, Gas & Mining (DOGM)
Price, Utah 435-613-3737
Salt Lake City, Utah 801-538-5340

Utah Division of Environmental Response & Remediation (DERR)
Salt Lake City, Utah 801-536-4123 (24 Hour Environmental Incidents)

Utah Division of Water Quality
Salt Lake City, Utah 801-536-4300 801-536-4123 (24 Hour Environmental Incidents)
If auto accident with spill, call Utah Highway Patrol

Utah Highway Patrol (UHP)
Price, Utah 435-637-0980 They will notify the EPA and the State

Federal Agencies
National Response Center: (800) 424-8802
EPA Region VIII Spill Line: (800)-227-8917
EPA Region VIII: (800) 227-8917 (Working Hours) 1-800-424-8802 (24-Hour)

LOCAL EMERGENCY RESPONSE AGENCIES
Emergency Central Dispatch (Where Available - Local Calls Only): 911
Carbon County Sheriff Department: 435-638-3251

PRIVATE SPILL CLEANUP COMPANIES
BIO-WEST, Inc.: 435-752-4202
Envirocare: 801-299-1900
APPENDIX B
RELEASE NOTIFICATION FORM

INCORPORATED
JULY 9, 2013
DIVISION OIL, GAS & MINING
Appendix B
Release Notification Form

Should it become necessary to inform any federal or state agency concerning an accidental release, be prepared to provide the following information:

Reporters Full Name: ___________________________ Title: ___________________________

Primary Phone Number: ___________________________ Secondary Phone Number: __________

Company: ___________________________ Office Address: ___________________________

Spill Location: ___________________________ Sec. ___________ Twp. ___________ Rng. ___________

Nearest City: ___________________________ County: ___________ State: ___________________________

Directions From Nearest City to Spill Location: ___________________________

Date and Time of Release: ___________________________ Type of Material Released: ___________________________

Source of the Material Release: ___________________________

Total Quantity Released: ___________________________ Quantity Released Into Water: ___________________________

Container Type: ___________________________ Container Material: ___________________________

Container Storage Capacity: ___________________________ Facility Storage Capacity: ___________________________

Actions Undertaken to Correct, Control and Mitigate the Incident: ___________________________

Description of Damages: ___________________________

Number of Injuries: ___________________________ Number of Deaths: ___________________________

Evacuation(s) Conducted: ___________________________ Number Evacuated: ___________________________

NOTIFICATION LOG

<table>
<thead>
<tr>
<th>Agency Contacted</th>
<th>Contact Person</th>
<th>Date and Time of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Response Center (NRC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPA Regional Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Water Quality Division</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Oil &amp; Gas Commission</td>
<td></td>
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<tr>
<td>BLM Field Office</td>
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<tr>
<td>Forest Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
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</tr>
</tbody>
</table>

INTEGRINATED

JULY 9, 2013

DIVISION OIL, GAS & MINING
APPENDIX C

INFORMATION SUBMITTAL TO EPA REGIONAL ADMINISTRATOR FOR QUALIFIED DISCHARGES(S)
Appendix C

Information Submittal to EPA Regional Administrator for Qualified Discharge(s)

In the event of a qualified discharge or discharges, this form can be utilized to provide official notification to the EPA Regional Administrator. If a facility has experienced a discharge or discharges that meet one of the following two criteria, then this report must be submitted to the Regional Administrator within 60 days.

(Check as appropriate)
☐ This Facility has experienced a reportable spill as referenced in 40 CFR Part 112.1 (b) of 1,000 gallons or more.
☐ This Facility has experienced two (2) reportable spills (as referenced in 40 CFR Part 112.1(b) of greater than 42 gallons each within a 12-month period.

Facility Name and Location:

Facility Contact Person (Name, address/phone number):

Facility Maximum Storage or Handling Capacity:

Facility Nominal Daily Throughput:

Describe the Corrective Actions and Countermeasures Taken (include description of equipment repairs and replacements):

Describe the Facility (Attach maps, flow diagrams and topographical maps as necessary):

Describe the Cause of the Discharge (as referenced in 40 CFR Part 112.1 (b)) Including Failure Analysis of the System:

Describe the Preventative Measures Taken or Contemplated to Minimize the Possibility of Recurrence:

Other pertinent information:

NOTE: A copy of this report must also be sent to the appropriate state agency in charge of oil pollution control activities.
APPENDIX D
PRODUCTION FACILITY INSPECTION FORM
Appendix D

PRODUCTION FACILITY INSPECTION FORM

Circle the appropriate response. Note that any "No" response requires corrective actions.

I. Flow line Inspections
   a. All active flow lines should be leak free: Yes / No
   b. All active flow lines should have a gauge installed to monitor pressure: Yes / No
   c. Any clamp-type repairs on active flow lines should be visually inspected and free from leaks: Yes / No

II. Process Equipment Inspections
   a. All incoming flow lines (active and inactive) should be identified: Yes / No
   b. Shut down valves are checked for fail-safe closure: Yes / No
   c. Header/main fold systems, process vessels and their interconnecting piping should be leak-free: Yes / No
   d. All automatic dump valves should be checked for fail-safe closure: Yes / No
   e. Operating pressures on process vessels should be at or below the vessel's rated working pressure: Yes / No

III. Tank Inspection
   a. All bulk storage tanks and their related piping are leak-free: Yes / No
   b. Secondary containment system is intact and competent: Yes / No
   c. All pressure/vacuum reliefs and atmospheric tank vents are operational: Yes / No
   d. Storage container foundations and supports are stable and sufficient: Yes / No

IV. General Site Inspection
   a. Facility identification and emergency telephone number is posted: Yes / No
   b. Facility has restricted access through fence, gate and cattle guard: Yes / No
   c. Facility is graded to drain storm water away from natural watercourses: Yes / No

V. Corrective Actions

________________________________________
________________________________________

VI. Certification
   a. Original Inspection
      By: ___________________________
      Title: _________________________
      Date: _________________________

   b. Corrective Actions
      By: ___________________________
      Title: _________________________
      Date: _________________________

INCORPORATED

JULY 9, 2013

DIVISION OIL, GAS & MINING
Appendix E

STORMWATER INSPECTION PROCEDURE AND DRAINAGE RECORD

Storm water that collects in the bermed areas is visually inspected for contamination from oil. **NO** oil shall be released from or pumped from within the berm onto the ground or into a water course. Drainage or pumping shall not occur until the fluids have been inspected for oil. Draining the storm water from inside the berm shall only occur under constant visual supervision of the drain outlet, and only after determining that the water is indeed fresh. Draining will cease at the first sign of oil sheen and the remaining fluid shall be removed and properly treated or disposed. The foreman in charge of the facility operations shall be consulted before any berm is drained or purged. Storm water in the depression area is removed by natural evaporation.

As required by law, any time that storm water is discharged from the dike, a record of the inspection, discharge and oil removal is to be maintained. The following is the discharge record:

<table>
<thead>
<tr>
<th>Date of Discharge</th>
<th>Oil Sheen Present</th>
<th>Inspector's Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
Appendix F

TRAINING RECORD FORM

DATE:______________  TRAINER:__________________________

SUBJECT:_________________________________________________

_________________________________________________________________

ATTACH COPIES OF ALL HANDOUTS ETC.

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
<th>COMPANY</th>
<th>JOB TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

INCORPORATED

JULY 9, 2013

DIVISION OIL, GAS & MINING
FIGURE 3
PHOTOGRAPHS
FIGURE 4
MSDS SHEETS
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Newfield Exploration
Route 3, P. O. Box 3660
Myton, UT 84052
Phone: 435.646.4864
Emergency: 435.401.1800
Attn: Pele Okullo
Date: 3/16/2012

Product Name: Black Wax

Synonyms: Petroleum Oil, Crude Oil, Uintah Black wax

Product Description: A highly complex mixture of hydrocarbons

2. COMPOSITION & INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components(s)</th>
<th>Occupational Exposure Limits</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA(1)</td>
<td>ACGIH(2)</td>
</tr>
<tr>
<td>Product/Components</td>
<td>CAS No.</td>
<td>Wt(4)</td>
</tr>
<tr>
<td>Crude Oil</td>
<td>8002-05-9</td>
<td>100</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>0-2</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>0-20</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>0-20</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0-4</td>
</tr>
<tr>
<td>Trimethylbenzene</td>
<td>2555-13-7</td>
<td>0-2</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0-1</td>
</tr>
<tr>
<td>Polynuclear Aromatic Hydrocarbons</td>
<td>N/A</td>
<td>1-10</td>
</tr>
</tbody>
</table>

(1) 8-hour TWA unless otherwise specified.
(2) 10-hour TWA unless otherwise specified.
3. HAZARD IDENTIFICATION

<table>
<thead>
<tr>
<th>Carcinogenicity:</th>
<th>NTP</th>
<th>IARC Monographs</th>
<th>OSHA Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Oil</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Benzene</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Potential Health Effects From Overexposure

**Acute Effects**

**Eyes:** Sight to moderate eye irritation.

**Skin:** Moderately irritating; causes redness, drying of skin.

**Inhalation:** Will cause narcosis and/or chemical pneumonitis. High concentrations of hydrogen sulfide can cause headache, dizziness, unconsciousness and/or death.

**Ingestion:** Extremely irritating to throat and stomach. Causes excitation, loss of consciousness, convulsion, cyanosis, congestion and capillary hemorrhaging of the lung and internal organs.

**Chronic Effects**

Skin irritation. The long-term, repeated application of crude to the skin of laboratory mice (without washing between applications) resulted in a statistically significant increase in the incidence of skin tumors.

**Additional Medical and Toxicological Information**

May aggravate pre-existing dermatitis. May cause blood-forming disorders, or lead to kidney or liver dysfunction. Contact with full strength or dilute formulations of this product or exposure above and below exposure limits may aggravate pre-existing dermatitis or respiratory disorders in certain individuals. This product contains benzene, which can cause degeneration in blood forming organs leading to anemia which may further degrade to leukemia.

4. FIRST AID MEASURES

**Eye Contact:** Flush thoroughly with large amounts of water for at least 15 minutes, including under the eyelids. Get medical attention.

**Skin Contact:** Remove contaminated clothing. Wash affected areas.
with soap and water. If irritation persists, get medical attention.

Inhalation: Remove to fresh air. If breathing has stopped, apply artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. If spontaneous vomiting occurs hold the victim’s head lower than their hips to prevent aspiration.

5. FIRE FIGHTING MEASURES

Flash Point: <100°F
Flammable Limits in Air, % by Volume:
    Lower: 1%
    Upper: 15%
Autoignition Temperature: Liquid: 450°F Vapor: 800-1000°F
Extinguishing Media: Dry chemical, foam, carbon dioxide.
NFPA Hazard Ratings (crude petroleum):
    Health: 1 Flammability: 3 Reactivity: 0

General Hazard:
Flowing crude oil can be ignited by self-generated static electricity; containers should be bonded and grounded. Runoff to sewer may create fire or explosion hazard well downstream from the source.

Fire Fighting Instructions:
Use a smothering technique for extinguishing fire of this flammable liquid. Do not use a forced water stream directly on crude oil fires as well this will scatter the fire. Firefighters should wear self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE

Remove source of heat or ignition including internal combustion engines and power tools. Clean up spill but do not flush to sewer or surface water. Ventilate area and avoid breathing vapors or mists.

7. HANDLING & STORAGE

Store in tightly closed containers in a dry cool place, away from sources of heat or ignition. Ground and bond all transfer and storage equipment to prevent static sparks and equip with self-closing valves, pressure vacuum bungs and flame arrestors. Empty containers may contain residue (liquid/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, or other
sources of ignition; that may explode and cause injury or death.

8. EXPOSURE CONTROL, PERSONAL PROTECTION

Eye Protection: Remove contact lenses and wear chemical safety
glasses or goggles where contact with liquid
or mist may occur.

Skin Protection: Wear insulating gloves and protective clothing
when contact with skin may occur. Wash with
soap and water before eating, drinking or
smoking. Launder contaminated clothing before
reuse.

Inhalation: CRUDE OIL MAY CONTAIN HYDROGEN SULFIDE. NIOSH
approved respiratory protection should be used
when handling crude of high or unknown
hydrogen sulfide content and to reduce
airborne concentrations to allowable
occupational exposure levels.

Ventilation: Provide adequate general and local
ventilation: (1) to maintain airborne chemical
concentrations below applicable exposure
limits, (2) to prevent accumulation of
flammable vapors and formation of explosive
atmospheres, and (3) to prevent formation of
oxygen deficient atmospheres, especially in
confined spaces. [Note: this product may
release gases or vapors that can displace
oxygen in enclosed areas.]

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point 760 mmHg: 20-40°F  Melting Point: N/A
Vapor Pressure mmHg @70°F: 0-12 psia  Vapor Density (Air=1): 1.5-3.0
% Solubility in H₂O @100°F: 0.01-0.05  pH: N/A
Specific Gravity 60/60°F: 0.80-0.98  Evaporation Rate: 0.1-1.0
% Volatile by Volume: 20-100 (Ethyl Ether = 1)
Viscosity Centipoise @100°F: 0.8-4500  Odor: Petroleum-like
Appearance: Pale to black liquid

10. STABILITY & REACTIVITY

Stability: Stable under normal conditions of use.
Hazardous Polymerization: Will not occur.
Conditions to Avoid/Incompatibilities: Strong oxidizing agents,
heat, sparks, flame and build up of static electricity.
Hazardous Decomposition Products: CO, CO₂, SO₂, and hydrocarbons
11. TOXICOLOGICAL INFORMATION

No data available.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL INFORMATION

Dispose through a licensed waste disposal company. Follow federal, state and local regulations.

14. TRANSPORT INFORMATION

Identification Number: UN 1267
Hazard Class: 3 (Flammable Liquid)
Petroleum crude oil
Packing Group I-III (depending on boiling point and flash point).

15. REGULATORY INFORMATION

EPA SARA TITLE III

Section 302 EPCRA Extremely Hazardous Substances (EHS)

<table>
<thead>
<tr>
<th>Product Component</th>
<th>CAS No.</th>
<th>Wt%</th>
<th>RQ, lb</th>
<th>TPQ, lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0-1</td>
<td>100</td>
<td>500</td>
</tr>
</tbody>
</table>

Section 304 CERCLA Hazardous Substances

<table>
<thead>
<tr>
<th>Product Component</th>
<th>CAS No.</th>
<th>Wt%</th>
<th>RQ, lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>0-2</td>
<td>10</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>0-20</td>
<td>1000</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>0-20</td>
<td>100</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0-4</td>
<td>1000</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0-1</td>
<td></td>
</tr>
</tbody>
</table>

Section 311/312 Hazard Categorization

Acute: X  Chronic: X  Fire: X  Pressure:  Reactive: X

Section 313 EPCRA Toxic Substances

<table>
<thead>
<tr>
<th>Product Component</th>
<th>CAS No.</th>
<th>Wt.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>0-2</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
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<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0-4</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0-1</td>
</tr>
</tbody>
</table>

Key: RQ = Reportable Quantity  TPQ = Threshold Planning Quantity of EHS
CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be found in crude oil and petroleum products. Although it is possible to sufficiently refine a crude oil or its end products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling crude oil and petroleum products.

16. OTHER INFORMATION

N/A
MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Crude Oil-Covenant (Sweet)

TRADE NAME: Crude Stock Tank Oil

GENERAL USE: Source for various petroleum distillates.

CHEMICAL FAMILY: Mixed hydrocarbons

PRODUCT DESCRIPTION:
Dark Brown Liquid With A Petroleum Odor.

MANUFACTURER
Wolverine Gas & Oil Company of Utah, LLC

TELEPHONE NUMBER: (435) 896-2956

ADDRESS: Sigurd Office & CFP, 2000 South Highway 24

CITY: Sigurd, UT 84657 COUNTRY: USA

DATE: March 4, 2009

DATE PREPARED: March 4, 2009

SUPERSEDES: New Issue.

SECTION 2 - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>% (by Weight)</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>Hazard Symbol</th>
<th>RISK PHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Oil</td>
<td>100</td>
<td>8002-05-9</td>
<td>232-298-5</td>
<td>(T)</td>
<td>R45</td>
</tr>
<tr>
<td>Benzene</td>
<td>Variable</td>
<td>71-43-2</td>
<td>200-753-7</td>
<td>(T), (F)</td>
<td>R11, R36/38, R45, R46, R48, 23/24/25, R65</td>
</tr>
</tbody>
</table>

NOTES: This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directive 91/155/EEC. Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directive 91/155/EEC and are considered trade secrets under US Federal Law (29 CFR and 49 CFR), Canadian Law (Health Canada Legislation), and European Union Directive 67/548/EEC.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION! FLAMMABLE LIQUID - SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED. High fire hazard. Keep away from heat, spark, open flame, and other ignition sources. If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects. Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

US HAZARD SYMBOL(S) (GHS) HAZARD SYMBOLS EUROPEAN HAZARD SYMBOLS

HMIS HAZARD RATINGS

| HEALTH | 4 | 0 = INSIGNIFICANT |
| FLAMMABILITY | 4 | 1 = SLIGHT |
| PHYSICAL HAZARD | 0 | 2 = MODERATE |
| | 3 | = HIGH |
| | 4 | = EXTREME |

REQUIRED PERSONAL PROTECTIVE EQUIPMENT:

HMIS PERSONAL PROTECTIVE EQUIPMENT LETTER: H
### MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:** Crude Oil-Covenant (Sweet)  
**PRODUCT NUMBER:**  
**DATE:** March 4, 2009

#### SECTION 3 - HAZARDS IDENTIFICATION (Continued)

**RISK PHRASES**
- R11: Highly flammable.
- R36/38: Irritating to eyes and skin.
- R43: May cause cancer.
- R46: May cause heritable genetic damage.
- R48/23/24/25: Toxic; danger of serious damage to health by prolonged exposure through inhalation, contact with skin and if swallowed.
- R65: Harmful; may cause lung damage if swallowed.

**SAFETY PHRASES**
- S2: Keep out of the reach of children.
- S16: Keep away from sources of ignition - No smoking.
- S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S53: Avoid exposure - obtain special instructions before use.

#### POTENTIAL HEALTH EFFECTS

**INHALATION:**
Excessive exposure may cause irritation to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**CHRONIC and CARCINOGENICITY**
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. This product contains polynuclear aromatic hydrocarbons which have been shown to be carcinogenic in laboratory animals after repeated and prolonged skin contact. The significance of these results to human exposures has not been determined - see Section 11; Toxicological Information. Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Pre-existing, chronic respiratory disease, liver or kidney dysfunction, or central nervous system disorders may be aggravated by exposure.

**SKIN:**
Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly. Rare, precancerous warts on the forearms, backs of hands and scrotum have been reported from prolonged or repeated skin contact.

**EYES:**
Contact with eyes may cause moderate to severe irritation.

**INGESTION:**
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

**CARCINOGENICITY:**
- NTP? Yes
- IARC MONOGRAPHS? Benzene = Group 1
- OSHA REGULATED? Yes (Benzene)
- CALIFORNIA, Prop. 65? Yes
- ESIS NOTATION? Yes

#### SECTION 4 - FIRST AID MEASURES

**INHALATION:**
Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

**EYES:**
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

**SKIN:**
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

**INGESTION:**
**DO NOT INDUCE VOMITING.** Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be dissipated.
**SECTION 5 - FIRE FIGHTING MEASURES**

**GENERAL HAZARDS:**
Flash Point (-14 to -12°F), OSHA/NFPA FLAMMABILITY CLASS: 1B (flammable liquid). Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

**EXTINGUISHING MEDIA:**
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.
LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for lighting the fire, but may be used to cool fire-exposed containers.

**FIRE FIGHTING PROCEDURES:**
Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA-approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessiva heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**
Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

**HAZARDOUS COMBUSTION PRODUCTS:**
Carbon Monoxide, Carbon Dioxide, Hydrocarbon Vapors, Smoke.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**
**ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.**
Evacuate nonessential personnel and secure or remove all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

**HANDLING PRECAUTIONS**
Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

**STORAGE PRECAUTIONS**
Keep away from flames, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

**SECTION 7 - HANDLING AND STORAGE**

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA ppm</td>
<td>TWA/m³</td>
<td>STEL ppm</td>
</tr>
<tr>
<td>Petroleum Oil</td>
<td>350</td>
<td>1800 IDLH 15minute</td>
<td>5 (as mist)*</td>
</tr>
<tr>
<td>Benzene</td>
<td>0.1</td>
<td>500 IDLH</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*1 ppm TWA; 10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1029, industry segments exempt from the 1 ppm TWA and 5 ppm STEL of the benzene standard); 0.5 ppm STEL/IDLH, Hazard, Flammable - see 29 CFR 1910.1029. OSHA Vacated PELs: Benzene: 10 ppm TWA (unregulated as of 1979). Note: sum of 15 NTP-listed polynuclear aromatic hydrocarbons 0.005 mg/m³, A1

**INTEGRATED MATERIALS CORPORATION**

**JULY 9, 2013**
**DIVISION OIL, GAS & MINING**
## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:** Crude Oil-Covenant (Sweet)  
**PRODUCT NUMBER:**  
**DATE:** March 4, 2009

### SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

#### RESPIRATORY PROTECTION:
Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. A NIOSH MSHA-approved or European EN149 approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

#### PROTECTIVE GLOVES:
Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

#### EYE PROTECTION:
Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

#### OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Naturally Occurring Radioactive Materials (NORM): Industry experience indicates that this material may contain small amounts of naturally-occurring uranium, thorium, and their decay products (NORM) which can accumulate in oil production and process equipment, particularly the equipment handling the water associated with crude oil production. Scales, other deposits, and sludges from this equipment may have a significant accumulation of NORM. Gamma radiation above background may be detected external to equipment contaminated with NORM. Production equipment should be assessed for external gamma radiation; access may need to be restricted in accordance with OSHA 29 CFR 1910.98 during operation. Such equipment should also be assumed to be internally contaminated with long half-life decay products that emit alpha radiation, which is a hazard if inhaled or ingested. Unless measurements indicate otherwise, steps should be taken to minimize skin and inhalation exposure to NORM dusts/mists by wearing personal protective clothing such as disposable Tyvek® (DuPont), utilizing respiratory protection (minimum of HEPA filter), and practicing good personal hygiene. Please refer to API Bulletin E2, “Bulletin on Management of Naturally occurring Radioactive Materials in Oil and Gas Production,” April 1, 1992, for additional information on managing NORM.

#### WORK / HYGIENIC PRACTICES:
Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance and Odor</th>
<th>Vapor Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Brown Liquid With A Petroleum Odor,</td>
<td>3.2 PSI @ 100°F (37.8°C)</td>
</tr>
</tbody>
</table>

| pH | Specific Gravity (Water = 1) |
| NA | 0.8254 @ 60°F (15.5°C) |

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Solubility In Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>146°F (63°C)</td>
<td>Insoluble</td>
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</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>-14 to -12°F (-25.6 to -24.5°C)</td>
<td>NR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flammable Limits</th>
<th>Vapor Density (Air = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEL: NR</td>
<td>&gt;1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auto-Ignition Temperature</th>
<th>Evaporation Rate (Water = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR</td>
<td>NR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volatile Organic Compound (VOC) Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>98% by Vol. (Estimate.)</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 10 - STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Stability</th>
<th>Conditions To Avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incompatibility (Materials to Avoid):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong oxidizers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Decomposition or Byproducts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide, Carbon Dioxide, Hydrocarbon Vapors, Smoke.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Polymerization:</th>
<th>Conditions To Avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will not occur.</td>
<td>None related to polymerization.</td>
</tr>
</tbody>
</table>

**INTEGRATED SERVICES**  
**JULY 9, 2013**  
**DIVISION OIL, GAS & MINING**
SECTION 11 - TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>LD50 of Ingredient (Specify Species and Route)</th>
<th>LC50 of Ingredient (Specify Species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Oil</td>
<td>8002-05-9</td>
<td>232-298-5</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>200-753-7</td>
<td>Oral, rat: LD50 = 930 mg/kg #</td>
<td>Inhalation, mouse: LC50 = 9990 ppm. Inhalation, rat: LC50 = 6.5 mL/kg/4H</td>
</tr>
</tbody>
</table>

Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal’s skin with soap and water between applications reduced tumor formation. This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

MUTAGENICITY (genetic effects): Some crude oils and crude oil fractions have been positive in mutagenicity studies.

#Oral, rat: LD50 = 1800 mg/kg. Benzene is considered very toxic; probable human oral lethal dose would be 50-500 mg/kg. Human inhalation of approximately 20,000 ppm (2% in air) was fatal in 5-10 minutes. While percutaneous absorption of liquid benzene through intact human skin can be limited (e.g., 0.05% of the applied dose), the absorbed dose via direct dermal contact combined with that received from body surface exposure to benzene in workplace air is such that a substantial fraction (20-40%) of the total exposure is due to skin absorption.

SECTION 12 - ECOLOGICAL INFORMATION

Coating action of oil may be toxic to aquatic organisms. Keep out of all bodies of water and sewage drainage systems. On release to the environment, the lighter components of crude oil may evaporate. The remaining portion may become dispersed in the water column or absorbed to soil or sediment. Crude oil is not readily biodegradable.

Two crude oils were tested in a acute battery of ecotoxicity tests. The 96 hour lethal loading (LL50) values for rainbow trout were 21 and 41 mg/l. LL50s for invertebrate organisms (mysis) were determined to be 2.7 and 4.1 mg/l and EL50s for algae were 122 and 528 mg/l. Do not allow undiluted and/or large quantities of product to enter sewage systems or reach ground water or bodies of water.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Collect and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations. This material is not listed as a RCRA hazardous waste under Federal Regulations (40 CFR 261-271). This material may meet the criteria of an “ignitable” hazardous waste. This material could also become hazardous if mixed or contaminated with a listed hazardous waste. Do not allow undiluted and/or large quantities of product to enter sewage systems or reach ground water or bodies of water.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Petroleum Crude Oil, Flammable Liquid, UN 1267

DOT HAZARD CLASS / Pack: 3,pgill
Group:
REFERENCE: 49CFR
UN / NA IDENTIFICATION NUMBER: UN1267
LABEL: Flammable, 3
HAZARD SYMBOLS: See Section 3

IATA HAZARD CLASS / Pack
Group: 3, pgll, 5L Passenger Max.60L Cargo.
IMDG HAZARD CLASS: 3,pgill
RID/ADR Dangerous Goods Code: 3
UN TDG Class / Pack Group: 3,pgill
Hazard Identification Number (HIN): 30

Note: Transportation information provided is for reference only. Client is urged to consult IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for discovering specific container sizes, packaging materials and methods of shipping.
MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Crude Oil-Covenant (Sweet)
PRODUCT NUMBER: DATE: March 4, 2009

SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act): Components are TSCA Referenced.
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):
   Acute Health: Yes Chronic Health: Yes
   Fire: Yes Sudden Release of Pressure: No
   Reactive: No

SARA 313 REPORTABLE INGREDIENTS: This material contains Benzene (CAS# 71-43-2), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

CERCLA (USA - Comprehensive Response Compensation and Liability Act): CAS# 71-43-2: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenic properties.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986. WARNING: This product contains Benzene, a chemical known to the state of California to cause cancer. WARNING: This product contains Benzene, a chemical known to the state of California to cause male reproductive toxicity.

California No Significant Risk Level: CAS# 71-43-2: 6.4 mg/day NSRL (oral); 13 mg/day NSRL (inhalation)

CPR (Canadian Controlled Products Regulations): This product has a WHMIS classification of D2B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

IDL (Canadian Ingredient Disclosure List): CAS# 71-43-2, and 8002-05-9 are listed on the Canadian Ingredient Disclosure List.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): CAS# 71-43-2, and 8002-05-9 are listed (CDSL).

EINECS (European Inventory of Existing Commercial Chemical Substances): Referenced.

WGK Water Quality Index: 3

SECTION 16 - OTHER INFORMATION

Legend:
- ACQIH - American Congress of Government Industrial Hygienists
- CAS - Chemical Abstracts Service
- EINECS - European Inventory of Existing Commercial Chemical Substances
- HMIS - Hazardous Materials Identification System
- IARC - International Agency for Research on Cancer
- NA - Not Available
- ND - Not Determined
- NE - Not Established
- NR - Not Reported
- NIOSH - National Institute for Occupational Safety and Health
- NTP - National Toxicology Program
- OSHA - Occupational Safety and Health Administration

REVISION SUMMARY:
New issue 03/04/2009 to GHS/EU protocols. -JT/LB-

MSDS Prepared by:
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Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

The information contained herein is believed to be accurate, but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturer of the components of the product. Users are advised to confirm in advance of heed that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material. If reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

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JULY 9, 2013
DIVISION OIL, GAS & MINING