Hiawatha Coal Company

P.O. Box 1240
Huntington, UT 84528

(801) 857-0399

C/007/0011
Received 5/10/16
Task ID #5183

May 9, 2016

Dana Dean
Utah Division of Oil, Gas & Mining
1954 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Re: **Discharge Permit Renewal, Hiawatha Mine Complex, C/007/0011**

Dear Ms. Dean,

Attached is an electronic submittal of an amendment to the Hiawatha Mining and Reclamation plan to update Appendix VII-5 with the most recently approved mine water discharge permit.

If you have any questions, please call me at (801) 857-0399 or email me at charles.reynolds@hiawathacoal.com.

Sincerely,

Charles Reynolds

Charles Reynolds, PE
Mine Manager

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: **Hiawatha Coal Company**

Mine: **Hiawatha Mine Complex** **Permit Number:** **C/007/0011**

Title: **Appendix VII-5 Update**

Description, Include reason for application and timing required to implement:

Update MRP with latest discharges permit renewal

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: Disturbed Area: ☐ increase ☐ decrease.

☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO#

☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?

☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?

☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?

☐ Yes ☒ No 6. Does the application require or include public notice publication?

☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?

☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?

☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV #

☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?

Explain:

☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?

☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)

☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?

☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?

☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?

☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?

☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?

☐ Yes ☒ No 18. Does the application require or include water monitoring, sediment or drainage control measures?

☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?

☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?

☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?

☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?

☒ Yes ☐ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Elliot Finley
Print Name

E Finley, Pres. 5-8-16
Sign Name, Position, Date

Subscribed and sworn to before me this 8th day of May, 20 16

Elaine Crossley
Notary Public

My commission Expires: 11-21, 20 17

Attest: State of Utah } ss:
County of Salt Lake

Notary Public
ELAINE CROSSLEY
Commission Number 672213
My Commission Expires
November 21, 2017
State of Utah

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining

Form DOGM- C1 (Revised March 12, 2002)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: **Hiawatha Coal Company, Inc.**
Mine: **Hiawatha Mine Complex** **Permit Number:** **C/007/0011**
Title: Appendix VII-5 Update

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Appendix VII-5 Entire
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	**Received by Oil, Gas & Mining**

APPENDIX VII-5

MINE WATER DISCHARGE PERMIT

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

JAN 28 2016

CERTIFIED MAIL
(Return Receipt Requested)

Elliot Finley, President
Hiawatha Coal Company
P.O. Box 1240
Huntington, UT 84528

Dear Mr. Finley:

Subject: UPDES Permit UT0023094, Hiawatha Coal Company

Enclosed is UPDES permit No. UT0023094 for your facility. This permit will become effective on **February 01, 2016**, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Section R317-9.

Copies of EPA form 3320-1, Discharge Monitoring Report (DMR) forms, are available upon request (for those facilities not using NetDMR). As a reminder, DMR forms whether paper forms or NetDMR submittals, are due in our Office by the 28th day of each month following each monthly monitoring period.

If you have any questions with regard to this matter, please contact Nate Nichols at (801) 536-4320.

Sincerely,

Walter L. Baker, P.E.
Director

WLB:NN:nf

Enclosures (3):
1. Permit (DWQ-2015-007306)
2. Fact Sheet Statement of Basis (DWQ-2015-007210)
3. Wasteload Analysis (DWQ-2014-018359)

cc: Amy Clark, EPA Region VIII via email (w/enclosures)
Brady Bradford, Southeast Utah Health Department

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

AUTHORIZATION TO DISCHARGE UNDER THE

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM
(UPDES)

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the *"Act"*),

HIAWATHA COAL COMPANY

is hereby authorized to discharge from its facility located in Township 16 South, Range 8 East in Emery County and in Township 15 South, Range 8 East in Carbon County, Utah, to receiving waters named

CEDAR CREEK, A TRIBUTARY OF HUNTINGTON CREEK
AND
MILLER CREEK, A TRIBUTARY OF THE PRICE RIVER

in accordance with discharge points, effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on February 01, 2016.

This permit expires at midnight, January 31, 2021.

Signed the 28 day of January, 2016

Walter L. Baker, P.E.
Director

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

1. The "30-day and monthly average" is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

3. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

4. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

5. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

7. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

8. "Director" means Director of the Utah Division of Water Quality.

9. "EPA" means the United States Environmental Protection Agency.

10. "Act" means the "*Utah Water Quality Act*".

11. "Best Management Practices" ("*BMP's*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. *BMP's* also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

005	Slurry Pond #4 Sediment Pond: T15S, R8E SLBM, Sec 27, at approximately 111° 0' 30" and latitude 39° 28' 45". The discharge is surface runoff from slurry pond #4
006	Hiawatha Sediment Pond D006: T15S, R8E SLBM, Sec 34, at approximately 111° 0' 15" and latitude 39° 28' 35". The discharge is surface runoff from slurry pond #5 cell 5A.
007	Hiawatha Sediment Pond D007: T15S, R8E SLBM, Sec 34, at approximately 111° 0' 10" and latitude 39° 28' 20". The discharge is surface runoff from slurry pond #5 main cell.
008	Middle Fork Sediment Pond: T15S, R8E SLBM, Sec 29, at approximately 111° 02' 40" and latitude 39° 29' 0". The discharge is surface runoff from the Middle Fork Mine Yard.
009	South Fork Mine Yard: T15S, R8E SLBM, Sec 19, at approximately 111° 02' 35" and latitude 39° 28' 50". The Discharge is surface runoff from the South Fork Mine Yard.
010	King 4 Mine Discharge: T15S, R7E SLBM, Sec 32, at approximately 111° 03' 45" and latitude 39° 32' 15". The Discharge is from sump locations within the mine.
011	South Fork Truck Loading Facility: T15S, R8E SLBM, Sec 33, at approximately 111° 02' 28" and latitude 39° 28' 47". The Discharge is surface runoff from the South Fork Loading facility.
012	Mohrland Pipeline Drain: T15S, R8E SLBM, Sec 10, at approximately 111° 0' 45" and latitude 39° 26' 30". The discharge is from a valve on the Mohrland Pipeline.
013	King 6 Water Tank Overflow: T15S, R8E SLBM, Sec 32, at approximately 111° 03' 07" and latitude 39° 29' 0". The discharge is from an overflow pipe from the King 6 water tank in South Fork Canyon.

C. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural

The results of the analyses of metals, cyanide and toxic organics shall be submitted along with the Discharge Monitoring Report (DMR) at the end of the earliest possible reporting period.

There shall be no visible sheen or floating solids or visible foam in other than trace amounts upon any discharges and there shall be no discharge of any sanitary wastes at any time.

a/ See Definitions, *Part I.A* of the permit, for definition of terms.

b/ If the rate of discharge is controlled, such as from intermittent discharging outfalls, the rate and duration of discharge shall be reported. Flow measurements of effluent volumes from all outfalls shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

c/ The TDS concentration from each of the outfalls shall not exceed 981 mg/L as a daily maximum limit. No tons per day loading limit will be applied if the concentration of TDS in the discharge is equal to or less than 500 mg/L as a thirty-day average. However, if the 30-day average concentration exceeds 500 mg/L, then the permittee cannot discharge more than 1.0 tons per day as a sum from all discharge points. Upon determination by the Director that the permittee is not able to meet the 500 mg/L 30-day average or the 1.0 tons per day loading limit, the permittee is required to participate in and/or fund a salinity offset project to include the TDS offset credits as appropriate.

The salinity-offset project shall include TDS credits on a ton-for-ton basis for which the permittee is over the TDS loading limit. The tonnage reduction from the offset project must be calculated by a method similar to one used by the NRCS, Colorado River Basin Salinity Control Forum, or other applicable agency.

If the permittee will be participating in the construction and implementation of a new salinity-offset project, then a project description and implementation schedule shall be submitted to the Director at least six (6) months prior to the implementation date of the project, which will then be reviewed for approval. The salinity offset project description and implementation schedule must be approved by the Director and shall be appended to this permit.

If the permittee will be funding any additional salinity-offset projects through third parties, the permittee shall provide satisfactory evidence to the Director that the required funds have been deposited to the third party within six (6) months of project approval by the Director. A monitoring and adjustment plan to track the TDS credits shall continue to be submitted to the Director for each monthly monitoring period during the life of this permit. Any changes to the monitoring and adjustment plan must be approved by the Director and upon approval shall be appended to this permit.

II. STORMWATER DISCHARGE REQUIREMENTS

A. Coverage of This Section.
The requirements listed under this section shall apply to storm water discharges from coal mining-related areas that are not subject to effluent limitations guidelines under *40 CFR Part 434*.

1. Site Coverage. Storm water discharges from the following portions of coal mines are covered under this portion of this permit: haul roads (nonpublic roads on which coal or coal refuse is conveyed), access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways), railroad spurs, sidings, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas), conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyor areas, including transfer stations), equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and other inactive mines, refuse disposal sites and other mining-related areas on private lands).

2. Non-Storm Water Discharges Authorized to Co-mingle and Discharge with Storm Water.

   a. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with this section (*Part II*) and: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage; lawn watering; routine external building washdown that does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

   b. The following discharges are prohibited from discharging (unless authorized under *Part I*): point source discharges of pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not occur as storm water discharges in response to precipitation events are also excluded from coverage under this part. In addition, floordrains from maintenance buildings and other similar drains in mining and preparation plant areas are prohibited.

B. Storm Water Pollution Prevention Plan Requirements.
Most of active coal mining-related areas are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the *Surface Mining Control and Reclamation Act* (*SMCRA*). OSM has granted authority to the Utah Division of Oil Gas and Mining (DOGM) to implement *SMCRA* through State *SMCRA* regulations. All *SMCRA* requirements regarding control of erosion, siltation and other pollutants resulting

6) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

7) Locations where fueling stations, vehicle and equipment maintenance areas are exposed to precipitation.

8) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

(b) For each area of the facility that generates storm water discharges associated with the mining-related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

(2) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of issuance of this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of issuance of this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

(3) Spills and Leaks. A list of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of issuance of this permit. Such list shall be updated as appropriate during the term of the permit.

(4) Sampling Data. A summary of any existing discharge sampling data describing pollutants in storm water discharges from the portions of the facility covered by this permit, including a summary of any sampling data collected during the term of this permit.

shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(4) Inspections. In addition to or as part of the comprehensive site evaluation required under *Part II.B.1.d.* of this section, qualified facility personnel shall be identified to inspect designated areas of the facility at appropriate intervals specified in the plan. The following shall be included in the plan:

(a) Active Mining-Related Areas and Those Inactive Areas Under *SMCRA* Bond Authority. The plan shall require quarterly inspections by the facility personnel for areas of the facility covered by pollution prevention plan requirements. This inspection interval corresponds with the quarterly inspections for the entire facility required to be provided by *SMCRA* authority inspectors for all mining-related areas under *SMCRA* authority, including sediment and erosion control measures. Inspections by the facility representative may be done at the same time as the mandatory inspections performed by *SMCRA* inspectors. Records of inspections of the *SMCRA* authority facility representative shall be maintained.

(b) Inactive Mining-Related Areas Not Under *SMCRA* Bond. The plan shall require annual inspections by the facility representative except in situations referred to in *Part II.B.1.c(4)(c)* below.

(c) Inspection Records. The plan shall require that inspection records of the facility representative and those of the SMCRA authority inspector shall be maintained. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections.

(5) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(6) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges) along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(a) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic roadsurfacing material; and protective trees.

(b) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

(9) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

d. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

(1) Areas contributing to a storm water discharge associated with coal mining-related areas shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. These areas include haul and access roads; railroad spurs, sidings, and internal haulage lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures, as indicated in paragraphs *c(8)* and *c(9)* above and where identified in the plan, shall be observed to ensure that they are operating correctly. A visual evaluation of any equipment needed to implement the plan, such as spill response equipment, shall be made.

duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table II.1
Monitoring Requirements for Coal Mining Facilities

Pollutants of Concern	Cut-Off Concentration
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Iron	1.0 mg/L
Total Suspended Solids	100 mg/L

(1) Monitoring Periods. Coal mining facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).

(2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

(3) Sampling Waiver.

(a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next monitoring period and submit the data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions

given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part V.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

b. Reporting. Permittees shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the reporting period beginning January 1, 2016, lasting through December 31, 2016, on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March, 2017. Monitoring results [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the period beginning January 1, 2016, lasting through December 31, 2016, shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Director* per storm event sampled. Signed copies of *SWDMR*s, or said certifications, shall be submitted to the *Director* at the address listed in *Part III.D.1.* of the permit.

c. Visual Examination of Storm Water Quality. Coal mining-related facilities shall perform and document a visual examination of a representative storm water discharge at the following frequencies: quarterly for active areas under *SMCRA* bond located in areas with average annual precipitation over 20 inches; semi-annually for inactive areas under *SMCRA* bond, and active areas under *SMCRA* bond located in areas with average annual precipitation of 20 inches or less; visual examinations are not required at inactive areas not under *SMCRA* bond.

(1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water runoff or snow melt: Quarterly-January through March; April through June; July through September; and October through December. Semi-annually—January through June and July through December.

(2) Sample and Data Collection. Examinations shall be made of samples collected within the first 60 minutes (or as soon thereafter as practical, but not

exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

G. Records Contents
Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records.
The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance which may seriously endanger health or environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24 hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4300 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:

   a. Any noncompliance which may endanger health or the environment;

   b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See *Part IV.G, Bypass of Treatment Facilities.)*;

   c. Any upset which exceeds any effluent limitation in the permit (See *Part IV.H, Upset Conditions.*); or,

   d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

IV. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply.
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions.
The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding $25,000 per day of violation; Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding $50,000 per day. Except as provided at *Part IV.G, Bypass of Treatment Facilities* and *Part IV.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense.
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate.
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance.
The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances.
Collected screening, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

(4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;

(5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and

(6) Any additional information requested by the Director.

b. Emergency Bypass. Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in section G.3.a.(1) through (6) to the extent practicable.

c. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass to the Director as required under Part III.I., Twenty Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2. of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required under Part III.I, Twenty-four Hour Notice of Noncompliance Reporting; and,

d. The permittee complied with any remedial measures required under Part IV.D, Duty to Mitigate.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Director, and,

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph V.G.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph V.G.2 must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports.

The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports

Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office

1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.

3. A revision to the current Water Quality Management Plan is approved and adopted which calls for different effluent limitations than contained in this permit.

P. Toxicity Limitation-Reopener Provision.
This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity (WET) testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

Q. Storm Water-Reopener Provision.
At anytime during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-the-State".

FACT SHEET STATEMENT OF BASIS
HIAWATHA COAL COMPANY
RENEWAL PERMIT: DISCHARGE AND STORMWATER
UPDES PERMIT NUMBER: UT0023094
MINOR INDUSTRIAL

FACILITY CONTACT

Elliot Finley, President
Hiawatha Coal Company
P.O. Box 1240
Huntington, UT 84528
Phone: (801) 857-0399

DESCRIPTION OF FACILITY

This facility consists of an inactive underground coal mine. It is located in Hiawatha, Utah in Township 16 South, Range 8 East in Emery County and in Township 15 South, Range 8 East in Carbon County. It has a Standard Industrial Classification (SIC) code 1221. The facility has 13 outfalls. Discharge of mine water drainage occurs continuously from Outfall 001. A portion of that mine water from Outfall 001 is piped to Hiawatha for drinking water. The surplus drinking water that is not used is discharged from Outfall 002. The remaining discharge points, Outfalls 003 to 013, are at the overflows from sediment ponds that collect storm water. These outfalls are designed to contain and prevent a discharge of up to a 100 year storm event.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

This facility has exceeded their annual TDS effluent limitations for four out of the last five years, although these exceedances were due to a single quarterly concentration, and not typical for the site. The facility has been made aware of the salinity offset program if they are unable to meet the TDS permit limit. Further, TDS effluent concentrations decreased consistently during the previous permit cycle. The facility has not violated the TDS concentration in the previous 18 months. Therefore, the 1 ton/day effluent loading limit will remain in place as a requirement of and in addition to the Colorado River Basin Salinity-Offset Program. Participation in this program by purchasing salinity offset credits or another Director approved Salinity-Offset project shall be required if the annual TDS effluent exceeds the permit limitations. If Hiawatha chooses to participate in a new salinity-offset project, a project description, construction plans, and implementation schedule shall be submitted to the Director at least six (6) months prior to the implementation date of the project, which will then be reviewed for approval. Additional information can be found on page 6 of this document.

The renewal permit contains a daily max effluent flow limit of 1.0 MGD. The previous permit did not contain an effluent flow limit.

	39° 28' 45". The discharge is surface runoff from slurry pond #4.
006	Hiawatha Sediment Pond D006: T15S, R8E SLBM, Sec 34, at approximately 111° 0' 15" and latitude 39° 28' 35". The discharge is surface runoff from slurry pond #5 cell 5A.
007	Hiawatha Sediment Pond D007: T15S, R8E SLBM, Sec 34, at approximately 111° 0' 10" and latitude 39° 28' 20". The discharge is surface runoff from slurry pond #5 main cell.
008	Middle Fork Sediment Pond: T15S, R8E SLBM, Sec 29, at approximately 111° 02' 40" and latitude 39° 29' 0". The discharge is surface runoff from the Middle Fork Mine Yard.
009	South Fork Mine Yard: T15S, R8E SLBM, Sec 19, at approximately 111° 02' 35" and latitude 39° 28' 50". The Discharge is surface runoff from the South Fork Mine Yard.
010	King 4 Mine Discharge: T15S, R7E SLBM, Sec 32, at approximately 111° 03' 45" and latitude 39° 32' 15". The Discharge is from sump locations within the mine.
011	South Fork Truck Loading Facility: T15S, R8E SLBM, Sec 33, at approximately 111° 02' 28" and latitude 39° 28' 47". The Discharge is surface runoff from the South Fork Loading facility.
012	Mohrland Pipeline Drain: T15S, R8E SLBM, Sec 10, at approximately 111° 0' 45" and latitude 39° 26' 30". The discharge is from a valve on the Mohrland Pipeline.
013	King 6 Water Tank Overflow: T15S, R8E SLBM, Sec 32, at approximately 111° 03' 07" and latitude 39° 29' 0". The discharge is from an overflow pipe from the King 6 water tank in South Fork Canyon.

a/ See Figure 1 in this FSSOB, for a simple schematic to illustrate the relationship of outfalls 001 and 002.

Effluent Limitations a/ for Outfalls 001 through 013				
Parameter	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum
TSS, mg/L	25	35	NA	70
pH, SU	NA	NA	6.5	9.0
Oil and Grease, mg/L	NA	NA	NA	10
TDS, mg/L, c/	NA	NA	NA	981
TDS, tons/day, c/	NA	NA	NA	1.0
Iron, mg/L	NA	NA	NA	1.0
Flow, MGD	NA	NA	NA	1.0

NA – Not Applicable

a/ See Definitions, *Part I.A* of the permit, for definition of terms.

In addition to the TDS effluent concentration limitation, TDS effluent loading is limited to one-ton/day. If the 1 ton/day effluent loading limitation cannot be met, then the permittee is limited to 366-tons/year total TDS effluent loading from the facility without participating in a salinity offset project or purchasing salinity offset credits as described below. It is the responsibility of the permittee to maintain annual TDS loading information and submit to the Director the annual TDS loading information.

For outfalls 003 through 013, any overflow, increase in volume of a discharge or discharge from a bypass system caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the total suspended solids limitations contained above.

Effluent Limitations a/ for Outfalls 003 through 013		
Effluent Characteristics	Daily Maximum	Daily Minimum
Settleable Solids, ml/L	0.5	NA

SELF-MONITORING AND REPORTING REQUIREMENTS

The following effluent self-monitoring and reporting requirements are the same as in the previous permit. Reports shall be made on Discharge Monitoring Report (DMR) forms and are due 28 days after the end of the monitoring quarter.

The salinity offset project description and implementation schedule must be approved by the Director and shall be appended to this permit.

If the permittee will be funding any additional salinity-offset projects through third parties, the permittee shall provide satisfactory evidence to the Director that the required funds have been deposited to the third party within six (6) months of project approval by the Director. A monitoring and adjustment plan to track the TDS credits shall continue to be submitted to the Director for each monthly monitoring period during the life of this permit. Any changes to the monitoring and adjustment plan must be approved by the Director and upon approval shall be appended to this permit.

STORM WATER REQUIREMENTS

The renewal permit will contain provisions for storm water discharges as in the previous permit. The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges.

PRETREATMENT REQUIREMENTS

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

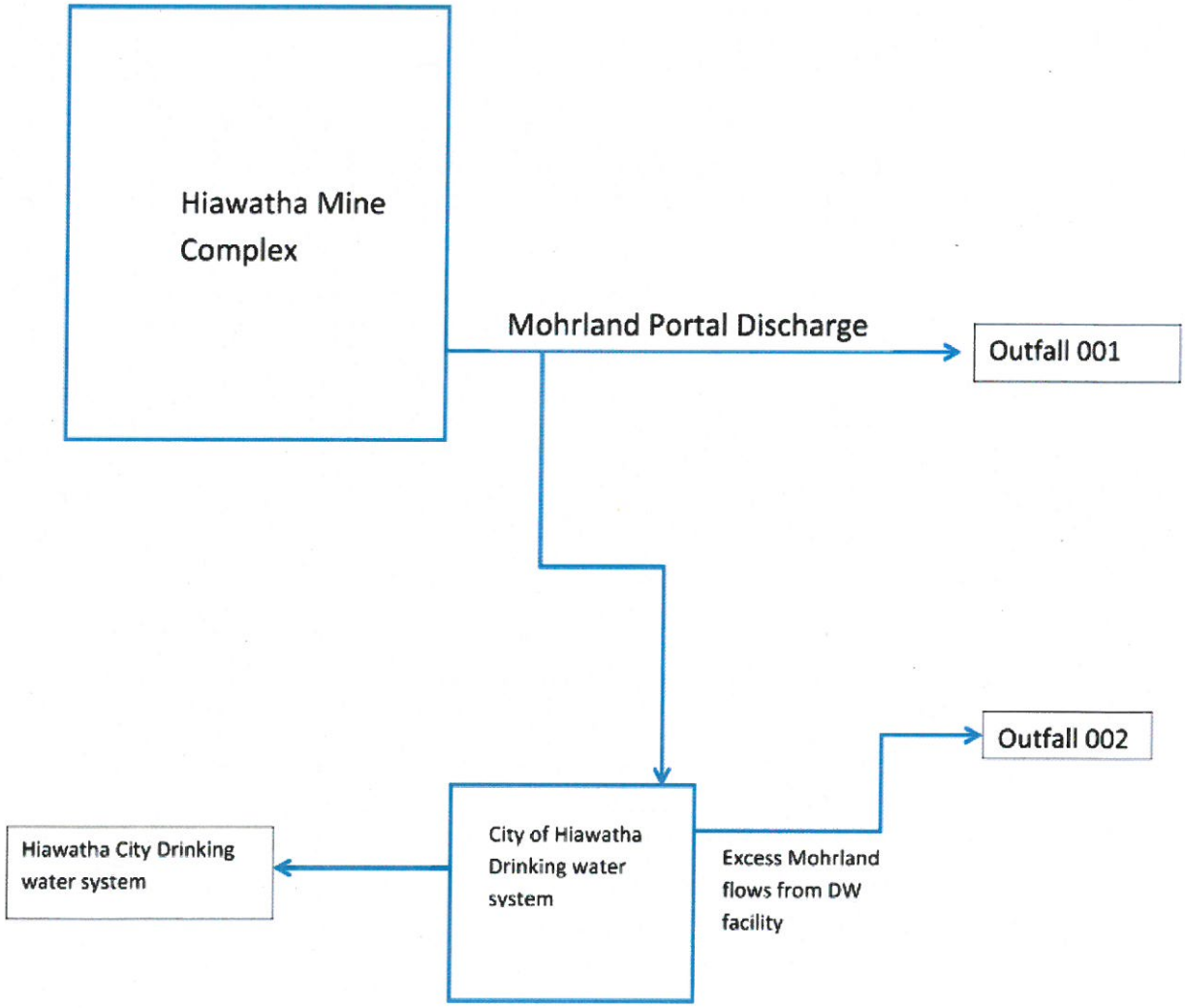
BIOMONITORING REQUIREMENTS

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 (WET) Control (biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3* and *Water Quality Standards, UAC R317-2-5* and *R317 -2-7.2*.

The permittee is a minor industrial discharger that will be contributing a relatively small volume of effluent, when compared to the flows of existing receiving waters, in which toxicity is not an existing concern and not likely to be present as long as the effluent limitations are met. Also, the mine water discharge has been a source of drinking water for many years. Based on these considerations, and that the facility is not classified as a major or a significant minor facility, there is no reasonable potential for toxicity in the Hiawatha Coal's discharge *(per State of Utah Permitting and Enforcement Guidance Document for WET Control)*. As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a

Figure 1.

Hiawatha Utah, UPDES outfalls 001 and 002



Utah Division of Water Quality
Salt Lake City, Utah

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY

Discharging Facility:	**Hiawatha Coal Company**		
UPDES No:	UT-UT0023094		
Current Flow:	1.00	MGD	Design Flow
Design Flow	1.00	MGD	

Receiving Water:	**0.0**		
Stream Classification:	2B, 3C, 4		
Stream Flows [cfs]:	0.0	Summer (July-Sept)	20th Percentile
	0.0	Fall (Oct-Dec)	20th Percentile
	0.0	Winter (Jan-Mar)	20th Percentile
	0.0	Spring (Apr-June)	20th Percentile
	2.0	Average	
Stream TDS Values:	1200.0	Summer (July-Sept)	Average
	1200.0	Fall (Oct-Dec)	Average
	1200.0	Winter (Jan-Mar)	Average
	1200.0	Spring (Apr-June)	Average

Effluent Limits:				**WQ Standard:**
Flow, MGD:	1.00	MGD	Design Flow	
BOD, mg/l:	25.0	Summer	5.0	Indicator
Dissolved Oxygen, mg/l	5.0	Summer	5.0	30 Day Average
TNH3, Chronic, mg/l:	2.4	Summer	Varies	Function of pH and Temperature
TDS, mg/l:	980.9	Summer	981.0	Site Specific

Modeling Parameters:	
Acute River Width:	50.0%
Chronic River Width:	100.0%

Level 1 Antidegradation Level Completed: Level II Review not required.

Date: 10/15/2014

Permit Writer: _____

WLA by: Neil M. Wham _____ 10-16-14

WQM Sec. Approval: _____ _____

TMDL Sec. Approval: _____ _____

Utah Division of Water Quality
Salt Lake City, Utah

Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard Concentration		Load*	1 Hour Average (Acute) Standard Concentration		Load*
Aluminum	87.00	ug/l**	0.725 lbs/day	750.00	ug/l	6.254 lbs/day
Arsenic	190.00	ug/l	1.584 lbs/day	340.00	ug/l	2.835 lbs/day
Cadmium	0.61	ug/l	0.005 lbs/day	6.52	ug/l	0.054 lbs/day
Chromium III	211.92	ug/l	1.767 lbs/day	4433.71	ug/l	36.970 lbs/day
ChromiumVI	11.00	ug/l	0.092 lbs/day	16.00	ug/l	0.133 lbs/day
Copper	23.85	ug/l	0.199 lbs/day	39.41	ug/l	0.329 lbs/day
Iron				1000.00	ug/l	8.338 lbs/day
Lead	12.88	ug/l	0.107 lbs/day	330.60	ug/l	2.757 lbs/day
Mercury	0.0120	ug/l	0.000 lbs/day	2.40	ug/l	0.020 lbs/day
Nickel	132.13	ug/l	1.102 lbs/day	1188.44	ug/l	9.910 lbs/day
Selenium	4.60	ug/l	0.038 lbs/day	20.00	ug/l	0.167 lbs/day
Silver	N/A	ug/l	N/A lbs/day	25.04	ug/l	0.209 lbs/day
Zinc	303.93	ug/l	2.534 lbs/day	303.93	ug/l	2.534 lbs/day

* Allowed below discharge

**Chronic Aluminum standard applies only to waters with a pH < 7.0 and a Hardness < 50 mg/l as $CaCO_3$

Metals Standards Based upon a Hardness of 300 mg/l as $CaCO_3$

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard Concentration		Load*	1 Hour Average (Acute) Standard Concentration		Load*
Aldrin				1.500	ug/l	0.013 lbs/day
Chlordane	0.004	ug/l	0.036 lbs/day	1.200	ug/l	0.010 lbs/day
DDT, DDE	0.001	ug/l	0.008 lbs/day	0.550	ug/l	0.005 lbs/day
Dieldrin	0.002	ug/l	0.016 lbs/day	1.250	ug/l	0.010 lbs/day
Endosulfan	0.056	ug/l	0.467 lbs/day	0.110	ug/l	0.001 lbs/day
Endrin	0.002	ug/l	0.019 lbs/day	0.090	ug/l	0.001 lbs/day
Guthion				0.010	ug/l	0.000 lbs/day
Heptachlor	0.004	ug/l	0.032 lbs/day	0.260	ug/l	0.002 lbs/day
Lindane	0.080	ug/l	0.667 lbs/day	1.000	ug/l	0.008 lbs/day
Methoxychlor				0.030	ug/l	0.000 lbs/day
Mirex				0.010	ug/l	0.000 lbs/day
Parathion				0.040	ug/l	0.000 lbs/day
PCB's	0.014	ug/l	0.117 lbs/day	2.000	ug/l	0.017 lbs/day
Pentachlorophenol	13.00	ug/l	108.468 lbs/day	20.000	ug/l	0.167 lbs/day
Toxephene	0.0002	ug/l	0.002 lbs/day	0.7300	ug/l	0.006 lbs/day

Utah Division of Water Quality
Salt Lake City, Utah

1,1,1-Trichloroethane						
Hexachloroethane	ug/l	lbs/day	8.9	ug/l	0.07	lbs/day
1,1-Dichloroethane						
1,1,2-Trichloroethane	ug/l	lbs/day	42.0	ug/l	0.35	lbs/day
1,1,2,2-Tetrachloroethai	ug/l	lbs/day	11.0	ug/l	0.09	lbs/day
Chloroethane			0.0	ug/l	0.00	lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	1.4	ug/l	0.01	lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
2-Chloronaphthalene	ug/l	lbs/day	4300.0	ug/l	35.88	lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	6.5	ug/l	0.05	lbs/day
p-Chloro-m-cresol			0.0	ug/l	0.00	lbs/day
Chloroform (HM)	ug/l	lbs/day	470.0	ug/l	3.92	lbs/day
2-Chlorophenol	ug/l	lbs/day	400.0	ug/l	3.34	lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	17000.0	ug/l	141.84	lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	2600.0	ug/l	21.69	lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	2600.0	ug/l	21.69	lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	0.1	ug/l	0.00	lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	3.2	ug/l	0.03	lbs/day
1,2-trans-Dichloroethyle	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	790.0	ug/l	6.59	lbs/day
1,2-Dichloropropane	ug/l	lbs/day	39.0	ug/l	0.33	lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	1700.0	ug/l	14.18	lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	2300.0	ug/l	19.19	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	9.1	ug/l	0.08	lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	0.5	ug/l	0.00	lbs/day
Ethylbenzene	ug/l	lbs/day	29000.0	ug/l	241.97	lbs/day
Fluoranthene	ug/l	lbs/day	370.0	ug/l	3.09	lbs/day
4-Chlorophenyl phenyl ether						
4-Bromophenyl phenyl ether						
Bis(2-chloroisopropyl) e	ug/l	lbs/day	170000.0	ug/l	1418.43	lbs/day
Bis(2-chloroethoxy) met	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Methylene chloride (HM	ug/l	lbs/day	1600.0	ug/l	13.35	lbs/day
Methyl chloride (HM)	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Methyl bromide (HM)	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Bromoform (HM)	ug/l	lbs/day	360.0	ug/l	3.00	lbs/day
Dichlorobromomethane	ug/l	lbs/day	22.0	ug/l	0.18	lbs/day
Chlorodibromomethane	ug/l	lbs/day	34.0	ug/l	0.28	lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	50.0	ug/l	0.42	lbs/day
Hexachlorocyclopentadi	ug/l	lbs/day	17000.0	ug/l	141.84	lbs/day
Isophorone	ug/l	lbs/day	600.0	ug/l	5.01	lbs/day
Naphthalene						
Nitrobenzene	ug/l	lbs/day	1900.0	ug/l	15.85	lbs/day
2-Nitrophenol	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
4-Nitrophenol	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	14000.0	ug/l	116.81	lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	765.0	ug/l	6.38	lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	8.1	ug/l	0.07	lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	16.0	ug/l	0.13	lbs/day
N-Nitrosodi-n-propylami	ug/l	lbs/day	1.4	ug/l	0.01	lbs/day
Pentachlorophenol	ug/l	lbs/day	8.2	ug/l	0.07	lbs/day

Metals				
Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	35.88 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	1835.62 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	38.38 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			6.30 ug/l	0.05 lbs/day
Zinc				

There are additional standards that apply to this receiving water, but were not considered in this modeling/waste load allocation analysis.

VII. Mathematical Modeling of Stream Quality

Model configuration was accomplished utilizing standard modeling procedures. Data points were plotted and coefficients adjusted as required to match observed data as closely as possible.

The modeling approach used in this analysis included one or a combination of the following models.

(1) The Utah River Model, Utah Division of Water Quality, 1992. Based upon STREAMDO IV (Region VIII) and Supplemental Ammonia Toxicity Models; EPA Region VIII, Sept. 1990 and QUAL2E (EPA, Athens, GA).

(2) Utah Ammonia/Chlorine Model, Utah Division of Water Quality, 1992.

(3) AMMTOX Model, University of Colorado, Center of Limnology, and EPA Region 8

(4) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al. Harper Collins Publisher, Inc. 1987, pp. 644.

Coefficients used in the model were based, in part, upon the following references:

(1) Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens Georgia. EPA/600/3-85/040 June 1985.

Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	1.00000	NA	981.00	4.08995
Fall	1.00000	NA		
Winter	1.00000	NA		
Spring	1.00000	NA		

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

IX. Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

Other conditions used in the modeling effort coincide with the environmental conditions expected at low stream flows.

Effluent Limitation for Flow based upon Water Quality Standards

In-stream criteria of downstream segments will be met with an effluent flow maximum value as follows:

Season	Daily Average	
Summer	1.000 MGD	1.547 cfs
Fall	1.000 MGD	1.547 cfs
Winter	1.000 MGD	1.547 cfs
Spring	1.000 MGD	1.547 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 1 MGD. If the discharger is allowed to have a flow greater than 1 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occuring, the permit writers must include the discharge flow limititation as indicated above; or, include loading effluent limits in the permit.

Effluent Limitation for Whole Effluent Toxicity (WET) based upon WET Policy

Effluent Toxicity will not occur in downstream segements if the values below are met.

WET Requirements	LC50 >	EOP Effluent	[Acute]
	IC25 >	99.9% Effluent	[Chronic]

Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards

In-stream criteria of downstream segments for Total Residual Chlorine will be met with an effluent limitation as follows:

Season		Concentration		Load	
Summer	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.019	mg/l	0.16	lbs/day
Fall	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.019	mg/l	0.16	lbs/day
Winter	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.019	mg/l	0.16	lbs/day
Spring	4 Day Avg. - Chronic	0.011	mg/l	0.00	lbs/day
	1 Hour Avg. - Acute	0.019	mg/l	0.00	lbs/day

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season		Concentration		Load	
Summer	Maximum, Acute	980.9	mg/l	4.09	tons/day
Fall	Maximum, Acute	980.9	mg/l	4.09	tons/day
Winter	Maximum, Acute	980.9	mg/l	4.09	tons/day
Spring	4 Day Avg. - Chronic	980.9	mg/l	4.09	tons/day

Colorado Salinity Forum Limits Determined by Permitting Section
Concentration limit is based on limits developed in the West Colorado Watershed TMDL, approved by EPA in 2004.

Effluent Limitations for Total Recoverable Metals based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Metals will be met with an effluent limitation as follows (based upon a hardness of 300 mg/l):

	4 Day Average			1 Hour Average		
	Concentration		Load	Concentration		Load
Aluminum	N/A		N/A	750.5	ug/l	6.3 lbs/day
Arsenic	190.12	ug/l	1.0 lbs/day	340.2	ug/l	2.8 lbs/day
Cadmium	0.61	ug/l	0.0 lbs/day	6.5	ug/l	0.1 lbs/day
Chromium III	212.05	ug/l	1.1 lbs/day	4,436.6	ug/l	37.0 lbs/day
Chromium VI	11.00	ug/l	0.1 lbs/day	16.0	ug/l	0.1 lbs/day
Copper	23.87	ug/l	0.1 lbs/day	39.4	ug/l	0.3 lbs/day
Iron	N/A		N/A	1,000.6	ug/l	8.3 lbs/day
Lead	12.89	ug/l	0.1 lbs/day	330.8	ug/l	2.8 lbs/day
Mercury	0.01	ug/l	0.0 lbs/day	2.4	ug/l	0.0 lbs/day
Nickel	132.22	ug/l	0.7 lbs/day	1,189.2	ug/l	9.9 lbs/day
Selenium	4.60	ug/l	0.0 lbs/day	20.0	ug/l	0.2 lbs/day

Effluent Targets for Pollution Indicators
Based upon Water Quality Standards

In-stream criteria of downstream segments for Pollution Indicators will be met with an effluent limit as follows:

	1 Hour Average	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	41.7 lbs/day
Nitrates as N	4.0 mg/l	33.4 lbs/day
Total Phosphorus as P	0.05 mg/l	0.4 lbs/day
Total Suspended Solids	90.0 mg/l	750.4 lbs/day

Note: Pollution indicator targets are for information purposes only.

Effluent Limitations for Protection of Human Health [Toxics Rule]
Based upon Water Quality Standards (Most stringent of 1C or 3A & 3B as appropriate.)

In-stream criteria of downstream segments for Protection of Human Health [Toxics] will be met with an effluent limit as follows:

	Maximum Concentration	
	Concentration	**Load**
Toxic Organics		
Acenaphthene	2.70E+03 ug/l	2.25E+01 lbs/day
Acrolein	7.81E+02 ug/l	6.51E+00 lbs/day
Acrylonitrile	6.60E-01 ug/l	5.51E-03 lbs/day
Benzene	7.10E+01 ug/l	5.92E-01 lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	4.40E+00 ug/l	3.67E-02 lbs/day
Chlorobenzene	2.10E+04 ug/l	1.75E+02 lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	7.70E-04 ug/l	6.42E-06 lbs/day
1,2-Dichloroethane	9.91E+01 ug/l	8.26E-01 lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	8.91E+00 ug/l	7.43E-02 lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	4.20E+01 ug/l	3.50E-01 lbs/day
1,1,2,2-Tetrachloroethane	1.10E+01 ug/l	9.18E-02 lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	1.40E+00 ug/l	1.17E-02 lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	4.30E+03 ug/l	3.59E+01 lbs/day
2,4,6-Trichlorophenol	6.50E+00 ug/l	5.42E-02 lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	4.70E+02 ug/l	3.92E+00 lbs/day
2-Chlorophenol	4.00E+02 ug/l	3.34E+00 lbs/day
1,2-Dichlorobenzene	1.70E+04 ug/l	1.42E+02 lbs/day
1,3-Dichlorobenzene	2.60E+03 ug/l	2.17E+01 lbs/day

Pyrene (PAH)	1.10E+04 ug/l	9.18E+01 lbs/day
Tetrachloroethylene	8.91E+00 ug/l	7.43E-02 lbs/day
Toluene	2.00E+05 ug/l	1.67E+03 lbs/day
Trichloroethylene	8.11E+01 ug/l	6.76E-01 lbs/day
Vinyl chloride	5.25E+02 ug/l	4.38E+00 lbs/day
Pesticides		
Aldrin	1.40E-04 ug/l	1.17E-06 lbs/day
Dieldrin	1.40E-04 ug/l	1.17E-06 lbs/day
Chlordane	5.90E-04 ug/l	4.92E-06 lbs/day
4,4'-DDT	5.90E-04 ug/l	4.92E-06 lbs/day
4,4'-DDE	5.90E-04 ug/l	4.92E-06 lbs/day
4,4'-DDD	8.41E-04 ug/l	7.01E-06 lbs/day
alpha-Endosulfan	2.00E+00 ug/l	1.67E-02 lbs/day
beta-Endosulfan	2.00E+00 ug/l	1.67E-02 lbs/day
Endosulfan sulfate	2.00E+00 ug/l	1.67E-02 lbs/day
Endrin	8.11E-01 ug/l	6.76E-03 lbs/day
Endrin aldehyde	8.11E-01 ug/l	6.76E-03 lbs/day
Heptachlor	2.10E-04 ug/l	1.75E-06 lbs/day
Heptachlor epoxide		
PCB's		
PCB 1242 (Arochlor 1242)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1254 (Arochlor 1254)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1221 (Arochlor 1221)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1232 (Arochlor 1232)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1248 (Arochlor 1248)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1260 (Arochlor 1260)	4.50E-05 ug/l	3.75E-07 lbs/day
PCB-1016 (Arochlor 1016)	4.50E-05 ug/l	3.75E-07 lbs/day
Pesticide		
Toxaphene	7.50E-04 ug/l	6.26E-06 lbs/day
Metals		
Antimony	ug/l	lbs/day
Arsenic	ug/l	lbs/day
Asbestos	ug/l	lbs/day
Beryllium		
Cadmium		
Chromium (III)		
Chromium (VI)		
Copper	ug/l	lbs/day
Cyanide	ug/l	lbs/day
Lead		
Mercury	ug/l	lbs/day
Nickel	ug/l	lbs/day
Selenium		
Silver		
Thallium	ug/l	lbs/day
Zinc		

Cyanide	22.0	5.2
Iron	1000.6	
Lead	100.1	12.9
Mercury	0.150	0.012
Nickel	1189.2	132
Selenium	20.0	4.6
Silver	25.1	N/A
Thallium	6.3	
Zinc	304.1	304.1
Boron	750.48	

Other Effluent Limitations are based upon R317-1.

E. coli	126.0	organisms per 100 ml

X. Antidegradation Considerations

The Utah Antidegradation Policy allows for degradation of existing quality where it is determined that such lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are protected [R317-2-3]. It has been determined that certain chemical parameters introduced by this discharge will cause an increase of the concentration of said parameters in the receiving waters. Under no conditions will the increase in concentration be allowed to interfere with existing instream water uses.

The antidegradation rules and procedures allow for modification of effluent limits less than those based strictly upon mass balance equations utilizing 100% of the assimilative capacity of the receiving water. Additional factors include considerations for "Blue-ribbon" fisheries, special recreational areas, threatened and endangered species, and drinking water sources.

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an Antidegradation Level II Review is not required.

XI. Colorado River Salinity Forum Considerations

Discharges in the Colorado River Basin are required to have their discharge at a TDS loading of less than 1.00 tons/day unless certain exemptions apply. Refer to the Forum's Guidelines for additional information allowing for an exceedence of this value.

XII. Summary Comments

The mathematical modeling and best professional judgement indicate that violations of receiving water beneficial uses with their associated water quality standards, including important downstream segments, will not occur for the evaluated parameters of concern as discussed above if the effluent limitations indicated above are met.

APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day	CBOD Coeff. FORCED (Kd)/day	CBOD Coeff. (Ka)T 1/day	REAER. Coeff. (Ka)20 (Ka)/day	REAER. Coeff. FORCED 1/day	REAER. Coeff. (Ka)T 1/day	NBOD Coeff. (Kn)20 1/day	NBOD Coeff. (Kn)T 1/day
2.000	0.000	0.805	1637.103	0.000	1023.130	0.600	0.131

Open Coeff. (K4)20 1/day	Open Coeff. (K4)T 1/day	NH3 LOSS (K5)20 1/day	NH3 (K5)T 1/day	NO2+NO3 LOSS (K6)20 1/day	NO2+NO3 (K6)T 1/day	TRC Decay K(Cl)20 1/day	TRC K(Cl)(T) 1/day
0.000	0.000	4.000	1.610	0.000	0.000	32.000	10.083

BENTHIC DEMAND (SOD)20 gm/m2/day	BENTHIC DEMAND (SOD)T gm/m2/day
1.000	0.287

K1 CBOD {theta}	K2 Reaer. {theta}	K3 NH3 {theta}	K4 Open {theta}	K5 NH3 Loss {theta}	K6 NO2+3 {theta}	K(Cl) TRC {theta}	S Benthic {theta}
1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.1