ANTIDEGRADATION REVIEW FORM
UTAH DIVISION OF WATER QUALITY

Instructions

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons. In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures. This review form is intended to assist the applicant and Division of Water Quality (DWQ) staff in complying with the rule but is not a substitute for the complete rule in R317-2-3.5. Additional details can be found in the *Utah Antidegradation Implementation Guidance* and relevant sections of the guidance are cited in this review form.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depends on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, the Division of Water Quality (DWQ) recommends that the process be initiated at least one year prior to the date a final approved permit is required.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. The applicant is responsible for conducting the Level II ADR. For the permit to be approved, the Level II ADR must document that all feasible measures have been undertaken to minimize pollution for socially, environmentally or economically beneficial projects resulting in an increase in pollution to waters of the state.

For permits requiring a Level II ADR, this antidegradation form must be completed and approved by DWQ before any UPDES permit can be issued. Typically, the ADR form is completed in an iterative manner in consultation with DWQ. The applicant should first complete the statement of social, environmental and economic importance (SEEI) in Part C and determine the parameters of concern (POC) in Part D. Once the POCs are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative in Part E can be conducted based on minimizing degradation resulting from discharge of the POCs. Once the applicant and DWQ agree upon the preferred alternative, the review is considered complete, and the form must be signed, dated, and submitted to DWQ.

For additional clarification on the antidegradation review process and procedures, please contact Nicholas von Stackelberg (801-536-4374) or Jeff Ostermiller (801-536-4370).

Antidegradation Review Form

Part A: Applicant Information

Facility Name: Skyline Mine

Facility Owner: Canyon Fuel Company, LLC

Facility Location: Eccles Canyon, Scofield Route

Form Prepared By: Jeremiah Armstrong, Environmental Engineer

Outfall Number: 001, 002, 003, 004

Receiving Water: Eccles Creek, Scofield Reservoir

What Are the Designated Uses of the Receiving Water (R317-2-6)?
Domestic Water Supply: 1C
Recreation: 2B - Secondary Contact
Aquatic Life: 3A - Cold Water Aquatic Life
Agricultural Water Supply: 4
Great Salt Lake: None

Category of Receiving Water (R317-2-3.2, -3.3, and -3.4): Category 3

UPDES Permit Number (if applicable): UT0023540

Effluent Flow Reviewed: 16.848 million gallons per day -Max 24hr average flow from 2001. This in the same area where we plan to be mining in the next few years, so we anticipate much higher flows than we have experience recently.
Typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.

What is the application for? (check all that apply)

☐ A UPDES permit for a new facility, project, or outfall.

☐ A UPDES permit renewal with an expansion or modification of an existing wastewater treatment works.

☐ A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.

☒ A UPDES permit renewal with no changes in facility operations.

Part B. Is a Level II ADR required?

This section of the form is intended to help applicants determine if a Level II ADR is required for specific permitted activities. In addition, the Executive Secretary may require a Level II ADR for an activity with the potential for major impact on the quality of waters of the state (R317-2-3.5a.1).

B1. The receiving water or downstream water is a Class 1C drinking water source.

☒ **Yes** A Level II ADR is required (Proceed to Part C of the Form)

☐ **No** (Proceed to Part B2 of the Form)

B2. The UPDES permit is new <u>or</u> is being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous antidegradation review(s).

☐ **Yes** (Proceed to Part B3 of the Form)

☐ **No** No Level II ADR is required and there is <u>no need to proceed further with review questions</u>.

B3. Will any pollutants use assimilative capacity of the receiving water, i.e. do the pollutant concentrations in the effluent exceed those in the receiving waters at critical conditions? For most pollutants, effluent concentrations that are higher than the ambient concentrations require an antidegradation review? For a few pollutants such as dissolved oxygen, an antidegradation review is required if the effluent concentrations are less than the ambient concentrations in the receiving water. (Section 3.3.3 of Implementation Guidance)

☐ **Yes** (Proceed to Part B4 of the Form)

☐ **No** No Level II ADR is required and there is <u>no need to proceed further with review questions</u>.

B4. Are water quality impacts of the proposed project temporary <u>and</u> limited (Section 3.3.4 of Implementation Guidance)? Proposed projects that will have temporary and limited effects on water quality can be exempted from a Level II ADR.

☐ **Yes** Identify the reasons used to justify this determination in Part B4.1 and proceed to Part G. No Level II ADR is required.

☐ **No** A Level II ADR is required (Proceed to Part C)

B4.1 Complete this question only if the applicant is requesting a Level II review exclusion for temporary <u>and</u> limited projects (see R317-2-3.5(b)(3) and R317-2-3.5(b)(4)). For projects requesting a temporary and limited exclusion please indicate the factor(s) used to justify this determination (check all that apply and provide details as appropriate) (Section 3.3.4 of Implementation Guidance):

☐ Water quality impacts will be temporary and related exclusively to sediment or turbidity and fish spawning will not be impaired.

Factors to be considered in determining whether water quality impacts will be temporary and limited:

a) The length of time during which water quality will be lowered: ☐
b) The percent change in ambient concentrations of pollutants: ☐
c) Pollutants affected: ☐
d) Likelihood for long-term water quality benefits: ☐
e) Potential for any residual long-term influences on existing uses: ☐
f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts: ☐

Additional justification, as needed: ☐

Level II ADR

Part C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Part G of the form.

Optional Report Name:

Part C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located?

The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in this section. More information is available in Section 6.2 of the Implementation Guidance.

C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.

The social and economic benefits realized through the operation of Skyline Mines are extensive. There are currently 273 jobs at Skyline mine which is projected to rise to 327 by the end of 2014. In 2009, the median income for Sanpete County was $39,828, for Carbon County it was $41,026, and for Emery County it was $48,034. The average salary for a Utah miner is $75,791, and the average total compensation for each employee at Skyline Mine, including wages, benefits and taxes paid, is $116,810. These are major social and economic benefits to the surrounding counties.

In 2014 alone, total labor and benefits paid is projected to exceed $35 million. State and Federal payroll taxes are expected to exceed $2,000,000, with projected royalties paid to Federal, County, and private entities from lease proceeds estimated to total $12,869,563. Total purchases from suppliers in the surrounding area should exceed $76,000,000. Over the five years of the UPDES permit, labor and benefits are projected to exceed $175,000,000, payroll taxes should exceed $10,000,000, royalties are estimated to exceed $64,000,000, and purchases from suppliers in the local area are projected to total over $380,000,000. Overall, the projected economic contribution to the local economy is over $629 million in the five years of the UPDES permit.

C2. Describe any environmental benefits to be realized through implementation of the proposed project.

The primary environmental benefit to Skyline Mine's discharge is the quality of the discharge itself. The UDPES 001 discharge exceeds the EPA's secondary drinking water regulations (SDWR). The total dissolved solids (TDS) averages 463 mg/L, where the EPA's drinking water guideline is 500 mg/L. The Total Iron content averages 0.09 mg/L, where the SDWR is 0.3 mg/L. pH of the discharge averages 7.46, where the SDWR ranges from 6.5 – 8.5. Skyline Mine participates in a Colorado River Salinity reduction program. In the event the discharge TDS exceeds the 500 mg/L threshold, Skyline Mine has preemptively contributed $1.5 million to the programs to help offset any impact.

Overall, the discharge of UPDES 001 contributes 5.95 Million gallons per day of drinking water quality water to Scofield Reservoir. In recent drought years, water discharged from Skyline Mine has been put to beneficial use in Scofield Reservoir.

C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.

We are unaware of any social or economic losses due to Skyline Mine's discharge. Recreation potential adjacent to the operation would consist primarily of fishing in Eccles Creek and Scofield Reservoir. The discharge makes up the majority of the creek flow, and thus is an overall positive for recreational activity. There is a minimal footprint from the operation (122 acres) and the only other commercial use for the US Forest Service land which we lease would be for logging and/or grazing. Either of which would have minimal losses of revenue, if any.

C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.

Skyline Mine's current workforce expansion will have a positive overall impact on affected communities. Skyline is currently drawing employees from Sanpete, Carbon, Emery, and Utah counties, specifically from other mines, and from the pool of the currently unemployed. Current unemployment rates are 7.2% for Sanpete County, 6.6% for Carbon County, 5.9% for Emery County, and 4.9% for Utah County. The currently projected 19% increase in employees will help to offset the impacts from closures of other mines in the area. Overall, impacts to existing infrastructure from added employees will be neutral since our workforce expansion is primarily from existing residents. Without the 273-327 jobs provided by Skyline Mine, the unemployment rate would be worse than it is currently, adding to the strain of state and local resources.

C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.

Each outfall associated with our permit has an adjacent sediment treatment pond.

Part D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern. *Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.*

Parameters of Concern:

Rank	Pollutant	Ambient Concentration	Effluent Concentration
1	Oil & Grease		<5 mg/L
2	Total Phosphorus		<0.05 mg/L
3	TDS		463 mg/L
4	TSS		<5
5	pH		7.46

Pollutants Evaluated that are not Considered Parameters of Concern:

Pollutant	Ambient Concentration	Effluent Concentration	Justification
-			
-			
-			

Part E. Alternative Analysis Requirements of a Level II Antidegradation Review. *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. More information is available in Section 5.5 and 5.6 of the Implementation Guidance.*

E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. No economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antidegradation review(s).

☒ **Yes** (Proceed to Part F)

☐ **No or Does Not Apply** (Proceed to E2)

E2. Attach as an appendix to this form a report that describes the following factors for all alternative treatment options (see 1) a technical description of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.

Report Name: ☐

E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLA) and any secondary or categorical effluent limits.

E4. Were any of the following alternatives feasible and affordable?

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	Yes	
Water Recycling/Reuse	Yes	
Land Application	Yes	
Connection to Other Facilities	Yes	
Upgrade to Existing Facility	Yes	
Total Containment	Yes	
Improved O&M of Existing Systems	Yes	
Seasonal or Controlled Discharge	Yes	
New Construction	Yes	
No Discharge	Yes	

E5. From the applicant's perspective, what is the preferred treatment option?

E6. Is the preferred option also the least polluting feasible alternative?

☐ **Yes**

☐ **No**

If no, what were less degrading feasible alternative(s)?

If no, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

Part F. Optional Information

F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.

☒ **No**

☐ **Yes**

F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?

☐ **No**

☒ **Yes**

Report Name: **As part of UPDES Permit UT0023540, Skyline Mine participates in a Colorado River Salinity Offset program administered by the Utah Division of Water Quality (DWQ). Skyline Mine contributes monies through the DWQ to a fund established by the Colorado River Basin Salinity Control Forum for the purpose of defraying the costs of construction and operation of specific salinity offset projects within the Colorado River Basin. The amount of the contribution to the Salinity Offset program is based on the concept of offsetting the net discharge of TDS (salt) from the Skyline Mine (total number of tons of TDS (salt) minus the permitted TDS tons Skyline anticipates discharging on a daily basis) against a "bank" of tons of TDS determined by the cost of removal of a similar number of tons of TDS from the Colorado River system. The cost per ton allocated to the bank is based on the cost of removing a ton of salt from the Price River Drainage through the construction and implementation of improved irrigation and irrigation water delivery systems.**

Attached is a Salt Credit Tracking graph illustrating Skyline is using less credits (or tons) than have been allotted.

Part G. Certification of Antidegradation Review

G1. Applicant Certification

The form should be signed by the same responsible person who signed the accompanying permit application or certification.

Based on my inquiry of the person(s) who manage the system or those persons directly responsible for gathering the information, the information in this form and associated documents is, to the best of my knowledge and belief, true, accurate, and complete.

Print Name:_____

Signature:_____

Date:_____

G2. DWQ Approval

To the best of my knowledge, the ADR was conducted in accordance with the rules and regulations outlined in UAC R-317-2-3.

Water Quality Management Section

Print Name:_____

Signature:_____

Date:_____