

Official Draft Public Notice Version: June 22, 2016

The findings, determinations and assertions contained in this document are not final and subject to change following the public comment period.

**FACT SHEET STATEMENT OF BASIS
ALTON COAL DEVELOPMENT, LLC
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)
PERMIT NUMBER: UT0025992
MAJOR PERMIT MODIFICATION
MINOR INDUSTRIAL FACILITY**

FACILITY CONTACTS

Facility Contact:	B. Kirk Nicholes	Responsible Official:	Larry Johnson
Position:	Env. Specialist	Position:	Mine Manager
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DESCRIPTION OF FACILITY

Facility Name: Alton Coal Development, LLC – North Private Lease
Mailing Address: 463 North 100 West, Suite 1
Cedar City, Utah 84721
Physical Location: 2060 South Alton Road, Alton, Utah 84710.
Coordinates: Latitude: 37° 24' 24.02 N., Longitude: 112° 27' 12.47 W.

Standard Industrial
Classification (SIC): *1221 - Bituminous Coal and Lignite Surface Mining*

REASON FOR MAJOR PERMIT MODIFICATION

Alton Coal Development, LLC (ACD) – North Private Lease is a surface coal mining operation. ACD has mined an area known as the South Lease, and is in the process of reclaiming this area. ACD has acquired an area known as the North Private Lease (NPL) where they will continue to mine for coal. The NPL is approximately one half mile southeast of Alton, Utah and 1.3 miles north of the current South Lease.

ACD is proposing to construct five ponds in the NPL; Ponds 5, 6, 7, 8 & 9. Four of these ponds will ultimately discharge to Kanab Creek. Pond 8 will discharge to pond 9 and not directly to Waters of the State. ACD is expanding their operation from the south lease to the north lease and has requested a modification of their existing UPDES Permit to include the new outfalls.

ACD plans to continue use of ponds 1, 1B, 2, 3 & 4 in the South Lease until sufficient vegetation is produced in the reclaimed areas and the Division of Oil Gas and Mining (DOG M) has given permission to remove the ponds. Pond 5 has already been reclaimed in the South Lease, and a new Pond 5 will be included in the NPL as indicated above. The remaining discharge points in the South Lease will be included in the modified permit for the NPL and can be inactivated after appropriate bond release by the DOGM.

DESCRIPTION OF DISCHARGE

The modified permit for ACD will contain nine Outfalls, five from the South Lease and four from the NPL. The new outfalls in the modified permit are as follows:

<u>Outfall</u>	<u>Description of Discharge Point</u>
005	Storm water runoff from sediment pond #5 to an unnamed tributary of Kanab Creek, Latitude 37° 25' 18.07" N and Longitude 112° 28' 35.82' W.
006	Storm water runoff from sediment pond #6 to an unnamed tributary of Kanab Creek, Latitude 37° 25' 12.32' N and Longitude 112° 28' 25.42' W.
007	Ground water and storm water runoff from sediment pond #7 to an unnamed tributary of Kanab Creek, Latitude 37° 25' 13.95' N. and Longitude 112° 28' 8.40' W.
008	Storm water runoff from sediment pond number 9 (sediment pond #8 discharges to sediment pond #9) to Kanab Creek, Latitude 37° 25' 12.46 N. and Longitude 112° 28' 1.42' W.

RECEIVING WATERS AND STREAM CLASSIFICATION

Lower Robinson Creek, Sink Valley Wash and Kanab Creek are classified as 2B, 3C and 4.

Class 2B – protected for secondary contact recreation such as boating, wading, or similar uses.

Class 3C – protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 - protected for agricultural uses including irrigation of crops and stock watering.

WASTE LOAD ANALYSIS, ANTIDegradation REVIEW AND REASONABLE POTENTIAL ANALYSIS

Effluent limitations were derived from either of two Wasteload Analyses (WLA), which are appended to this statement of basis as Addendum I. One WLA is for those points that discharge to unnamed tributaries to Kanab Creek and are ephemeral in nature, and the other WLA is for Outfall 008 which discharges directly to Kanab Creek. The WLAs incorporate Secondary Treatment Standards, Water Quality Standards, Anti-degradation Reviews (ADR) as appropriate, and designated uses into a water quality model that projects the effects of discharge concentrations on

receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. An ADR Level I review was performed and concluded that an ADR Level II review was required. The WLAs indicate that the effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters.

The level II ADR review was completed by ACD and received by DWQ on February 1, 2016. The ADR II was approved by DWQ on March 9, 2016. The results of the ADR II concluded that the present treatment systems employed by ACD is the least degrading feasible alternative.

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required.

A quantitative RP analysis was performed on a limited data set for copper, lead, selenium and boron to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. Based on the RP analysis, the following parameters exceeded the most stringent chronic water quality standard or were determined to have a reasonable potential to exceed the standard: total selenium. Because the data set used was limited, and ACD rarely discharges, this modified permit will require monthly monitoring when the facility is discharging for the following total metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc and boron. ACD will be required to use the method of analysis providing the lowest limit of detection. A copy of the data used in the RP analysis is included in Appendix II, and the RP analysis is in Appendix III.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in *40 Code of Federal Regulations (CFR) Part 122.44* and in *UAC R317-8-4.2*, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (*UAC R317-1-3.2*) or Utah Water Quality Standards (*UAC R317-2*). In cases where multiple limits have been developed, those that are more stringent apply. In cases where no underlying standards have been developed, Best Professional Judgment (BPJ) may be used where applicable to set effluent limits. "Best Professional Judgment" refers to a discretionary, best professional decision made by the permit writer based upon precedent, prevailing regulatory standards or other relevant information.

- 1) All of the discharges are intermittent in nature and will occur only during runoff events. All of the receiving streams in the modified permit are also intermittent in nature, except for Kanab Creek near Outfall 008. All but one of the Outfalls (008) will be discharging to ephemeral streams. Most of the Outfalls will have no dilution and as a result, the effluent limits will be either categorical standards (State or Federal) or water quality standards, no

matter what the effluent flow is. However, Outfall 008 has some dilution as it goes directly into that portion of Kanab Creek that has flow. Therefore, Outfall 008 will have a limit on flow and the other discharge points will not. Also, Outfall 008 will have a different limit for selenium and iron than the other discharge points, as a result of dilution effects in Kanab Creek.

- 2) ACD's discharge meets the EPA definition of "alkaline mine drainage." As such, it is subject to the technology based effluent limitations in *40 CFR Part 434.45*. Technology based limits used in the permit are listed below.
 - a. Total suspended solids (TSS) daily maximum limit.
 - b. For discharges composed of surface water or mine water commingled with surface water, *40 CFR Part 434.63* allows alternate effluent limits to be applied when discharges result from specific runoff events, detailed below and in the permit. ACD has the burden of proof that the described runoff event occurred.
 - i. For runoff events (rainfall or snowmelt) less than or equal to a 10-year 24-hour precipitation event, settleable solids shall be substituted for TSS and shall be limited to 0.5 milliliters per liter (ml/L). All other effluent limitations must be achieved concurrently, as described in the permit.
 - ii. Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at Outfalls 005, 006, 007 and 008 may comply with the following limitations instead of the otherwise applicable limitations:

Effluent Characteristics	30 Day Average	Daily Minimum	Daily Maximum
pH, SU (all Outfalls)	NA	6.5	9.0

- 3) TSS 30-day and 7-day averages are based on Utah Secondary Treatment Standards.
- 4) Daily minimum and daily maximum limitations on pH are derived from Utah Secondary Treatment Standards and Water Quality Standards.

- 5) Total dissolved solids (TDS) are limited according to Water Quality Standards and policies established by the Colorado River Basin Salinity Control Forum. TDS are limited by both mass loading and concentration requirements as described below:
 - a. Since discharges from ACD eventually reach the Colorado River, TDS mass loading is limited according to policies established by the Colorado River Basin Salinity Control Forum (Forum), as authorized in *UAC R317-2-4* to further control salinity in the Utah portion of the Colorado River Basin. On February 28, 1977 the Forum produced the "*Policy For Implementation of Colorado River Salinity Standards Through the NPDES Permit Program*" (Policy), with the most current subsequent triennial revision dated October 2014. The TDS loading required by the salinity forum, and included in this permit is one ton per day as a sum from all discharge points, unless the concentration of TDS is 500 mg/L or less. If the concentration of TDS is less than or equal to 500 mg/L at all discharge points, no loading limit applies. If one ton per day cannot be achieved the permittee will be required to remove salinity/TDS in excess of one ton per day by developing a treatment process, participating in a salinity off-set program, or developing some type of mechanism to remove the salinity/TDS. The selection of a salinity control program, if needed, must be approved by the Director of the Division of Water Quality and implemented within one year of the effective date of approval.
 - b. Based on *UAC R317-2-14, Table 2.14.1* the concentration of TDS in water used for agricultural purposes shall not exceed 1200 mg/L, unless there is a designated site specific standard for TDS which has been incorporated into the State Water Quality Standards. At the present time there are no site specific standards for Upper Robinson Creek or Sink Valley Wash. Therefore, the permittee will be required to meet a daily maximum TDS concentration of 1200 mg/L at all of its discharge points.
- 6) The limitation on total recoverable iron is water quality based and derived in the WLA. The iron limitation is based upon the State Water Quality Standard of 1.0 mg/L for dissolved iron (*UAC R317-2 Table 2.14.2*) and the WLA limitation of 1.0 for total recoverable iron. Total recoverable iron is a more stringent limitation than dissolved iron. Therefore, a permit limit of 1.0 mg/L for total recoverable iron will be included in the renewal permit and shall apply to each of the discharge points.
- 7) Oil and Grease are limited to 10 mg/L by BPJ, as this is consistent with other industrial facilities statewide.

EFFLUENT LIMITATIONS, SELF-MONITORING, AND REPORTING REQUIREMENTS

The effluent limitations and monitoring requirements for Outfalls (005, 006, 007, 008) are as outlined below. Effluent self-monitoring requirements are developed from the *Utah Monitoring, Recording and Reporting Frequency Guidelines* as effective December 1, 1991 along with the use of BPJ. Reports shall be made via NetDMR or on Discharge Monitoring Report (DMR) forms and are due 28 days after the end of the monthly monitoring period.

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, ¹ MGD	NA	² NA	NA	0.117a/	Monthly	Measured
TSS, mg/L	25	35	NA	70	Monthly	Grab
Total Iron, mg/L e/	NA	NA	NA	1.0	Monthly	Grab
Total Selenium, mg/L e/	0.0046	NA	NA	0.020	Monthly	Grab
Oil & Grease, mg/L b/	NA	NA	NA	10	Monthly	Grab
TDS, mg/L	NA	NA	NA	1200	Monthly	Grab
TDS lbs/day	NA	NA	NA	2000c/	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab
Sanitary Waste d/	NA	NA	NA	None	Monthly	Visual
Oil and Grease, floating solids, visible foam, b/	NA	NA	NA	None	Monthly	Visual
Total Arsenic, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Cadmium, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Chromium, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Copper, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Mercury, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Nickel, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Lead, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Silver, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Zinc, mg/L	NA	NA	NA	NA	Monthly	Grab
Total Boron, mg/L	NA	NA	NA	NA	Monthly	Grab

¹ MGD: million gallons per day ² NA: not applicable

- a/ For intermittent discharges, the duration of the discharge shall also be reported. This daily maximum flow limit shall apply to Outfall 008 only.
- b/ In addition to monthly sampling for oil and grease, a visual inspection for oil and grease, floating solids, and visible foam shall be performed at least monthly. There shall be no sheen, floating solids, or visible foam in other than trace amounts. If sheen is observed, a

sample of the effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration.

- c/ A limit of one ton (2000 lbs per day) as a sum from all discharge points is required of the permittee, unless a concentration of 500 mg/L or less is achieved at all discharge points. If 500 mg/L or less is achieved at all discharge points, then no loading limit applies. If the permittee cannot achieve the 500 mg/L concentration requirement or the one ton per day loading limit, then the permittee will be required to remove salinity/TDS in excess of one ton per day by developing a treatment process, participating in a salinity off-set program, or developing some type of mechanism to remove the salinity/TDS. The selection of a salinity control method, if needed, must be approved by the Director of the Division of Water Quality and implemented within one year of that approval.
- d/ There shall be no discharge of sanitary waste.
- e/ Outfall 008 shall meet a total selenium limit of 0.0081 mg/L as a thirty day average and 0.0414 mg/L as a daily maximum, and a total iron of 2.16 mg/L as a daily maximum.

MODIFIED CHANGES IN THE EXISTING PERMIT

Since the issuance of the first individual permit, mining has been in the South Lease. Mining has been completed in the South Lease with all of the ponds associated with Outfalls undergoing reclamation. These Outfalls will be continued in the modified permit until reclamation is completed at which time they will be inactivated and removed from the permit. Mining will move to the NPL with the addition of five new ponds and four Outfalls. The only Outfall with a flow limitation is Outfall 008

A thirty day average and daily maximum for total selenium has been included in this modification as determined from RP analysis. The following total metals will be analyzed for on a monthly basis from any Outfall that discharges: arsenic, cadmium, chromium, copper, mercury, nickel, lead, silver, zinc and boron.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring (2/1991))*. Authority to require effluent biomonitoring is provided in *UAC R317-8, Utah Pollutant Discharge Elimination System* and *UAC R317-2, Water Quality Standards*.

ACD is a minor facility that discharges water encountered in strip mining, which includes to a larger extent, alluvial water and surface water runoff. As such there is no reasonable potential for toxicity to be present and biomonitoring limits and testing will not be required. However, to ensure that no toxicity is present ACD will be required to sample, and complete an acute whole effluent toxicity test on a grab sample of the discharge from the pond(s) that receive pit water. Those that discharge only surface runoff water will not be required to do this WET testing. This monitoring shall occur on the first discharge that occurs after the effective date of the modified permit and reported with the appropriate discharge monitoring report.

PERMIT DURATION

This modified permit will be in effect until midnight July 31, 2018, the expiration date of the originally issued individual permit.

Drafted by Mike Herkimer
Environmental Scientist
Utah Division of Water Quality
February 16, 2016

ADDENDUMS

- I. Waste Load Analysis, Anti-Degradation Review (ADR)
- II. Inorganic and organic data from discharges in the south lease, to be used in RP analysis.
- III. RP analysis.

The permit was public noticed from to in the

ADDENDUM I

Wasteload Analyses and Anti-degradation Review

PV DRAFT

ADDENDUM II

Inorganic and organic data from discharges in the south lease, to be used in RP analysis.

P/N DRAFT

ADDENDUM III

RP analysis.

PV DRAFT