

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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Industrial Permit No. **UT0024911**

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

AUTOLIV ASP, INC

is hereby authorized to discharge from its wastewater treatment facility to receiving waters named

BLUE CREEK,

in accordance with specific limitations, outfalls, and other conditions set forth herein.

This permit shall become effective on August 1, 2022.

This permit expires at midnight on July 31, 2027.

Signed this 27th day of July, 2022.



John K. Mackey, P.E.
Director

DWQ-2022-005638

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

A. Description of Discharge Points. The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

<u>Outfall Number(s)</u> 001	<u>Location of Discharge Outfall(s)</u> Located at latitude 40°40'30.1"N and longitude 112°26'40.6"W. The discharge is pumped out of a holding tank to a pipeline that runs West-Northwest for approximately 1.3 miles to Blue Creek.
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B. 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 deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately, and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfall(s) 001, as defined in *Part VIII*, and determined by test procedures described in *Part I. C.3. a* of this permit.

2.

Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Effluent Limitations *a			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD	--	--	--	0.03
BOD ₅ , mg/L	25	35	--	--
Total Suspended Solids, mg/L	31	--	60	--
Dissolved Oxygen, mg/L	--	--	5.0	--
Copper (Dissolved), mg/L	0.426	--	0.229	
WET, Acute Biomonitoring	--	--	--	LC ₅₀ > 100% effluent RWC (from WLA)
pH, Standard Units	--	--	6.5	9
Oil and Grease, mg/L	26	--	52	--
Selenium, µg/L	--	--	--	66.9
Total Dissolved Solids, mg/L				
March-October	3,800	--	--	4,900
November - February	4,700	--	--	6,300

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Self-Monitoring and Reporting Requirements *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b	Continuous	Recorder	MGD
BOD ₅	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
DO	Daily	Grab	mg/L
Copper	Monthly	Grab	mg/L
pH	Daily	Grab	SU
WET – Biomonitoring *c			
Ceriodaphnia - Acute	1 st & 3 rd Quarter	Composite	Pass/Fail
Fathead Minnows - Acute	2 nd & 4 th Quarter	Composite	Pass/Fail
Oil and Grease *d	Monthly	Visual/Grab	mg/L
Selenium	Monthly	Grab	µg/L
Total Dissolved Solids	Monthly	Grab	mg/L
Metals (Dissolved) *e	Quarterly	Grab	mg/L
Organic Toxics *e	Quarterly	Grab	mg/L

*a See Definitions, *Part VIII*, for definition of terms.

*b If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

*c Acute Ceriodaphnia will be tested during the 1st and 3rd quarters and acute fathead minnows will be tested during the 2nd and 4th quarters.

*d Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report NA.

*e Quarterly sampling or Metals and Total Toxic Organics will be required without effluent limits to help determine reasonable potential for these parameters at the next permit renewal. The list of Total Toxic Organics can be found in *40 CFR § 413.02 - General definitions*. The following metals shall be monitored for RP:

Metals to be Monitored for RP		
Parameter	Sample Type	Units
Total Arsenic	Grab	mg/L
Total Cadmium	Grab	mg/L
Total Chromium	Grab	mg/L
Total Cyanide	Grab	mg/L
Total Lead	Grab	mg/L
Total Mercury	Grab	mg/L
Total Nickel	Grab	mg/L
Total Silver	Grab	mg/L
Total Zinc	Grab	mg/L

3. Acute Whole Effluent Toxicity (WET) Testing.

- a. *Whole Effluent Testing – Acute Toxicity.* Starting immediately, the permittee shall quarterly, conduct acute static renewal toxicity tests on a (grab/composite) sample of the final effluent at Outfall(s). The sample shall be collected at the point of compliance before mixing with the receiving water.

The monitoring frequency for acute tests shall be quarterly unless a sample is found to be acutely toxic during a routine test. If that occurs, the monitoring frequency shall become weekly (See Part , Accelerated Testing). Unless otherwise approved by the

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Director, samples shall be collected on a two-day progression; i.e., if the first sample is on a Monday, during the next sampling period, the sampling shall begin on a Wednesday, etc.

The static-renewal acute toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012 as per 40 CFR 136.3(a) TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS. The permittee shall conduct the 48-hour static renewal toxicity test using *Ceriodaphnia dubia* (solution renewal every 24 hours) and the acute 96-hour static renewal toxicity test using *Pimephales promelas* (fathead minnow) (solution renewal every 24 hours. Based on the Test Acceptability Criteria included in Utah Pollutant Discharge Elimination System (UPDES) Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring) January, 2017, the Director may require acceptable variations in the test, i.e. temperature, carbon dioxide atmosphere, or any other acceptable variations in the testing procedure, as documented in the Fact Sheet Statement of Basis. If possible, dilution water should be taken from the receiving stream. A valid replacement test is required within the specified sampling period to remain in compliance.

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the results to be considered valid. If more than 10 percent control mortality occurs, the test shall be repeated until satisfactory control mortality is achieved. The permittee shall meet all QA/QC requirements of the acute WET testing method listed in this Section of the permit.

If the permit contains a total residual chlorine limitation such that it may interfere with WET testing (>0.20 mg/L), the permittee may dechlorinate the sample in accordance with approved USEPA methods for WET testing the sample. If de-chlorination is affecting the test, the permittee may collect the sample just before chlorination with Director approval.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the required reporting period (month, quarter or semi-annual) e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28. Monthly test results shall be reported along with the DMR submitted for that month. The format for the report shall be consistent with Appendix C of "Utah Pollutant Discharge Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (Biomonitoring), Utah Division of Water Quality, February 2018.

If the results for ten consecutive tests indicate no acute toxicity, the permittee may request a reduction in acute toxicity testing by a reduction in monitoring frequency, alternating species, or using only the most sensitive species. The Director may approve or deny the request. If the request is approved, the test procedures are to be the same as specified above for the test species. Under no circumstances shall monitoring for WET at major facilities be reduced less than quarterly. Minor facilities may be less than quarterly at the discretion of the Director.

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- b. *Accelerated Testing.* When whole effluent toxicity is indicated during routine WET testing as specified in this permit, the permittee shall notify the Director in writing within 5 days after becoming aware of the test result. The permittee shall perform an accelerated schedule of WET testing to establish whether a pattern of toxicity exists unless the permittee notifies the Director and commences a PTI, TIE, or a TRE. Accelerated testing or the PTI, TIE, or TRE will begin within fourteen days after the permittee becomes aware of the test result. Accelerated testing shall be conducted as specified under Part I. Pattern of Toxicity. If the accelerated testing demonstrates no pattern of toxicity, routine monitoring shall be resumed.
- c. *Pattern of Toxicity.* A pattern of toxicity is defined by the results of a series of up to five biomonitoring tests pursuant to the accelerated testing requirements using a full set of dilutions for acute (five plus the control) and five effluent dilutions for chronic (five plus the control), on the species found to be more sensitive, once every week for up to five consecutive weeks for acute and once every two weeks up to ten consecutive weeks for chronic.

If two (2) consecutive tests (not including the scheduled test which triggered the search for a pattern of toxicity) do not result in an exceedance of the acute or chronic toxicity criteria, no further accelerated testing will be required and no pattern of toxicity will be found to exist. The permittee will provide written verification to the Director within 5 days of determining no pattern of toxicity exists, and resume routine monitoring.

A pattern of toxicity may or may not be established based on the following:

WET tests should be run at least weekly (acute) or every two weeks (chronic) (note that only one test should be run at a time), for up to 5 tests, until either:

- 1) 2 consecutive tests fail, or 3 out of 5 tests fail, at which point a pattern of toxicity will have been identified, or
- 2) 2 consecutive tests pass, or 3 out of 5 tests pass, in which case no pattern of toxicity is identified.

- d. *Preliminary Toxicity Investigation.*
- (1) When a pattern of toxicity is detected the permittee will notify the Director in writing within 5 days and begin an evaluation of the possible causes of the toxicity. The permittee will have 15 working days from demonstration of the pattern of toxicity to complete an optional Preliminary Toxicity Investigation (PTI) and submit a written report of the results to the Director. The PTI may include, but is not limited to: additional chemical and biological monitoring, examination of pretreatment program records, examination of discharge monitoring reports, a thorough review of the testing protocol, evaluation of treatment processes and chemical use, inspection of material storage and transfer areas to determine if any spill may have occurred.
 - (2) If the PTI identifies a probable toxicant and/or a probable source of toxicity, the permittee shall submit, as part of its final results, written notification of that effect to the Director. Within thirty days of completing the PTI the permittee shall submit to the Director for approval a control program to control effluent toxicity and shall proceed to implement such plan in accordance with the Director's approval. The control program, as submitted to or revised by the Director, will be incorporated into the permit. After final implementation, the permittee must

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demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit. With adequate justification, the Director may extend these deadlines.

- (3) If no probable explanation for toxicity is identified in the PTI, the permittee shall notify the Director as part of its final report, along with a schedule for conducting a Phase I Toxicity Reduction Evaluation (TRE) (see Part ___ Toxicity Reduction Evaluation
 - (4) If toxicity spontaneously disappears during the PTI, the permittee shall submit written notification to that effect to the Director, with supporting testing evidence.
- e. *Toxicity Reduction Evaluation (TRE)*. If a pattern of toxicity is detected the permittee shall initiate a TIE/TRE within 7 days unless the Director has accepted the decision to complete a PTI. With adequate justification, the Director may extend the 7-day deadline. The purpose of the TIE portion of a TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and the TRE will control or provide treatment for the toxicity.

A TRE may include but is not limited to one, all, or a combination of the following:

- (1) Phase I – Toxicity Characterization
- (2) Phase II – Toxicity Identification Procedures
- (3) Phase III – Toxicity Control Procedures
- (4) Any other appropriate procedures for toxicity source elimination and control.

If the TRE establishes that the toxicity cannot be immediately eliminated, the permittee shall submit a proposed compliance plan to the Director. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the Director, this permit may be reopened and modified.

If toxicity spontaneously disappears during the TIE/TRE, the permittee shall submit written notification to that effect to the Director.

If the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the permittee shall submit the following:

- (a) An alternative control program for compliance with the numerical requirements.
- (b) If necessary, as determined by the Director, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

This permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the Director, and/or modified WET testing requirements without public notice.

Failure to conduct an adequate TIE/TRE plan or program as described above, or the submittal of a plan or program judged inadequate by the Director, shall be considered a violation of this permit. After implementation of TIE/TRE plan, the

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permittee must demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit.

D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1) * or by NetDMR, post-marked or entered into NetDMR no later than the 28th day of the month following the completed reporting period. The first report is due on September 28, 2022. If no discharge occurs during the reporting period, “no discharge” shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VII.G)*, and submitted by NetDMR, or to the Division of Water Quality at the following address:

Department of Environmental Quality
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

* Starting January 1, 2017 monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception.

II. INDUSTRIAL PRETREATMENT REQUIREMENTS

A. Definitions. For this section, the following definitions shall apply:

1. *Indirect Discharge* means the introduction of pollutants into a publicly-owned treatment works (POTW) from any non-domestic source regulated under section 307 (b), (c) or (d) of the CWA.
2. *Interference* means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
 - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
 - b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
3. *Pass Through* means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
4. *Publicly Owned Treatment Works* or *POTW* means a treatment works as defined by section 212 of the CWA, which is owned by a State or municipality (as defined by section 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the CWA, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.
5. *Significant industrial user (SIU)* is defined as an industrial user discharging to a POTW that satisfies any of the following:
 - a. Has a process wastewater flow of 25,000 gallons or more per average work day;
 - b. Has a flow greater than five percent of the flow carried by the municipal system receiving the waste;
 - c. Is subject to Categorical Pretreatment Standards, or
 - d. Has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.
6. *User or Industrial User (IU)* means a source of Indirect Discharge.

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- B. Discharge to POTW. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of The Water Quality Act of 1987, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at 40 CFR 403, the State Pretreatment Requirements at UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters. At a minimum, the discharge, into a POTW must meet the requirements of Part II.D. and E. of the permit.
- C. Hazardous Waste Notification. The permittee must notify the POTW, the EPA Regional Waste Management Director, the Director and the State hazardous waste authorities in writing, if they discharge any substance into a POTW that, 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).
- D. General and Specific Prohibitions.
1. General Prohibitions. The permittee may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph 2. of this section apply to the introducing pollutants into a POTW whether or not the permittee is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.
 2. Specific Prohibitions. The following pollutants shall not be introduced into a POTW:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C);
 - b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
 - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at such volume or strength as to cause interference in the POTW;
 - e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C));
 - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants, which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems;
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW;
or
 - i. Any pollutant that causes pass through or interference at the POTW.
 - j. Any specific pollutant which exceeds any local limitation established by the POTW.

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- E. Categorical Standards. In addition to the general and specific limitations expressed in *Part II. D.* of this section, applicable National Categorical Pretreatment Standards must be met by all industrial users discharging into a POTW. These standards are published in the federal regulations at *40 CFR 405 through 471*.

III. BIOSOLIDS REQUIREMENTS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, this facility does not receive, generate, treat or dispose of biosolids. Therefore 40 CFR 503 does not apply. As a result, there are no specific biosolids requirements in this permit.

IV. STORM WATER REQUIREMENTS.

- A. Industrial Storm Water Permit. Based on the type of industrial activities occurring at the facility, the permittee is required to maintain separate coverage or an appropriate exclusion under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). If the facility is not already covered, the permittee has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation.

- B. Construction Storm Water Permit. Any construction at the facility that disturbs an acre or more of land, including less than an acre if it is part of a common plan of development or sale, is required to obtain coverage under the UPDES Construction General Storm Water Permit (UTRC000000). Permit coverage must be obtained prior to land disturbance. If the site qualifies, a Low Erosivity Waiver (LEW) Certification may be submitted instead of permit coverage.

V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10 and 40CFR Part 503*, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10 and 40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.
- F. 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.
- G. 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 five 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
- H. Twenty-four Hour Notice of Noncompliance Reporting.
1. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites 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.

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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 VI.G, Bypass of Treatment Facilities.*);
 - c. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H, Upset Conditions.*);
 - d. Violation of a daily discharge limitation for any of the pollutants listed in the permit; or,
 - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
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:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part V.H.3*
- J. Inspection and Entry The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but

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not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

VI. 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 or 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 VI.G, Bypass of Treatment Facilities* and *Part VI.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. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- 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, sludge, or other pollutants removed in the course of treatment shall be 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.
- G. Bypass of Treatment Facilities.
1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.
 2. Prohibition of Bypass.
 - a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

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- (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (3) The permittee submitted notices as required under *section VI.G.3*.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections VI.G.2.a (1), (2) and (3)*.
3. Notice.
- a. *Anticipated bypass*. Except as provided above in *section VI.G.2* and below in *section VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
 - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (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 VI.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 IV.H*, 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 V.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
 - d. The permittee complied with any remedial measures required under *Part VI.D, Duty to Mitigate*.

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

- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

- J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/L);
 - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,
 - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":\

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- a. Five hundred micrograms per liter (500 ug/L);
- b. One milligram per liter (1 mg/L) for antimony;
- c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
- d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

VII. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of parameters discharged or pollutant sold or given away. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. 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.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
 - 1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
 - 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

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representative may thus be either a named individual or any individual occupying a named position.

3. Changes to authorization. If an authorization under *paragraph VII.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 VII.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 of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
 1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;

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2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
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. Revisions to the current CWA § 208 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Biosolids – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the permittees biosolids use or land application practices do not comply with existing applicable state or federal regulations.
- Q. Toxicity Limitation - Reopener Provision. Use the following paragraph if WET testing is required at the facility:
- This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) limitations, a compliance date, a compliance schedule, a change in the whole effluent toxicity (biomonitoring) protocol, additional or modified numerical limitations, or any other conditions related to the control of toxicants if one or more of the following events occur;
1. Toxicity is detected, as per *Part I.C.4.a* of this permit, during the duration of this permit.

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2. The TRE results indicate that the toxicant(s) represent pollutant(s) or pollutant parameter(s) that may be controlled with specific numerical limits, and the Director concludes that numerical controls are appropriate.
3. Following the implementation of numerical control(s) of toxicant(s), the Director agrees that a modified biomonitoring protocol is necessary to compensate for those toxicants that are controlled numerically.
4. The TRE reveals other unique conditions or characteristics, which in the opinion of the permit issuing authority justify the incorporation of unanticipated special conditions in the permit.

Use the following paragraph if there is no WET testing is required at the facility:

This permit may be reopened and modified (following proper administrative procedures) to include 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.

- R. Storm Water-Reopener Provision. At any time 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-State".

VIII. DEFINITIONS

A. Wastewater.

1. The "7-day (and weekly) average", other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. "Act," means the *Utah Water Quality Act*.
4. "Acute toxicity" occurs when 50 percent or more mortality is observed for either test species at any effluent concentration (lethal concentration or "LC₅₀").
5. "Bypass," means the diversion of waste streams from any portion of a treatment facility.
6. "Chronic toxicity" occurs when the IC₂₅ < XX% effluent. The XX% effluent is the concentration of the effluent in the receiving water, at the end of the mixing zone expressed as per cent effluent.
7. "IC₂₅" is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.
8. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
 - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
 - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

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- c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,
 - d. Continuous sample volume, with sample collection rate proportional to flow rate.
9. “CWA” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
 10. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
 11. “EPA,” means the United States Environmental Protection Agency.
 12. “Director,” means Director of the Division of Water Quality.
 13. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
 14. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
 15. “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.
 16. “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 preventative maintenance, or careless or improper operation.

**FACT SHEET AND STATEMENT OF BASIS
AUTOLIV ASP, INC
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT0024911
MINOR INDUSTRIAL**

FACILITY CONTACTS

Person Name:	Fadi Al-Tigar
Position:	Plant Manager
Person Name:	Jeremy Speas
Position:	HSE Manager
Phone Number:	(385) 264-2814
Facility Name:	Autoliv ASP, Inc (Promontory Plant)
Mailing and Facility Address:	16700 West Highway 83 Promontory, Utah 84301

DESCRIPTION OF FACILITY

Autoliv is an automotive safety device manufacturer. The Promontory facility produces gas generant for the automotive airbag units. Fuels and oxidizers are blended and spray dried into a DOT 1.3C explosive powder. This powder is then pressed into tablets and wafers that go into the airbag inflator units. Nitrogen gas is generated by the rapid burning of the gas generant when an airbag is initiated. The facility has a Standard Industrial Classification (SIC) code 3714, for Motor Vehicle Parts and Accessories.

Water is trucked into the wastewater plant from various production facilities on site. Wastewater is first filtered through a Shriver hydraulic filter press, rated at 25 microns, to remove the bulk of the solids. Water is then passed through a 5 micron polishing filter system and stored in tanks prior to distillation treatment. Final treatment is achieved by running the distillate through resin filter beds to remove any remaining minor contaminants, primarily ammonia. Treated water is then stored in 30,000 gallon storage tanks, where it is either recycled through the plant boiler system or discharged to Blue Creek. The facility anticipates a maximum discharge rate of 30,000 gallons per day.

The Autoliv ASP-6 wastewater treatment plant previously held a UPDES discharge permit (UT0024911) for its facility. The permit was not renewed in 2002 because the plant was able to recycle all of its treated water at the time. The Promontory Plant has since changed its formulation for airbag propellant from sodium azide to copper oxide. The wastewater plant was modified to treat the new waste stream. As a result, the volume of treated water sometimes exceeds the facility's capacity to recycle, and needs to be discharged. The discharge is expected to be mainly during the winter months from October to March. During the summer months, it is anticipated that most of the distilled water generated will be recycled in the process.

DISCHARGE

DESCRIPTION OF DISCHARGE

Autoliv ASP, Inc has not discharged in 25 years, but maintains the permit in case there is excess water that cannot be recycled through the boiler system. If discharge is needed it will be discharged to Blue Creek; West of the Facility.

Outfall

Description of Discharge Point

001 Located at latitude 40°40'30.1"N and longitude 112°26'40.6"W. The discharge is pumped out of a holding tank to a pipeline that runs West-Northwest for approximately 1.3 miles to Blue Creek.

RECEIVING WATERS AND STREAM CLASSIFICATION

If a discharge were to occur, the facility would discharge to Blue Creek, which is a Class 2B, 3D, 4 according to *Utah Administrative Code (UAC) R317-2-13*:

- Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.
- Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.
- Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

TMDL REQUIREMENTS/CONCERNS

The facility discharges to Blue Creek. Blue Creek was listed on the 2020 303d list because of the following impairments: Boron, Total Dissolved Solids (TDS), pH, *E. coli* and Selenium. There is not an approved TMDL for Blue Creek for any of these impairments. As a result limits for Total Dissolved Solids and Selenium have been added to the permit.

BASIS FOR EFFLUENT LIMITATIONS

Based on the facility's SIC code 3714, the technological effluent limitations are based on *40 CFR Part 433 - Metal Finishing Point Source Category*. Specifically, *40 CFR § 433.13 Effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT)*. This effluent limitation guideline (ELG), regulates a variety of metals, however, since the facility is primarily dealing with copper oxide, the only metal limit in the permit will be copper. This is based on Best Professional Judgment, as this is the primary metal the facility uses in their process. The ELG will also set the limit for TSS, pH and oil and grease.

Limitations on biochemical oxygen demand (BOD5) are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. Limitations for dissolved oxygen based on the results of a Wasteload Analysis for this discharge into Blue Creek (Attachment I). It has been determined that this discharge will not cause a violation of water quality standards. An Antidegradation Level II review is not required since the Level I review shows that water quality impacts are minimal, the facility submitted a Level II ADR with their last

permit application and has not increased their loads since that time. The permittee is expected to be able to comply with these limitations. The permit limitations are found in Table 1 below:

REASONABLE POTENTIAL ANALYSIS

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 could not be conducted because the facility has not discharged and lacks the required metals data to preform the analysis.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

The permit was updated to place the facility under the appropriate ELG for their SIC code 3714. This includes a new limit for copper. Based upon the ELG and a rule change in *UAC R-317-3* the limit for Total Suspended Solids has increased from the previous permit.

The ammonia limit was removed from the previous permit because ammonia is not one of the pollutants listed on the ELG for the facility and the facility has no reasonable potential to produce ammonia based on their process.

The sampling of dissolved metals and total toxic organics are being added to this permit to help determine the reasonable potential to discharge these parameters at the next permit renewal.

The permit limitations are:

Parameter	Effluent Limitations *a			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD	--	--	--	0.03
BOD ₅ , mg/L	25	35	--	--
Total Suspended Solids, mg/L	31	--	60	--
Dissolved Oxygen, mg/L	--	--	5.0	--
Copper (Dissolved), mg/L	0.426	--	0.229	
WET, Acute Biomonitoring	--	--	--	LC ₅₀ > 100% effluent RWC (from WLA)
pH, Standard Units	--	--	6.5	9
Oil and Grease, mg/L	26	--	52	--
Selenium, µg/L	--	--	--	66.9
Total Dissolved Solids, mg/L				
March-October	3,800	--	--	4,900
November - February	4,700	--	--	6,300

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be

submitted using NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Self-Monitoring and Reporting Requirements *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b	Continuous	Recorder	MGD
BOD ₅	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
DO	Daily	Grab	mg/L
Copper	Monthly	Grab	mg/L
pH	Daily	Grab	SU
WET – Biomonitoring *c			
Ceriodaphnia - Acute	1 st & 3 rd Quarter	Composite	Pass/Fail
Fathead Minnows - Acute	2 nd & 4 th Quarter	Composite	Pass/Fail
Oil and Grease *d	Monthly	Visual/Grab	mg/L
Selenium	Monthly	Grab	µg/L
Total Dissolved Solids	Monthly	Grab	mg/L
Metals (Dissolved) *e	Quarterly	Grab	mg/L
Organic Toxics *e	Quarterly	Grab	mg/L

- *a See Definitions, *Part VIII*, for definition of terms.
- *b If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
- *c Acute Ceriodaphnia will be tested during the 1st and 3rd quarters and acute fathead minnows will be tested during the 2nd and 4th quarters.
- *d Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report NA.
- *e Quarterly sampling or Metals and Total Toxic Organics will be required without effluent limits to help determine reasonable potential for these parameters at the next permit renewal. The list of Total Toxic Organics can be found in *40 CFR § 413.02 - General definitions*. The following metals shall be monitored for RP:

Metals to be Monitored for RP		
Parameter	Sample Type	Units
Total Arsenic	Grab	mg/L
Total Cadmium	Grab	mg/L
Total Chromium	Grab	mg/L
Total Cyanide	Grab	mg/L
Total Lead	Grab	mg/L
Total Mercury	Grab	mg/L
Total Nickel	Grab	mg/L
Total Silver	Grab	mg/L
Total Zinc	Grab	mg/L

BIOSOLIDS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, this facility does not receive, generate, treat or dispose of biosolids. Therefore 40 CFR 503 does not apply. As a result, there are no specific biosolids requirements in this permit.

STORM WATER

Separate storm water permits may be required based on the types of activities occurring on site.

Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities is required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring. If the facility is not already covered, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation. Previously storm water discharge requirements and coverage were combined in this individual permit. These have been separated to provide consistency among permittees, electronic reporting for storm water discharge monitoring reports, and increase flexibility to changing site conditions.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction.

Information on storm water permit requirements can be found at <http://stormwater.utah.gov>

PRETREATMENT REQUIREMENTS

Autoliv does not discharge process wastewater to a Publicly Owned Treatment Works (POTW). Any process wastewater that Autoliv may discharge to a POTW, 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, Autoliv shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the POTW accepting the waste.

In addition, in accordance with 40 CFR 403.12(p)(1), Autoliv must notify the POTW, the EPA Regional Waste Management Director, the DWQ Director and the State hazardous waste authorities in writing if Autoliv discharges any substance into a POTW that 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).

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. 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.

Autoliv is a minor industrial facility that discharges effluent in which toxicity is not likely to be present. Based on the high level of treatment, the absence of measurable concentrations of toxic pollutants in the effluent, and the relatively small discharge volume in relation to the receiving water, the effluent was determined not to have reasonable potential for toxicity and WET limits are not required. Since the facility was new at the last permit issuance, a year of quarterly WET testing was required in the previous permit. However, since the facility did not discharge during the previous permit cycle, quarterly monitoring for acute WET will again be required for a minimum of one year. If the results for one year of testing indicate no toxicity, the permittee may request an elimination of testing or a reduction in testing frequency and/or reduction to one species. The permit will also contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Lonnie Shull, Discharge, Biomonitoring
Jennifer Robinson, Pretreatment
Carl Adams, Storm Water
Chris Shope, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: June 10, 2022
Ended: July 11, 2022

Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit was published on the Division of Water Quality's Website from June 10, 2022 until July 11, 2022. No comments were received during the public comment period.

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes they were not considered Major and the permit is not required to be re Public Noticed.

RESPONSIVENESS SUMMARY

No comments were received during the public comment period.

DWQ-2022-005636

PND Draft

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ATTACHMENT 1

Wasteload Analysis

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**Utah Division of Water Quality
Statement of Basis
ADDENDUM
Wasteload Analysis and Antidegradation Level I Review**

Date: January 18, 2022

Prepared by: Christopher L. Shope, PhD
Standards and Technical Services

Facility: Autoliv ASP Inc., UPDES Permit No. UT0024911
ATK Launch Systems, Inc., UPDES No. UT0024805

Receiving water: Blue Creek, Promontory Point (2B, 3D, 4)

This addendum summarizes the wasteload analysis that was performed to determine water quality based effluent limits (WQBEL) for this discharge. Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses (UAC R317-2-8). Projected concentrations are compared to numeric water quality standards to determine acceptability. The numeric criteria in this wasteload analysis may be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

Discharge

Autoliv

Outfall 001: Blue Creek (Stream Discharge) → Bear River Migratory Bird Refuge → Bear River Bay of Great Salt Lake
0.03 MGD maximum daily discharge

ATK

Outfall 001: South Plant → Blue Creek → Bear River Migratory Bird Refuge → Bear River Bay of Great Salt Lake
The maximum daily design discharge is 0.50 MGD and the maximum monthly design discharge is 0.35 MGD for the facility.

Outfall 002: North Plant → Blue Creek → Bear River Migratory Bird Refuge → Bear River Bay of Great Salt Lake
The maximum daily design discharge is 0.25 MGD and the maximum monthly design discharge is 0.16 MGD for the facility.

Receiving Water

Per UAC R317-2-13.7.a, the designated beneficial uses of Blue Creek and tributaries, Box Elder County, from Bear River Bay, Great Salt Lake to Blue Creek Reservoir, are 2B, 3D and 4.

- *Class 2B - Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low*

degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing

- *Class 3D - Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.*
- *Class 4 - Protected for agricultural uses including irrigation of crops and stock watering. Site-specific total dissolved solids (TDS) criteria are associated with this use. Blue Creek and tributaries, Box Elder County, from Bear River Bay, Great Salt Lake to Blue Creek Reservoir: March through October daily maximum 4,900 mg/l and an average of 3,800 mg/l; November through February daily maximum 6,300 mg/l and an average of 4,700 mg/l. Assessments will be based on TDS concentrations measured at the location of STORET 4960740.*

Typically, the critical flow for the wasteload analysis is considered the lowest stream flow for seven consecutive days with a ten-year return frequency (7Q10). Flow data was insufficient to calculate the annual or seasonal 7Q10 values. The seasonal 20th percentile flow values were calculated using data from DWQ monitoring stations. For conservative effluent limits, a mass balance analysis was completed as discussed in the Wasteload Allocation Methods section. For this analysis, the upstream boundary condition was determined using monitoring location DWQ 4960740 BLUE CK AB MORTON-THIOKOL AT U83 to provide equivalent effluent discharge limits at full assimilative capacity for the three outfalls (ATK Outfall 002, Autoliv Outfall 001, and ATK Outfall 001).

For dissolved oxygen and biochemical oxygen demand, the upstream monitoring location above each ATK Outfall was utilized. For ATK outfalls 001 and 002, sites DWQ 4965020-THIOKOL 05 AB BLUE CK 2.1 MI S OF NORTH BNDRY and DWQ 4960740 BLUE CK AB MORTON-THIOKOL AT U83 XING were used, respectively. The seasonal 20th percentile and the overall flow values are displayed in Table 1.

Table 1: Seasonal and Overall Average Flow Data for monitoring locations

Season	20 th percentile Flow Data (cfs)		
	DWQ 4960740	DWQ 4965020	DWQ 4965020
Summer	1.19	0.0001	0.0001
Fall	4.00	0.0001	0.0001
Winter	2.32	0.0001	0.0001
Spring	4.34	0.0001	0.0001
Overall	2.40	0.0001	0.0001

Ambient receiving water quality was characterized using data from the same DWQ monitoring stations and analysis methods described previously. For conservative effluent limits, the upstream boundary conditions at DWQ 4960740 BLUE CK AB MORTON-THIOKOL AT U83 XING were analyzed using a mass balance approach. For DO and BOD, monitoring location DWQ 4960740 BLUE CK AB MORTON-THIOKOL AT U83 XING was used for ATK Outfall 002 and DWQ

**Utah Division of Water Quality
Wasteload Analysis
Autoliv ASP Inc., UPDES Permit No. UT0024911**

4965020-THIOKOL 05 AB BLUE CK 2.1 MI S OF NORTH BNDRY was used for ATK Outfall 001.

Discharge data was characterized using data from the Autoliv ASP Inc. Facility Monitoring Data Parameters provided in the 2020 permit application. Autoliv has reported no discharges since the permit was issued on December 1, 2015 and so there is no DMR data available. The ATK Launch Systems, Inc. effluent discharge data from outfalls 001 and 002 were collected from the DMR report. When data was not available, DWQ monitoring locations were used. Moving downstream, the effluent monitoring locations were: (ATK outfall 002) 4960780-THIOKOL 02 OUTFALL TO BLUE CK .4 MI S OF N BNDRY, (Autoliv outfall 001) no data are available, and (ATK outfall 001) 4965070-THIOKOL 001 THIOKOL WWTP.

Total Maximum Daily Load (TMDL)

According to the Utah's 2021 303(d) [Water Quality Assessment Report](#) "Combined 2018/2020 Integrated Report Version 1.0", the receiving water for the discharge, Blue Creek (UT16020309-002_00) is impaired for boron, selenium, pH, E. coli, and total dissolved solids (TDS). Aluminum was delisted in this report because the more recent monitoring data is sufficient and is now supporting. A site specific standard for total dissolved solids was adopted for Blue Creek to address the impairment. The standard is as follows per UAC R317-2-14.1, Footnote (4).

Blue Creek and tributaries, Box Elder County, from Bear River Bay, Great Salt Lake to Blue Creek Reservoir: March through October daily maximum 4,900 mg/l and an average of 3,800 mg/l; November through February daily maximum 6,300 mg/l and an average of 4,700 mg/l. Assessments will be based on TDS concentrations measured at the location of STORET 4960740.

Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and for chronic conditions is 2500 ft, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone.

A tracer study was conducted in 1997 at Outfall 001 and the discharge was determined to be fully mixed 200 feet downstream from the discharge location (Moellmer 1997). Based on the results of the mixing zone modeling, plume width was 2.27 ft or 100.0% of the river at 1125.0 feet. A total of 100 % of the seasonal critical low flow was used to calculate chronic limits. Acute limits were calculated using 50% of the seasonal critical low flow.

Parameters of Concern

As stated previously, Blue Creek is impaired for dissolved aluminum, dissolved selenium, pH, and total dissolved solids. Other potential parameters of concern identified for the discharge/receiving water were total suspended solids (TSS), total dissolved solids (TDS), dissolved oxygen (DO), BOD5, nitrate/nitrite (NO3), total ammonia (TAN), dissolved metals, volatile organic compounds (VOC), and pH, as determined in consultation with the UPDES Permit Writer.

WET Limits

Utah Division of Water Quality
Wasteload Analysis
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The percent of effluent in the receiving water in a fully mixed condition, and acute and chronic dilution in a not fully mixed condition are calculated in the WLA in order to generate WET limits. The LC₅₀ (lethal concentration, 50%) percent effluent for acute toxicity and the IC₂₅ (inhibition concentration, 25%) percent effluent for chronic toxicity, as determined by the WET test, needs to be below the WET limits, as determined by the WLA. The WET limit for LC₅₀ is typically 100% effluent and does not need to be determined by the WLA.

Table 2: WET Limits for IC₂₅

Outfall	Percent Effluent
Autoliv Outfall 001	2.0%
ATK Outfall 001	15.0%
ATK Outfall 002	8.0%

Wasteload Allocation Methods

Effluent limits were determined for conservative constituents using a simple mass balance mixing analysis (UDWQ, 2020). The mass balance approach was utilized to provide equivalent effluent discharge limits at full assimilative capacity in aggregate for each of the three outfalls into Blue Creek. The mass balance analysis is summarized in the Wasteload Appendix.

The water quality standard for chronic ammonia toxicity is dependent on temperature and pH, and the water quality standard for acute ammonia toxicity is dependent on pH. The AMMTOX Model developed by University of Colorado and adapted by Utah DWQ and EPA Region VIII was initially used to determine ammonia effluent limits (Lewis et al., 2002). However, the seasonal acute and chronic freshwater total ammonia criteria were calculated based on UAC R317.2.14.2 assuming that fish early life stages (ELS) are present. The analysis is summarized in the Wasteload Appendix.

Because ATK Outfalls 001 and 002 are wastewater treatment plant discharge locations, effluent limits for dissolved oxygen and biochemical oxygen demand were determined for each outfall using the Utah Rivers Model analysis (UDWQ, 2020).

Models and supporting documentation are available for review upon request.

Antidegradation Level I Review

The objective of the Level I ADR is to ensure the protection of existing uses, defined as the beneficial uses attained in the receiving water on or after November 28, 1975. No evidence is known that the existing uses deviate from the designated beneficial uses for the receiving water. Therefore, the beneficial uses will be protected if the discharge remains below the WQBELs presented in this wasteload.

A Level II Antidegradation Review (ADR) is not required for this facility. The proposed permits are a simple renewal of existing UPDES permits. No increase in effluent flow or concentration of pollutants over those authorized in the existing permits is being requested.

Utah Division of Water Quality
Wasteload Analysis
Autoliv ASP Inc., UPDES Permit No. UT0024911

Documents:

WLA Document: *Combined_Autoliv_ATK_WLA_2021.docx*
Wasteload Analysis and Addendums: *Combined_Autoliv_ATK_WLA_2021.xlsm*
ATK_002_WLA_2021.xlsm
ATK_001_WLA_2021.xlsm

References:

Lewis, B., J. Saunders, and M. Murphy. 2002. Ammonia Toxicity Model (AMMTOX, Version2): A Tool for Determining Effluent Ammonia Limits. University of Colorado, Center for Limnology.

Moellmer, W.O. 1997. Blue Creek Dye Study Memorandum dated 10/20/1997. Utah Division of Water Quality.

Utah Division of Water Quality. 2020. *Utah Wasteload Analysis Procedures Version 2.0*.

DWQ-2022-005634

WASTELOAD ANALYSIS [WLA]
Appendix A: Mass Balance Mixing Analysis for Conservative Constituents
Combined WLA for ATK and Autoliv

Date: 12/6/2021

Discharger: ATK Launch Systems, LLC Autoliv ASP, Inc.
 Outfall: 001 & 002 001
 Receiving Stream: Blue Creek
 Stream Classification: 2B,3D,4
 Aquatic Life Class 3: 3D
 Agriculture Class 4: Yes
 Direct Drinking Water Source: No
 Important Fishery for Human Consumption: No
 Season: Annual

Stream Flow:
 Acute: 1.48 cfs
 Chronic: 2.96 cfs
 Stream Hardness: 521 mg/l as CaCO3

Effluent Flow:	ATK	Autoliv	Combined
Max. Daily	0.22 MGD	0.02 MGD	0.24
Ave. Monthly	0.11 MGD	0.01 MGD	0.12
Effluent Hardness:	300 mg/l as CaCO3		

Mixed Flow:
 Acute: 1.86 cfs Dilution Fact. 3.94
 Chronic: 3.15 cfs Dilution Fact. 15.77
 Mixed Hardness: 400 mg/l as CaCO3 Not to Exceed 400 mg/L 495.9 mg/l as CaCO3

Aquatic Wildlife Criteria (Class 3 Waters)

	Standard 30-Day Average	Standard Instantaneous	Upstream Concentration	Chronic Effluent Limit	Acute Effluent Limit
Physical					
Dissolved Oxygen - Minimum (mg/L)	5.0	3.0		5.0	3.0
pH - Minimum		6.5			6.5
pH - Maximum		9.0			9.0

Chronic Metals, µg/L	Total Recoverable Standard	Conversion Factor	Dissolved Standard	Upstream Concentration	Dissolved Effluent Limit	Recoverable Effluent Limit
Aluminum ¹	87	1.000	87	14	N/A	N/A
Arsenic	150	1.000	150	35	1,963	1,963
Cadmium	0.76	0.851	0.64	0.13	8.73	10.26
Chromium III	268	0.860	231	6.4	3,767	4,380
ChromiumVI	11.0	1.000	11.0	6.4	83.5	83.5
Copper	30.5	0.960	29.3	4.1	426	444
Cyanide ²	5.2	1.000	5.2	3.5	32.5	32.5
Lead	18.6	0.589	10.9	0.2	179.7	305.1
Mercury ²	0.012	1.000	0.012	0.008	0.075	0.075
Nickel	169	0.997	168	6.7	2,712	2720
Selenium	4.6	1.000	4.6	6.1		CL ³
Tributylin ²	0.072	1.000	0.072	0.048	0.45	0.45
Zinc	388	0.986	382	19	6,120	6,207

Acute Metals, µg/L	Total Recoverable Standard	Conversion Factor	Dissolved Standard	Upstream Concentration	Dissolved Effluent Limit	Total Recoverable Effluent
Aluminum ³	750	1.000	750	14		CL ³
Arsenic	340	1.000	340	35	1542	1542
Cadmium	8.7	0.886	7.7	0.13	37.7	42.6
Chromium III	5612	0.316	1773	6.4	8,738	27,651
ChromiumVI	16.0	1.000	16.0	6.4	53.8	53.8
Copper	51.7	0.960	49.6	4.1	229	239
Cyanide	22.0	1.000	22.0	3.5	95.1	95.1
Iron	1000	1.000	1000	36	4,800	4,800
Lead	476.8	0.589	280.8	0.2	1,387	2,355
Mercury	2.400	1.000	2.400	0.008	11.828	11.828
Nickel	1516	0.998	1513	6.7	7,450	7465
Selenium	18.4	1.000	18.4	6.1	66.9	66.9
Silver	41.1	0.850	34.9	0.7	170	200
Tributylin	0.460	1.000	0.460	0.048	2.08	2.08
Zinc	388	0.978	379	19	1801	1842

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1: Where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaCO₃ in the receiving water after mixing, the 87 ug/L chronic criterion (expressed as total recoverable) will not apply, and aluminum will be regulated based on compliance with the 750 ug/L acute criterion (expressed as total recoverable).

2: Background concentration assumed 67% of chronic standard.

3: Receiving segment listed as impaired for constituent without an approved TMDL; limit to be set based on capping current load.

Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

Season	Concentration
Summer 4 Day Avg. - Chronic	3.7 mg/l as N
1 Hour Avg. - Acute	19.9 mg/l as N
Fall 4 Day Avg. - Chronic	4.2 mg/l as N
1 Hour Avg. - Acute	19.9 mg/l as N
Winter 4 Day Avg. - Chronic	4.4 mg/l as N
1 Hour Avg. - Acute	19.9 mg/l as N
Spring 4 Day Avg. - Chronic	4.2 mg/l as N
1 Hour Avg. - Acute	19.9 mg/l as N

Early Life Stages are assumed to be present per R317-2.14.2.

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.0%.

Inorganics, µg/L	Chronic Standard	Acute Standard	Upstream Concentration	Chronic Effluent Limit	Acute Effluent Limit
Chlorine, Total Residual (TRC)	11.0	19.0	11.0	11.0	50.5
Hydrogen Sulfide (un-disassociated)		2.0	1.0		5.9
Phenol (Maximum)		0.10	0.05		0.30
Radiological pCi/l	Chronic Standard	Acute Standard	Upstream Concentration	Chronic Effluent Limit	Acute Effluent Limit
Gross Alpha		15.00	7.50		881.7
Organics, µg/L	Chronic Standard	Acute Standard	Upstream Concentration	Chronic Effluent Limit	Acute Effluent Limit
Acrolein	3.00	3.00	1.50	26.6	8.9
Aldrin		1.50	0.75		4.5
Chlordane	0.0043	1.20	0.0022	0.0382	5.9
Chlorpyrifos	0.041	0.083	0.02		0.33
DDT, DDE	0.0010	0.55	0.0005	0.0089	2.72
Diazinon	0.17	0.17	0.09		0.51
Dieldrin	0.056	0.24	0.028	0.497	1.08
Alpha-Endosulfan	0.056	0.11	0.028	0.497	0.43
Beta-Endosulfan	0.056	0.11	0.028	0.497	0.43
Endrin	0.036	0.086	0.018	0.320	0.354
Heptachlor	0.0038	0.26	0.0019	0.0338	1.28
Heptachlor epoxide	0.0038	0.26	0.0019	0.0338	1.28
Lindane	0.08	1.00	0.04	0.71	4.78
Methoxychlor		0.03	0.02		0.09
Mirex		0.001	0.0005		0.003
Nonylphenol	6.6	28.00	3.30		125.4
Parathion	0.013	0.066	0.007		0.30
PCB's	0.014		0.007	0.124	
Pentachlorophenol (varies with pH)	15.00	19.00	7.50	133.2	64.3
Toxaphene	0.0002	0.73	0.0001	0.0018	3.61
WET Limits, IC ₂₅	Percent Effluent				
ATK Outfall 001	15%				
ATK Outfall 002	8%				
Autoliv Outfall 001	2%				

Utah Division of Water Quality

Agricultural Criteria (Class 4 Waters)

Constituent - Maximum	Unit	Standard	Upstream Concentration	Effluent Limit
Total Dissolved Solids ¹				
Maximum Daily: Mar - Oct	mg/l	4900	N/A	4900
Maximum Daily: Nov - Feb	mg/l	6300	N/A	6300
Average: Mar - Oct	mg/l	3800	N/A	3800
Average: Nov - Feb	mg/l	4700	N/A	4700
Arsenic	µg/L	100	50	444
Boron	µg/L	750	375	3331
Cadmium	µg/L	10	5	44
Chromium	µg/L	100	50	444
Copper	µg/L	200	100	888
Lead	µg/L	100	50	444
Selenium	µg/L	50	25	222

1: Site Specific Standard - Blue Creek and tributaries, Box Elder County, from Bear River Bay, Great Salt Lake to Blue Creek Reservoir: March through October daily maximum 4,900 mg/l and an average of 3,800 mg/l; November through February daily maximum 6,300 mg/l and an average of 4,700 mg/l.

Numeric Criteria for the Protection of Human Health from Consumption of Water and Fish

Parameter Maximum Conc., µg/L	Class 1C (Water and Organism)		Class 3 (Organism Only)	
	Standard	Upstream Concentration	Standard	Acute Effluent Limitation
Toxic Organics				
Antimony	5.6	2.8	640	3152
Arsenic				
Beryllium				
Cadmium				
Chromium III				
Chromium VI				
Copper	1300	650		
Lead				
Mercury				
Nickel	100	50	4600	22535
Selenium			4200	20755
Silver				
Thallium	0.24	0.12	0.47	1.85
Zinc	7400	3700	26000	113899
Cyanide	140	70	140	416
Asbestos (million fibers/L)	7	3.5		
2,3,7,8-TCDD Dioxin	5.00E-09	2.50E-09	5.1E-09	1.53483E-08
Acrolein	6	3	9	32.6
Acrylonitrile	0.051	0.0255	0.250	1.13
Alachlor	2	1		
Atrazine	3	1.5		
Benzene	2.2	1.1	51	248
Bromoform	4.3	2.15	140	683
Carbofuran	40	20		
Carbon Tetrachloride	0.23	0.115	1.6	7.5
Chlorobenzene	100	50	1600	7710
Chlorodibromomethane	0.4	0.2	13	63.5
Chloroethane				
2-Chloroethylvinyl Ether				
Chloroform	5.7	2.85	470	2311
Dalapon	200	100		
Di(2ethylhexyl)adipate	400	200		
Dibromochloropropane	0.2	0.1		
Dichlorobromomethane	0.55	0.275	17	82.9
1,1-Dichloroethane				
1,2-Dichloroethane	0.38	0.19	37	182
1,1-Dichloroethylene	7	3.5	7100	35072
Dichloroethylene (cis-1,2)	70	35		
Dinose	7	3.5		
Diquat	20	10		
1,2-Dichloropropane	0.5	0.25	15	73.1
1,3-Dichloropropene	0.34	0.17	21	103.1
Endothall	100	50		
Ethylbenzene	530	265	2100	9333
Ethylene Dibromide	0.05	0.025		
Glyphosate	700	350		
Haloacetic acids	60	30		
Methyl Bromide	47	23.5	1500	7320
Methyl Chloride				

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Parameter	Maximum Conc., µg/L	Class 1C (Water and Organism) Acute	Class 3 (Organism Only) Acute
	Standard	Upstream Concentration	Standard
		Limitation	Limitation
Methylene Chloride	4.6	2.3	590
Ocamyl (vidate)	200	100	2907
Picloram	500	250	
Simazine	4	2	
Styrene	100	50	
1,1,2,2-Tetrachloroethane	0.17	0.085	4
Tetrachloroethylene	0.69	0.345	3.3
Toluene	1000	500	15000
1,2 -Trans-Dichloroethyle	100	50	10000
1,1,1-Trichloroethane	200	100	
1,1,2-Trichloroethane	0.59	0.295	16
Trichloroethylene	2.5	1.25	30
Vinyl Chloride	0.025	0.0125	2.4
Xylenes	10000	5000	
2-Chlorophenol	81	40.5	150
2,4-Dichlorophenol	77	38.5	290
2,4-Dimethylphenol	380	190	850
2-Methyl-4,6-Dinitrophenol	13	6.5	280
2,4-Dinitrophenol	69	34.5	5300
2-Nitrophenol			
4-Nitrophenol			
3-Methyl-4-Chlorophenol			
Penetachlorophenol	0.27	0.135	3
			0.0
Toxic Organics	Standard	Upstream Concentration	Standard
		Limitation	Limitation
Phenol	10000	5000	860000
2,4,6-Trichlorophenol	1.4	0.7	2.4
Acenaphthene	670	335	990
Acenaphthylene			
Anthracene	8300	4150	40000
Benzidine	0.000086	0.000043	0.0002
BenzoaAnthracene	0.0038	0.0019	0.018
BenzoaPyrene	0.0038	0.0019	0.018
BenzobFluoranthene	0.0038	0.0019	0.018
BenzoghiPerylene			
BenzokFluoranthene	0.0038	0.0019	0.018
Bis2-ChloroethoxyMethane			
Bis2-ChloroethylEther	0.03	0.015	0.53
Bis2-ChloroisopropylEther	1400	700	65000
Bis2-EthylhexylPhthalate	1.2	0.6	2.2
4-Bromophenyl Phenyl Ether			
Butylbenzyl Phthalate	1500	750	1900
4-Chlorophenyl Phenyl Ether			
Chrysene	0.0038	0.0019	0.018
Dibenzoa, (h)Anthracene	0.0038	0.0019	0.018
1,2-Dichlorobenzene	420	210	1300
1,3-Dichlorobenzene	320	160	960
1,4-Dichlorobenzene	63	31.5	190
3,3-Dichlorobenzidine	0.021	0.0105	0.028
Diethyl Phthalate	17000	8500	44000
Dimethyl Phthalate	270000	135000	1100000
Di-n-Butyl Phthalate	2000	1000	4500
2,4-Dinitrotoluene	0.11	0.055	3.4
2,6-Dinitrotoluene			
Di-n-Octyl Phthalate			
1,2-Diphenylhydrazine	0.036	0.018	0.2
Fluoranthene	130	65	140
Fluorene	1100	550	5300
Hexachlorobenzene	0.00028	0.00014	0.00029
Hexachlorobutedine	0.44	0.22	18
Hexachloroethane	1.4	0.7	3.3
Hexachlorocyclopentadiene	40	20	1100
Ideno 1,2,3-cdPyrene	0.0038	0.0019	0.018
Isophorone	35	17.5	960
Naphthalene			
Nitrobenzene	17	8.5	690
N-Nitrosodimethylamine	0.00069	0.000345	3
N-Nitrosodi-n-Propylamine	0.005	0.0025	0.51
N-Nitrosodiphenylamine	3.3	1.65	6
Phenanthrene			
Pyrene	830	415	4000
1,2,4-Trichlorobenzene	35	17.5	70

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Aldrin	0.000049	0.0000245	0.00005	0.00015
alpha-BHC	0.0026	0.0013	0.0049	0.01909
beta-BHC	0.0091	0.00455	0.017	0.06607
gamma-BHC (Lindane)	0.2	0.1	1.8	8.5
delta-BHC				
Chlordane	0.0008	0.0004	0.00081	0.00243
4,4-DDT	0.00022	0.00011	0.00022	0.00065
4,4-DDE	0.00022	0.00011	0.00022	0.00065
4,4-DDD	0.00031	0.000155	0.00031	0.00092
Dieldrin	0.000052	0.000026	0.000054	0.00016
alpha-Endosulfan	62	31	89	318
beta-Endosulfan	62	31	89	318
Endosulfan Sulfate	62	31	89	318
Endrin	0.059	0.0295	0.06	0.18022
Endrin Aldehyde	0.029	0.0145	0.3	1.4
Heptachlor	0.000079	0.0000395	0.000079	0.00023
Heptachlor Epoxide	0.000039	0.0000195	0.000039	0.000115862
Polychlorinated Biphenyls	0.000064	0.000032	0.000064	0.00019
PCB's				
Toxaphene	0.00028	0.00014	0.00028	0.00083

Summary - Dissolved Metals, µg/L

	Class 1C Human Health (Drinking Water Water	Class 1C Human Health (Drinking Water + Organism)	Class 3 Human Health (Organism Only)	Class 3 Acute Aquatic Wildlife	Class 4 Agricultural	Acute Most Stringent
Aluminum				0		0
Antimony			3,151.6			3,152
Arsenic				1,542.2	444.2	444.2
Barium						0.0
Beryllium						0.0
Cadmium				37.7	44.4	37.7
Chromium (Total)					444.2	444.2
Chromium (III)				8,738		8,738
Chromium (VI)				53.8		53.8
Copper				229.0	888.3	229.0
Cyanide			0.0	95.1		0.0
Iron				4,800		4,800
Lead				1,386.9	444.2	444.2
Mercury				11.8		11.8
Nickel			22,534.5	7,450		7,450
Selenium			20,754.9	66.9	222.1	66.9
Silver				169.8		169.8
Thallium						0.00
Tributyltin				2.1		2.08
Zinc				1,801.4		1801.4

Summary - Total Recoverable Metals, µg/L

	Chronic Total Recoverabl e Limits	Acute Most Stringent Dissolved Limits	Total Recoverable to Dissolved Fraction Conversion Factor	Acute Most Stringent Total Recoverable Limits
Aluminum	N/A	0	1.000	0
Antimony		3151.6		3,151.6
Arsenic	1963	444	1.000	444
Barium		0	1.000	0
Beryllium		0.0		0.0
Cadmium	10.3	37.7	0.886	42.6
Chromium (Total)		444		444
Chromium (III)	4380	8738	0.316	27,651
Chromium (VI)	84	54	1.000	54
Copper	444	229	0.960	239
Cyanide	32.5	0		0
Iron		4800	1.000	4,800
Lead	305	444	0.589	754.1
Mercury	0.075	11.8	0.850	13.9
Nickel	2719.9	7450	0.998	7,465
Selenium	CL3	67	1.000	67
Silver		170	0.850	200
Thallium		0.00		0.0

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Tributyltin	0.45	2.08		2.1
Zinc	6207	1801	0.978	1,842

**Total Recoverable to Dissolved Fraction Conversion Factor
[Laboratory Correction Factor] EPA 823-B 96-007 June 1996**

	Acute Factor	Chronic Factor
Aluminum	1.000	1.000
Antimony		
Arsenic	1.000	1.000
Barium	1.000	1.000
Beryllium		
Cadmium	0.886	0.851
Chromium III	0.316	0.860
Chromium VI	1.000	1.000
Copper	0.960	0.960
Cyanide		
Iron	1.000	1.000
Lead	0.589	0.589
Mercury	0.850	1.000
Nickel	0.998	0.997
Selenium	1.000	1.000
Silver	0.850	1.000
Thallium		
Tributyltin		
Zinc	0.978	0.986

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WASTELOAD ANALYSIS [WLA] [REDACTED] = not included in the WLA
Addendum: Statement of Basis

18-Jan-22
4:00 PM

Facilities: ATK Launch Systems, LLC
Outfall: 002
Discharging to: Blue Creek

UPDES No: UT-0024805

I. Introduction

Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses [R317-2-8, UAC]. Projected concentrations are compared to numeric water quality standards to determine acceptability. The anti-degradation policy and procedures are also considered. The primary in-stream parameters of concern may include metals (as a function of hardness), total dissolved solids (TDS), total residual chlorine (TRC), un-ionized ammonia (as a function of pH and temperature, measured and evaluated in terms of total ammonia), and dissolved oxygen.

Mathematical water quality modeling is employed to determine stream quality response to point source discharges. Models aid in the effort of anticipating stream quality at future effluent flows at critical environmental conditions (e.g., low stream flow, high temperature, high pH, etc).

The numeric criteria in this wasteload analysis may always be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

II. Receiving Water and Stream Classification

Blue Creek:	2B,3D,4
Antidegradation Review:	Level I review completed. Level II review is not required.

III. Numeric Stream Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards	
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average)	0.019 mg/l (1 Hour Average)
Chronic Dissolved Oxygen (DO)	N/A	5.0 mg/l (30 Day Average) mg/l (7Day Average) 3.0 mg/l (1 Day Average)
Maximum Total Dissolved Solids	3800.0 mg/l	Background

Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aluminum	87.00 ug/l**	0.139 lbs/day	750.00	ug/l	1.202 lbs/day
Arsenic	150.00 ug/l	0.240 lbs/day	340.00	ug/l	0.545 lbs/day
Cadmium	2.77 ug/l	0.004 lbs/day	8.87	ug/l	0.014 lbs/day
Chromium III	312.79 ug/l	0.501 lbs/day	6544.25	ug/l	10.487 lbs/day
ChromiumVI	11.00 ug/l	0.018 lbs/day	16.00	ug/l	0.026 lbs/day
Copper	35.81 ug/l	0.057 lbs/day	61.68	ug/l	0.099 lbs/day
Iron			1000.00	ug/l	1.602 lbs/day
Lead	23.60 ug/l	0.038 lbs/day	605.52	ug/l	0.970 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.004 lbs/day
Nickel	197.55 ug/l	0.317 lbs/day	1776.82	ug/l	2.847 lbs/day
Selenium	4.60 ug/l	0.007 lbs/day	20.00	ug/l	0.032 lbs/day
Silver	N/A ug/l	N/A lbs/day	56.72	ug/l	0.091 lbs/day
Zinc	454.69 ug/l	0.729 lbs/day	454.69	ug/l	0.729 lbs/day

* Allowed below discharge

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**Chronic Aluminum standard applies only to waters with a pH < 7.0 and a Hardness < 50 mg/l as CaCO₃

Metals Standards Based upon a Hardness of 482.6 mg/l as CaCO₃

IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	0.01 lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			3800.0 mg/l	3.04 tons/day

V. Numeric Stream Standards for Protection of Human Health (Class 1C Waters)

Metals	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3) to			ug/l	lbs/day
Nitrates as N			ug/l	lbs/day

VI. Numeric Stream Standards the Protection of Human Health from Water & Fish Consumption [Toxics]

Metals	Maximum Conc., ug/l - Acute Standards			
	Class 1C		Class 3A, 3B	
Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	33.32 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	1704.61 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	35.64 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.

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Salt Lake City, Utah**

(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.

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

VIII. Modeling Information

The required information for the model may include the following information for both the upstream conditions at low flow and the effluent conditions:

Flow, Q, (cfs or MGD)	D.O. mg/l
Temperature, Deg. C.	Total Residual Chlorine (TRC), mg/l
pH	Total NH3-N, mg/l
BOD5, mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

Other Conditions

In addition to the upstream and effluent conditions, the models require a variety of physical and biological coefficients and other technical information. In the process of actually establishing the permit limits for an effluent, values are used based upon the available data, model calibration, literature values, site visits and best professional judgement.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis. Dry washes are considered to have an upstream flow equal to the flow of the discharge.

Current Upstream Information

	Stream								
	Critical Low								
	Flow	Temp.	pH	T-NH3	BOD5	DO	TRC	TDS	
	cfs	Deg. C		mg/l as N	mg/l	mg/l	mg/l	mg/l	mg/l
Summer (Irrig. Season)	1.2	20.8	8.5	0.05	2.83	6.82	0.00	3732.7	
Fall	4.0	7.4	8.3	0.11	4.00	---	0.00	4420.3	
Winter	2.3	3.0	8.0	0.12	2.95	---	0.00	4420.3	
Spring	4.3	15.4	8.4	0.09	2.85	---	0.00	4420.3	
Dissolved Metals	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb	
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
All Seasons	30.00	36.30	0.50	3.26	2.65*	13.40	46.3	1.68	
Dissolved Metals	Hg	Ni	Se	Ag	Zn	Boron			
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			
All Seasons	0.0000	2.66	2.03	0.98	17.98	10.0			* 1/2 MDL

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Salt Lake City, Utah**

Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	0.16000	20.5	1158.58	0.77285
Fall	0.16000	12.9		
Winter	0.16000	7.9		
Spring	0.16000	16.6		

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	0.160 MGD	0.248 cfs
Fall	0.160 MGD	0.248 cfs
Winter	0.160 MGD	0.248 cfs
Spring	0.160 MGD	0.248 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.16 MGD. If the discharger is allowed to have a flow greater than 0.16 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

Effluent Limitation for Biological Oxygen Demand (BOD) based upon Water Quality Standards or Regulations

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent BOD limitation as follows:

Season	Concentration	
Summer	25.0 mg/l as BOD5	33.4 lbs/day
Fall	25.0 mg/l as BOD5	33.4 lbs/day
Winter	25.0 mg/l as BOD5	33.4 lbs/day
Spring	25.0 mg/l as BOD5	33.4 lbs/day

Effluent Limitation for Dissolved Oxygen (DO) based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent D.O. limitation as follows:

Season	Concentration
Summer	5.00
Fall	5.00
Winter	5.00
Spring	5.00

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Salt Lake City, Utah**

Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

Season	Concentration	Load
Summer	4 Day Avg. - Chronic	5.3 mg/l as N
	1 Hour Avg. - Acute	21.4 mg/l as N
Fall	4 Day Avg. - Chronic	27.0 mg/l as N
	1 Hour Avg. - Acute	68.3 mg/l as N
Winter	4 Day Avg. - Chronic	23.0 mg/l as N
	1 Hour Avg. - Acute	60.6 mg/l as N
Spring	4 Day Avg. - Chronic	25.1 mg/l as N
	1 Hour Avg. - Acute	63.6 mg/l as N

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.%.

Effluent Limitations for Heat/Temperature based upon Water Quality Standards

Summer	40.8 Deg. C.	105.5 Deg. F
Fall	65.2 Deg. C.	149.3 Deg. F
Winter	38.2 Deg. C.	100.7 Deg. F
Spring	77.8 Deg. C.	172.1 Deg. F

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:

	Concentration	1 Hour Average
		Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	8.0 lbs/day
Nitrates as N	4.0 mg/l	6.4 lbs/day
Total Phosphorus as P	0.05 mg/l	0.1 lbs/day
Total Suspended Solids	90.0 mg/l	144.2 lbs/day

Note: Pollution indicator targets are for information purposes only.

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l
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.

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Salt Lake City, Utah**

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.

This doesn't apply to facilities that do not discharge to the Colorado River Basin.

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.

XIII. Notice of UPDES Requirement

This Addendum to the Statement of Basis does not authorize any entity or party to discharge to the waters of the State of Utah. That authority is granted through a UPDES permit issued by the Utah Division of Water Quality. The numbers presented here may be changed as a function of other factors. Dischargers are strongly urged to contact the Permits Section for further information. Permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations provided that the values in this wasteload analysis [TMDL] are not compromised. See special provisions in Utah Water Quality Standards for adjustments in the Total Dissolved Solids values based upon background concentration.

Utah Division of Water Quality
801-538-6052
File Name: ATK_002_WLA_2021.xlsm

APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day 2.000	CBOD Coeff. FORCED (Kd)/day 0.000	CBOD Coeff. (Ka)T 1/day 2.078	REAER. Coeff. (Ka)20 (Ka)/day 131.166	REAER. Coeff. FORCED 1/day 0.000	REAER. Coeff. (Ka)T 1/day 133.792	NBOD Coeff. (Kn)20 1/day 0.400	NBOD Coeff. (Kn)T 1/day 0.427
Open Coeff. (K4)20 1/day 0.000	Open Coeff. (K4)T 1/day 0.000	NH3 LOSS (K5)20 1/day 4.000	NH3 (K5)T 1/day 4.157	NO2+NO3 LOSS (K6)20 1/day 0.000	NO2+NO3 (K6)T 1/day 0.000	TRC Decay K(Cl)20 1/day 32.000	TRC K(Cl)T 1/day 33.597
BENTHIC DEMAND (SOD)20 gm/m2/day 1.000	BENTHIC DEMAND (SOD)T gm/m2/day 1.054						
K1 CBOD	K2 Reaer.	K3 NH3	K4 Open	K5 NH3 Loss	K6 NO2+3	K(Cl) TRC	S Benthic

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Salt Lake City, Utah

{theta}	{theta}	{theta}	{theta}	{theta}	{theta}	{theta}	{theta}
1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.1

Antidegradation Review

An antidegradation review (ADR) was conducted to determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected. The Level I ADR evaluated the criteria of R317-2-3.5(b) and determined that a Level II antidegradation Review is not required.

**Utah Division of Water Quality
Salt Lake City, Utah**

WASTELOAD ANALYSIS [WLA] [REDACTED] = not included in the WLA
Addendum: Statement of Basis

18-Jan-22
4:00 PM

Facilities: ATK Launch Systems, LLC
Outfall: 001
Discharging to: Blue Creek

UPDES No: UT-0024805

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Maximum Total Dissolved Solids	3800.0 mg/l	Background

Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aluminum	87.00 ug/l**	0.305 lbs/day	750.00	ug/l	2.629 lbs/day
Arsenic	150.00 ug/l	0.526 lbs/day	340.00	ug/l	1.192 lbs/day
Cadmium	2.26 ug/l	0.008 lbs/day	6.88	ug/l	0.024 lbs/day
Chromium III	252.96 ug/l	0.887 lbs/day	5292.49	ug/l	18.552 lbs/day
ChromiumVI	11.00 ug/l	0.039 lbs/day	16.00	ug/l	0.056 lbs/day
Copper	28.69 ug/l	0.101 lbs/day	48.32	ug/l	0.169 lbs/day
Iron			1000.00	ug/l	3.505 lbs/day
Lead	16.96 ug/l	0.059 lbs/day	435.33	ug/l	1.526 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.008 lbs/day
Nickel	158.65 ug/l	0.556 lbs/day	1426.94	ug/l	5.002 lbs/day
Selenium	4.60 ug/l	0.016 lbs/day	20.00	ug/l	0.070 lbs/day
Silver	N/A ug/l	N/A lbs/day	36.32	ug/l	0.127 lbs/day
Zinc	365.03 ug/l	1.280 lbs/day	365.03	ug/l	1.280 lbs/day

* Allowed below discharge

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**Chronic Aluminum standard applies only to waters with a pH < 7.0 and a Hardness < 50 mg/l as CaCO₃

Metals Standards Based upon a Hardness of 372.4 mg/l as CaCO₃

IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	0.02 lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			3800.0 mg/l	6.66 tons/day

V. Numeric Stream Standards for Protection of Human Health (Class 1C Waters)

Metals	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3) to Nitrates as N			ug/l ug/l ug/l	lbs/day lbs/day lbs/day

VI. Numeric Stream Standards the Protection of Human Health from Water & Fish Consumption [Toxics]

Metals	Maximum Conc., ug/l - Acute Standards			
	Class 1C		Class 3A, 3B	
Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	12.55 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	642.06 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	13.42 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			6.30 ug/l	0.02 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.

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(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.

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

VIII. Modeling Information

The required information for the model may include the following information for both the upstream conditions at low flow and the effluent conditions:

Flow, Q, (cfs or MGD)	D.O. mg/l
Temperature, Deg. C.	Total Residual Chlorine (TRC), mg/l
pH	Total NH3-N, mg/l
BOD5, mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

Other Conditions

In addition to the upstream and effluent conditions, the models require a variety of physical and biological coefficients and other technical information. In the process of actually establishing the permit limits for an effluent, values are used based upon the available data, model calibration, literature values, site visits and best professional judgement.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis. Dry washes are considered to have an upstream flow equal to the flow of the discharge.

Current Upstream Information

	Stream								
	Critical Low								
	Flow	Temp.	pH	T-NH3	BOD5	DO	TRC	TDS	
	cfs	Deg. C		mg/l as N	mg/l	mg/l	mg/l	mg/l	mg/l
Summer (Irrig. Season)	0.0	12.9	9.0	0.08	14.00	11.31	0.00	3190.0	
Fall	0.0	12.9	9.0	0.08	14.00	---	0.00	3190.0	
Winter	0.0	12.9	9.0	0.08	14.00	---	0.00	3190.0	
Spring	0.0	12.9	9.0	0.08	14.00	---	0.00	3190.0	
Dissolved Metals	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb	
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
All Seasons	1.59*	10.00	6.00	25.00	2.65*	23.00	41.0	75.00	
Dissolved Metals	Hg	Ni	Se	Ag	Zn	Boron			
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			
All Seasons	0.0000	0.53*	1.00	1.00	300.00	10.0			* 1/2 MDL

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Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	0.35000	20.1	1393.09	2.03281
Fall	0.35000	11.0		
Winter	0.35000	6.9		
Spring	0.35000	14.5		

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	0.350 MGD	0.541 cfs
Fall	0.350 MGD	0.541 cfs
Winter	0.350 MGD	0.541 cfs
Spring	0.350 MGD	0.541 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.35 MGD. If the discharger is allowed to have a flow greater than 0.35 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

Effluent Limitation for Biological Oxygen Demand (BOD) based upon Water Quality Standards or Regulations

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent BOD limitation as follows:

Season	Concentration	
Summer	25.0 mg/l as BOD5	73.0 lbs/day
Fall	25.0 mg/l as BOD5	73.0 lbs/day
Winter	25.0 mg/l as BOD5	73.0 lbs/day
Spring	25.0 mg/l as BOD5	73.0 lbs/day

Effluent Limitation for Dissolved Oxygen (DO) based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent D.O. limitation as follows:

Season	Concentration
Summer	5.00
Fall	5.00
Winter	5.00
Spring	5.00

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Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

Season	Concentration	Load
Summer	4 Day Avg. - Chronic	2.5 mg/l as N
	1 Hour Avg. - Acute	9.6 mg/l as N
Fall	4 Day Avg. - Chronic	3.3 mg/l as N
	1 Hour Avg. - Acute	11.3 mg/l as N
Winter	4 Day Avg. - Chronic	3.8 mg/l as N
	1 Hour Avg. - Acute	13.2 mg/l as N
Spring	4 Day Avg. - Chronic	3.3 mg/l as N
	1 Hour Avg. - Acute	11.3 mg/l as N

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.%.

Effluent Limitations for Heat/Temperature based upon Water Quality Standards

Summer	16.9 Deg. C.	62.4 Deg. F
Fall	16.9 Deg. C.	62.4 Deg. F
Winter	16.9 Deg. C.	62.4 Deg. F
Spring	16.9 Deg. C.	62.4 Deg. F

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:

	Concentration	1 Hour Average
		Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	17.5 lbs/day
Nitrates as N	4.0 mg/l	14.0 lbs/day
Total Phosphorus as P	0.05 mg/l	0.2 lbs/day
Total Suspended Solids	90.0 mg/l	315.5 lbs/day

Note: Pollution indicator targets are for information purposes only.

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l
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.

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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.

This doesn't apply to facilities that do not discharge to the Colorado River Basin.

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.

XIII. Notice of UPDES Requirement

This Addendum to the Statement of Basis does not authorize any entity or party to discharge to the waters of the State of Utah. That authority is granted through a UPDES permit issued by the Utah Division of Water Quality. The numbers presented here may be changed as a function of other factors. Dischargers are strongly urged to contact the Permits Section for further information. Permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations provided that the values in this wasteload analysis [TMDL] are not compromised. See special provisions in Utah Water Quality Standards for adjustments in the Total Dissolved Solids values based upon background concentration.

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APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day 2.000	CBOD Coeff. FORCED (Kd)/day 0.000	CBOD Coeff. (Ka)T 1/day 0.798	REAER. Coeff. (Ka)20 (Ka)/day 49564.889	REAER. Coeff. FORCED 1/day 0.000	REAER. Coeff. (Ka)T 1/day 30845.250	NBOD Coeff. (Kn)20 1/day 0.400	NBOD Coeff. (Kn)T 1/day 0.086
Open Coeff. (K4)20 1/day 0.000	Open Coeff. (K4)T 1/day 0.000	NH3 LOSS (K5)20 1/day 4.000	NH3 (K5)T 1/day 1.596	NO2+NO3 LOSS (K6)20 1/day 0.000	NO2+NO3 (K6)T 1/day 0.000	TRC Decay K(CI)20 1/day 32.000	TRC K(CI)T 1/day 9.979
BENTHIC DEMAND (SOD)20 gm/m2/day 1.000	BENTHIC DEMAND (SOD)T gm/m2/day 0.284						
K1 CBOD	K2 Reaer.	K3 NH3	K4 Open	K5 NH3 Loss	K6 NO2+3	K(CI) TRC	S Benthic

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{theta}	{theta}	{theta}	{theta}	{theta}	{theta}	{theta}	{theta}
1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.1

Antidegradation Review

An antidegradation review (ADR) was conducted to determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected. The Level I ADR evaluated the criteria of R317-2-3.5(b) and determined that a Level II antidegradation Review is not required.