

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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Major Municipal Permit No. **UT0000361**  
Storm Water Permit No. **UTR000000**

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

**ANDERSON GENEVA**

is hereby authorized to discharge from its facility to receiving waters named **UTAH LAKE**,  
and to discharge storm water,  
in accordance with specific limitations, outfalls, and other conditions set forth herein.

This modified permit shall become effective on November 1, 2019.

This permit expires at midnight on March 31, 2021.

Signed this 1<sup>st</sup> day of November, 2019.



Erica Brown Gaddis, PhD  
Director

DWQ-2019-012353



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**I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS**

A. Description of Discharge Point. 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</u>	<u>Location of Discharge Point(s)</u>
001	Discharge of storm water and groundwater to the retention pond and then to Utah Lake through a 1500 foot long, 24-inch diameter diffuser at latitude 40°19'25" and longitude 111°45'42".
005-A	Internal discharge from the carbon filtration treatment unit that treats leachate from a RCRA Corrective Action Management Unit located at latitude 40°19'10" N and longitude 111° 44' 27" W.
005-B	Internal discharge from the new carbon filtration treatment unit that treats leachate from a RCRA Corrective Action Management Unit located at latitude 40°19'21.9576" N and longitude 111° 45'23.7528" W.

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 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.

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD <sub>5</sub> , mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
Lead, mg/L	0.151	NA	NA	0.844
Total Dissolved Solids, mg/L	NA	NA	NA	1200
Oil & Grease, mg/L	NA	NA	NA	10.0
PH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD <sub>5</sub>	Monthly	Grab	mg/L
TSS	2 x Month	Grab	mg/L
Oil & Grease	2 x Month	Grab	mg/L
Total Lead	2 x Month	Grab	mg/L
Total Dissolved Solids	2 x Month	Grab	mg/L
Total Phosphorous	2 x Month	Grab	mg/L
pH	2 x Month	Grab	SU
WET, Acute Biomonitoring	Quarterly	Composite	Pass/Fail

2. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 005 (A & B). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Ammonia, lbs/day	62	NA	NA	210
Phenols (4AAP), lbs/day	0.12	NA	NA	0.25
Benzene, lbs/day	NA	NA	NA	0.12
Naphthalene, lbs/day	NA	NA	NA	0.12
Benzo(a)pyrene, lbs/day	NA	NA	NA	0.12

NA – Not Applicable

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
Ammonia	2 x Month	Grab	lbs/day
Phenols (4AAP)	2 x Month	Grab	lbs/day
Benzene	2 x Month	Grab	lbs/day
Naphthalene	2 x Month	Grab	lbs/day
Benzo(a)pyrene	2 x Month	Grab	lbs/day

3. Acute Whole Effluent Toxicity (WET) Testing.

- a. *Whole Effluent Testing – Acute Toxicity.* Starting on the effective date of the permit, the permittee shall quarterly conduct acute static replacement toxicity tests on a composite sample of the final effluent. The sample shall be collected at outfall 001.

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 I.C.3.b, Accelerated Testing*). Samples shall be collected on a two-day progression; i.e., if the first sample is on a Monday, the sampling shall begin on a Wednesday during the next sampling period.

The acute static replacement 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 acute 48-hour static replacement toxicity test using Ceriodaphnia dubia alternating quarterly with the acute 96-hour static replacement toxicity test using Pimephales promelas (fathead minnow).

Acute toxicity occurs when 50 percent or more mortality is observed for either test 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.

If the permit contains a total residual chlorine limitation greater than 0.2 mg/L, the permittee may request approval from the Director to either dechlorinate the sample or to collect the sample prior to chlorination.

Quarterly test results shall be reported along with the Discharge Monitoring Report Form (DMR) submitted for the end of the reporting calendar quarter.

For example, biomonitoring results for the calendar quarter ending March 31 shall be reported with the standard DMR due April 28, with the remaining biomonitoring reports submitted with standard DMRs due each July 28, October 28, and January 28. All test results shall be reported along with the DMR submitted for that reporting period. The format for the report shall be consistent with the latest Region VIII guidance for acute whole effluent reporting and shall include all chemical and physical data as specified.

- b. *Accelerated Testing.* When acute toxicity is indicated during routine biomonitoring 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 biomonitoring to establish whether a pattern of toxicity exists. Accelerated testing will begin within 7 days after the permittee becomes aware of the test result. Accelerated testing shall be conducted as specified under *Part I.C.3.c, 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 5 biomonitoring tests pursuant to the accelerated testing requirements using 100 percent effluent on the single species found to be more sensitive, once every week for up to 5 consecutive weeks.

If 2 consecutive tests (not including the scheduled quarterly or monthly test which triggered the search for a pattern of toxicity) do not result in acute toxicity, 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, and resume routine monitoring.

A pattern of toxicity is established if one of the following occurs:

- (1). If 2 consecutive test results (not including the scheduled quarterly or monthly test that triggered the search for a pattern of toxicity) indicate acute toxicity, this constitutes an established pattern of toxicity.
  
  - (2). If consecutive tests continue to yield differing results each time, the permittee will be required to conduct up to a maximum of 5 acute tests (not including the scheduled quarterly or monthly test which triggered the search for a pattern of toxicity). If 3 out of 5 test results indicate acute toxicity, this will constitute an established pattern of toxicity.
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- d. *Preliminary Toxicity Investigation.* 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 a 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 a spill may have occurred, and similar procedures.

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 30 days of completing the PTI the permittee shall submit for approval a control program to control effluent toxicity and shall proceed to implement such plan within 7 days following approval. The control program, as submitted to or revised by the Director, may be incorporated into the permit.

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 I.C.3.e, Toxicity Reduction Evaluation*).

If toxicity spontaneously disappears during the PTI, the permittee shall submit written notification to that effect to the Director as part of the reporting requirements of paragraph 1 of this section.

- e. *Toxicity Reduction Evaluation.* If toxicity is detected during the life of this permit, and it is determined by the Director that a TRE is necessary, the permittee shall be so notified and shall initiate a TRE immediately thereafter. The purpose of the TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and 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 the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the permittee may:

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

If acceptable to the Director, 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 a modified biomonitoring protocol.

Failure to conduct an adequate TRE, or failure to submit a 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.

- D. 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 28<sup>th</sup> day of the month following the completed reporting period. 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 VI.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

**PART II**  
**DISCHARGE PERMIT NO. UT0000361**  
**PRETREATMENT**

**II. INDUSTRIAL PRETREATMENT PROGRAM**

There is no discharge of process wastewater to any municipal wastewater treatment facility. Any process wastewater that the facility may discharge to the public sanitary sewer, either as direct discharge or as a hauled waste, is subject to federal, state and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated in 40 CFR Section 403, the State Pretreatment Requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

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

### **III. STORM WATER REQUIREMENTS.**

- A. Coverage of This Section. The requirements listed under this section shall apply to storm water discharges from the industrial facility. This section covers discharges of storm water associated with industrial activity to waters of the State from the confines of the facility listed on the cover page. Specific monitoring requirements have been included and are based on the requirements of the UPDES Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity, Permit No. UTR000000.
- B. Prohibition of Non-Storm Water Discharges. Except for discharges identified in *Part I.*, and discharges described below in this paragraph, non-storm water discharges are prohibited. The following non-storm water discharges may be authorized under this permit provided the non-storm water component of the discharge is in compliance with this section; discharges from firefighting activities; fire hydrant flushing; potable water sources including waterline flushing; drinking fountain water; irrigation drainage and lawn watering; routine external building wash down water where detergents or other compounds have not been used in the process; pavement wash waters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.
- C. Storm Water Pollution Prevention Plan Requirements. The permittee must have (on site) or develop and implement a storm water pollution prevention plan as a condition of this permit.
1. Contents of the Plan. The plan shall include, at a minimum, the following items:
    - a. *Pollution Prevention Team.* Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.
    - b. *Description of Potential Pollutant Sources.* Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials, which may be reasonably expected to have the potential as a significant pollutant source. Each plan shall include, at a minimum:

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- (1) *Drainage.* A site map indicating drainage areas and storm water outfalls. For each area of the facility that generates storm water discharges associated with the waste water treatment related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified. The site map shall include but not be limited to:
- (a) Drainage direction and discharge points from all wastewater associated activities including but not limited to grit screen cleaning, bio-solids drying beds and transport, chemical/material loading, unloading and storage areas, vehicle maintenance areas, salt or sand storage areas.
  - (b) Location of any erosion and sediment control structure or other control measures utilized for reducing pollutants in storm water runoff.
  - (c) Location of bio-solids drying beds were exposed to precipitation or where the transportation of bio-solids may be spilled onto internal roadways or tracked off site.
  - (d) Location where grit screen cleaning or other routinely performed industrial activities are located and are exposed to precipitation.
  - (e) Location of any handling, loading, unloading or storage of chemicals or potential pollutants such as caustics, hydraulic fluids, lubricants, solvents or other petroleum products, or hazardous wastes and where these may be exposed to precipitation.
  - (f) Locations where any major spills or leaks of toxic or hazardous materials have occurred.
  - (g) Location of any sand or salt piles.
  - (h) Location of fueling stations or vehicle and equipment maintenance and cleaning areas that are exposed to precipitation.
  - (i) Location of receiving streams or other surface water bodies.
  - (j) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

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- (2) *Inventory of Exposed Materials.* An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the effective date of this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the effective date of this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.
- (3) *Spills and Leaks.* A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.
- (4) *Sampling Data.* A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
- (5) *Summary of Potential Pollutant Sources and Risk Assessment.* A narrative description of the potential pollutant sources from the following activities associated with treatment works: access roads/rail lines; loading and unloading operations; outdoor storage activities; material handling sites; outdoor vehicle storage or maintenance sites; significant dust or particulate generating processes; and onsite waste disposal practices. Specific potential pollutants shall be identified where known.
- (6) *Measures and Controls.* The permittee shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:
  - (7) *Good Housekeeping.* All areas that may contribute pollutants to storm waters discharges shall be maintained in a clean, orderly manner. These are practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff; conservation of vegetation where possible to minimize erosion;

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sweeping of haul roads, bio-solids access points, and exits to reduce or eliminate off site tracking; sweeping of sand or salt storage areas to minimize entrainment in storm water runoff; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; other equivalent measures to address identified potential sources of pollution.

- (8) *Preventive Maintenance.* A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.
- (9) *Spill Prevention and Response Procedures.* Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points, shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures and equipment for cleaning up spills shall be identified in the plan and made available to the appropriate personnel.
- (10) *Inspections.* In addition to the comprehensive site evaluation required under paragraph (*Part III.C.1.b.(16)*) of this section, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility on a periodic basis. The following areas shall be included in all inspections: access roads/rail lines, equipment storage and maintenance areas (both indoor and outdoor areas); fueling; material handling areas, residual treatment, storage, and disposal areas; and wastewater treatment areas. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist developed by the facility is encouraged.
- (11) *Employee Training.* Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify how often training will take place, but training should be held at least annually (once per calendar year). Employee training must, at a minimum, address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and control; fueling procedures; general good housekeeping

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practices; proper procedures for using fertilizers, herbicides and pesticides.

- (12) *Record keeping and Internal Reporting Procedures.* A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.
- (13) *Non-storm Water Discharges.*
- (a) *Certification.* The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G* of this permit.
  - (b) *Exceptions.* Except for flows from firefighting activities, sources of non-storm water listed in *Part III.B. (Prohibition of Non-storm Water Discharges)* of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
  - (c) *Failure to Certify.* Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the *Director* within 180 days after the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State, which are not, authorized by a *UPDES* permit are unlawful, and must be terminated.
- (14) *Sediment and Erosion Control.* The plan shall identify areas, which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

- (15) *Management of Runoff*. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity *Part III.C.1.b* (Description of Potential Pollutant Sources) of this permit] shall be considered when determining reasonable and appropriate measures. Appropriate measures or other equivalent measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, wet detention/retention devices and discharging storm water through the waste water facility for treatment.
- (16) *Comprehensive Site Compliance Evaluation*. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:
- (a) Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.
  - (b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with *Part III.C.1.b* (Description of Potential Pollutant Sources) of this section and pollution prevention measures and controls identified in the plan in accordance with *Part III.C.1.b.(6)* (Measures and Controls) of this section shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.
  - (c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution

prevention plan, and actions taken in accordance with paragraph *i.* (above) shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G* (Signatory Requirements) of this permit.

(17) *Deadlines for Plan Preparation and Compliance.* The permittee shall prepare and implement a plan in compliance with the provisions of this section within 270 days of the effective date of this permit. If the permittee already has a plan, it shall be revised according to *Part III.C.1.b.(16)*, Comprehensive Site Evaluation.

(18) *Keeping Plans Current.* The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the state or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objective of controlling pollutants in storm water discharges associated with the activities at the facility.

**D. Monitoring and Reporting Requirements.**

1. Quarterly Visual Examination of Storm Water Quality. Facilities shall perform and document a visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination must be made at least once in each of the following designated periods during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event: January through March; April through June; July through September; and October through December.

a. *Sample and Data Collection.* Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for entire permit term.

- b. *Visual Storm Water Discharge Examination Reports.* Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
  
- c. *Representative Discharge.* When the permittee has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the observation data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.
  
- d. *Adverse Conditions.* When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the results of the visual examination. Adverse weather conditions, which may prohibit the collection of samples, include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).
  
- e. *Inactive and Unstaffed Site.* When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.
  
- f. *Analytical Monitoring Requirements.* During the second and fourth year of the permit the facility must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) except as provided in the paragraphs of this section titled (Sampling Waiver), (Representative Discharge), and (Alternative Certification). The facility is required to monitor their storm water discharges for the pollutants of concern listed in the table below (table N-1). Facilities must report in accordance with the (Reporting) section. In addition to the parameters listed in table N-1, the permittee shall

provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

**Table N-1.**  
**Industry Monitoring Requirements**

<b>Pollutants of Concern<sup>i</sup></b>	<b>Benchmark Cut-Off Concentration</b>
Chemical Oxygen Demand (COD)	120 mg/L
Total Suspended Solids (TSS)	100 mg/L
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Copper	0.0636 mg/L
Total Recoverable Iron	1.0 mg/L
Total Recoverable Lead	0.0816 mg/L
Total Recoverable Zinc	0.117 mg/L

- g. *Monitoring Periods.* The facility shall monitor samples collected during the sampling periods of: January to March, April to June, July to September, and October to December for the years specified in paragraph above.
- h. *Sample Type.* A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.
- i. *Sampling Waiver.*
- (1) *Adverse Conditions.* When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate

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qualifying event in the next period and submit the data along with data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

- (2) **Low Concentration Waiver.** When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring period is less than the corresponding value for that pollutant listed in Table N-1 under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements in the fourth year monitoring period. The facility must submit to the *Director*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility which drains to the outfall for which sampling was waived.
  
- (3) **Inactive and Unstaffed Site.** When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The facility must submit to the *Director*, in lieu of monitoring data, a certification statement on the *SWDMR* stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

**IV. 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 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

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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.
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 V.G, Bypass of Treatment Facilities.*);
  - c. Any upset which exceeds any effluent limitation in the permit (See *Part V.H, Upset Conditions.*);
  - d. Violation of a maximum 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.

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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 IV.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 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.

**V. 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 V.G, *Bypass of Treatment Facilities* and Part V.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:
    - (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 V.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 V.G.2.a (1), (2) and (3).*
3. Notice.
  - a. *Anticipated bypass.* Except as provided above in *section V.G.2* and below in *section V.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;

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- (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 V.G.3.a.(1) through (6)* to the extent practicable.
- c. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part III.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 IV.H, Twenty-four Hour Notice of Noncompliance Reporting;* and,
  - d. The permittee complied with any remedial measures required under *Part V.D, Duty to Mitigate.*
- 3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

**VI. 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:

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- a. The authorization is made in writing by a person described above and submitted to the Director, and,
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
3. Changes to authorization. If an authorization under *paragraph VI.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 VI.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

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- 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;
  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.

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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 of federal regulations.
- Q. Toxicity Limitation - Reopener Provision. 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.3.a* of this permit, during the duration of this permit.
  2. The TRE results indicate that the toxicant(s) represent pollutant(s) that may be controlled with specific numerical limits, and the Director agrees that numerical controls are the most appropriate course of action.
  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.
- 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".

**VII. 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 “LC<sub>50</sub>”).
5. “Bypass,” means the diversion of waste streams from any portion of a treatment facility.
6. “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.
- 7. “CWA,” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
  - 8. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
  - 9. “EPA,” means the United States Environmental Protection Agency.
  - 10. “Director,” means Director of the Division of Water Quality.
  - 11. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
  - 12. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
  - 13. “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.
  - 14. “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.
- B. Storm Water.
- 1. “Best Management Practices” (“BMPs”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

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**DISCHARGE PERMIT NO. UT0000361**

2. “Coal pile runoff” means the rainfall runoff from or through any coal storage pile.
3. “Co-located industrial activity” means when a facility has industrial activities being conducted onsite that are described under more than one of the coverage sections of *Appendix II* in the General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity. Facilities with co-located industrial activities shall comply with all applicable monitoring and pollution prevention plan requirements of each section in which a co-located industrial activity is described.
4. “Commercial Treatment and Disposal Facilities” means facilities that receive, on a commercial basis, any produced hazardous waste (not their own) and treat or dispose of those wastes as a service to the generators. Such facilities treating and/or disposing exclusively residential hazardous wastes are not included in this definition.
5. “Landfill” means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.
6. “Land application unit” means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.
7. “Municipal separate storm sewer system” (large and/or medium) means all municipal separate storm sewers that are either:
  - a. Located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (at the issuance date of this permit, Salt Lake City is the only city in Utah that falls in this category); or
  - b. Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (at the issuance date of this permit Salt Lake County is the only county that falls in this category); or
  - c. Owned or operated by a municipality other than those described in paragraph *a.* or *b.* (above) and that are designated by the *Director* as part of the large or medium municipal separate storm sewer system.
8. “NOI” means ”notice of intent”, it is an application form that is used to obtain coverage under the General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity.

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9. “NOT” means “notice of termination”, it is a form used to terminate coverage under the General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity.
10. “Point source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
11. “Section 313 water priority chemical” means a chemical or chemical categories that:
  - a. Are listed at *40 CFR 372.65* pursuant to *Section 313* of the *Emergency Planning and Community Right-to-Know Act (EPCRA)* (also known as *Title III of the Superfund Amendments and Reauthorization Act (SARA)* of 1986);
  - b. Are present at or above threshold levels at a facility subject to *EPCRA Section 313* reporting requirements; and
  - c. Meet at least one of the following criteria:
    - (1) Are listed in *Appendix D* of *40 CFR Part 122* on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);
    - (2) Are listed as a hazardous substance pursuant to *Section 311(b)(2)(A)* of the *CWA* at *40 CFR 116.4*; or
    - (3) Are pollutants for which EPA has published acute or chronic water quality criteria. See *Appendix III* of this permit. This appendix was revised based on final rulemaking EPA published in the *Federal Register* November 30, 1994.
12. “Significant materials” includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *CERCLA*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.
13. “Significant spills” includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311 of the Clean Water*

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*Act (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).*

14. "Storm water" means storm water runoff, snowmelt runoff, and surface runoff and drainage.
15. "SWDMR" means "storm water discharge monitoring report", a report of the results of storm water monitoring required by the permit. The Division of Water Quality provides the storm water discharge monitoring report form.
16. "Storm water associated with industrial activity" (*UAC R317-8-3.8(6)(c) & (d)*) means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the *UPDES* program. For the categories of industries identified in paragraphs (*a*) through (*j*) of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined in *40 CFR Part 401*); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph (*k*) of this definition, the term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (*a*) to (*k*) of this definition) include those facilities designated under *UAC R317-8-3.8(1)(a)5*. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:
  - a. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under *40 CFR*

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*Subchapter N* (except facilities with toxic pollutant effluent standards that are exempted under category (k) of this definition);

- b. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;
- c. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under *40 CFR 434.11(l)* because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations that have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but that have an identifiable owner/operator;
- d. Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;
- e. Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under *Subtitle D* of RCRA;
- f. Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;
- g. Steam electric power generating facilities, including coal handling sites;
- h. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45 and 5171 that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified under paragraphs (a) to (g) or (I) to (k) of this subsection are associated with industrial activity;

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- i. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under *40 CFR Part 403*. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located in the confines of the facility, or areas that are in compliance with *40 CFR Part 503*;
  - j. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than 5 acres of total land area that are not part of a larger common plan of development or sale;
  - k. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and that are not otherwise included within categories (a) to (j))
17. "Waste pile" means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

**FACT SHEET STATEMENT OF BASIS  
ANDERSON-GENEVA DEVELOPMENT  
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)  
UPDES PERMIT NUMBER: UT0000361  
PERMIT MODIFICATION  
MAJOR INDUSTRIAL FACILITY**

**FACILITY CONTACT INFORMATION**

Contact: Jerry Grover  
Position: Site Engineer  
Phone: (801) 225-2031

Mailing Address: 281 South Vineyard Road, Suite 106  
Vineyard, UT 84057

Facility Address: 900 North Geneva Road  
Vineyard, UT 84057

**DESCRIPTION OF FACILITY**

The Anderson-Geneva Development facility (AGD) is a defunct integrated steel mill located in the town of Vineyard, Utah, just east of Utah Lake in Utah County. As of June 2010, the steel making machinery has been dismantled and removed off site, and all of the buildings on the property have been demolished. The only wastewater process currently in operation is the RCRA Granular Activated Carbon (GAC) treatment unit discharging through Outfall 005, which is an internal discharge point as part of the storm water collection system ultimately discharging through Outfall 001. All wastewater, groundwater, and storm water generated at the facility is discharged via Outfall 001 to Utah Lake through a 1500 foot long, 24-inch diameter diffuser pipe.

**DESCRIPTION OF PERMIT MODIFICATION**

AGD has requested the relocation of Outfall 005 to accommodate a new GAC treatment unit located approximately  $\frac{3}{4}$  mile west from the existing outfall and GAC treatment unit. The receiving waters remain unchanged as do the effluent flow volumes, which are designed to discharge intermittently from the GAC treatment units (12 gallons per minute peak). Since the existing GAC treatment unit and Outfall 005 location will initially remain in place until after the new outfall location is permitted and operational, this will be accomplished by identifying the discharge locations as Outfall 005-A (existing) and Outfall 005-B (new location). Therefore the outfall descriptions are being updated accordingly in the permit. This is the only change being proposed with this permit modification and subject to public comment. All other permit provisions remain unopened and unchanged.

## **DISCHARGE INFORMATION**

### **DESCRIPTION OF DISCHARGES**

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Discharge of storm water and groundwater to the retention pond and then to Utah Lake through a 1500-foot long, 24-inch diameter diffuser located at latitude 40°19'25" and longitude 111° 45' 42".
005-A	Internal discharge from the carbon filtration treatment unit that treats leachate from a RCRA Corrective Action Management Unit located at latitude 40°19'10" N and longitude 111° 44' 27" W.
005-B	Internal discharge from the new carbon filtration treatment unit that treats leachate from a RCRA Corrective Action Management Unit located at latitude 40°19'21.9576" N and longitude 111° 45'23.7528" W.

### **RECEIVING WATERS AND STREAM CLASSIFICATION**

The discharge from all permitted outfalls flows through Outfall 001 into Utah Lake. Utah Lake is Class 2B, 3B, 3D, and 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 3B - Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.
- 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.

The permit limitations and monitoring requirements remain unchanged as follows:

Outfall 001

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD <sub>5</sub> , mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
Lead, mg/L	0.151	NA	NA	0.844
Total Dissolved Solids, mg/L	NA	NA	NA	1200
Oil & Grease, mg/L	NA	NA	NA	10.0
PH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

Outfall 005 (A & B)

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Ammonia, lbs/day	62	NA	NA	210
Phenols (4AAP), lbs/day	0.12	NA	NA	0.25
Benzene, lbs/day	NA	NA	NA	0.12
Naphthalene, lbs/day	NA	NA	NA	0.12
Benzo(a)pyrene, lbs/day	NA	NA	NA	0.12

NA – Not Applicable

Outfall 001

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD <sub>5</sub>	Monthly	Grab	mg/L
TSS	2 x Month	Grab	mg/L
Oil & Grease	2 x Month	Grab	mg/L
Total Lead	2 x Month	Grab	mg/L
Total Dissolved Solids	2 x Month	Grab	mg/L
Total Phosphorous	2 x Month	Grab	mg/L
pH	2 x Month	Grab	SU
WET, Acute Biomonitoring	Quarterly	Composite	Pass/Fail

Outfall 005 (A & B)

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
Ammonia	2 x Month	Grab	lbs/day
Phenols (4AAP)	2 x Month	Grab	lbs/day
Benzene	2 x Month	Grab	lbs/day
Naphthalene	2 x Month	Grab	lbs/day
Benzo(a)pyrene	2 x Month	Grab	lbs/day

**PERMIT DURATION**

It is recommended that this modified permit be effective for the remainder of the five (5) year permit cycle, which is set to expire at midnight on March 31, 2021.

Drafted by  
Jeff Studenka, Environmental Scientist  
Utah Division of Water Quality  
September 20, 2019

**PUBLIC NOTICE INFORMATION (Updated October 28, 2019)**

Began: September 25, 2019  
Ended: October 25, 2019

Public Noticed in The Daily Herald Newspaper, as well as on DWQ's website during the public notice and comment period. No comments were received; therefore the modified permit has been issued as drafted.

DWQ-2019-012351

**FACT SHEET STATEMENT OF BASIS  
ANDERSON GENEVA  
RENEWAL PERMIT  
UPDES PERMIT NUMBER: UT0000361  
MAJOR INDUSTRIAL**

**FACILITY CONTACTS**

Jerry Grover, Site Engineer

(801) 225-2031 ext. 2

Mailing Address: 373 East 1950 North Suite E  
Vineyard, UT 84057

Facility Address: 900 North Geneva Road  
Vineyard, UT 84057

**DESCRIPTION OF FACILITY**

The Geneva facility is a now defunct integrated steel mill located in the town of Vineyard Utah, east of Utah Lake at latitude 40°18'02" and longitude 111°44'28". As of June 2010, the steel making machinery has been dismantled and shipped off site, and all of the buildings on the property have been demolished.

As of September 2015, the only treatment unit currently in operation is the RCRA Granular Activated Carbon Treatment Unit which discharges from Outfall 005. The discharge of groundwater and storm water occurs at Outfall 001.

Geneva's current operation falls under two Standard Industrial Classification (SIC) Codes. They are: 4953 – Refuse Systems and 5093 – Scrap and Waste Materials. From these classifications Anderson Geneva's effluent limitations are subject to the Utah Secondary Treatment Standards.

All wastewater, groundwater, and storm-water generated at the facility is discharged to Utah Lake through a 1500 foot long, 24 inch diameter diffuser with 20, 6" portals.

**SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

DWQ has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided RP model. Since the Geneva facility no longer has any active processes contributing to Outfall 001 an RP initial screening check was run for Cyanide, Lead, Zinc, and Ammonia. The RP analysis showed that there is no potential to violate

water quality standards for Cyanide, Zinc, and Ammonia; as a result, this permit will not include limits for these parameters.

## DISCHARGE

### **DESCRIPTION OF DISCHARGE**

Anderson Geneva has been reporting self-monitoring results on discharge monitoring reports on a monthly basis. There have not been significant violations during the previous 5 years.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Discharge of storm water and groundwater to the retention pond and then to Utah Lake through a 1500-foot long, 24-inch diameter diffuser at latitude 40°19'25" and longitude 111° 45' 42".
005	Internal discharge from the carbon filtration treatment unit that treats groundwater from a RCRA site groundwater collection system.

### **RECEIVING WATERS AND STREAM CLASSIFICATION**

The discharge flows into the Utah Lake. Utah Lake is Class 2B, 3B, 3D, and 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 3B - Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.
- 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.

### **BASIS FOR EFFLUENT LIMITATIONS**

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD<sub>5</sub>), total dissolved solids, and pH are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. The limit for lead is based upon water quality standards obtained from the waste load analysis (WLA). The WLA indicates that these limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The oil and grease is based on best professional judgment (BPJ). The effluent limits for Outfall 005 have been the same since the RCRA site was designated. The permit limitations are:

Outfall 001

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD <sub>5</sub> , mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
Lead, mg/L	0.151	NA	NA	0.844
Total Dissolved Solids, mg/L	NA	NA	NA	1200
Oil & Grease, mg/L	NA	NA	NA	10.0
PH, Standard Units	NA	NA	6.5	9.0

Outfall 005

Effluent Limitations				
Parameter	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Ammonia, lbs/day	62	NA	NA	210
Phenols (4AAP), lbs/day	0.12	NA	NA	0.25
Benzene, lbs/day	NA	NA	NA	0.12
Naphthalene, lbs/day	NA	NA	NA	0.12
Benzo(a)pyrene, lbs/day	NA	NA	NA	0.12

NA – Not Applicable.

**SELF-MONITORING AND REPORTING REQUIREMENTS**

The following self-monitoring requirements are similar to the previous permit. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report or NetDMR (DMR) no later than the 28<sup>th</sup> day of the month following the completed reporting period. Lab sheets for biomonitoring must be attached to the biomonitoring DMR.

Outfall 001

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD <sub>5</sub>	Monthly	Grab	mg/L
TSS	2 x Month	Grab	mg/L
Oil & Grease	2 x Month	Grab	mg/L
Total Lead	2 x Month	Grab	mg/L
Total Dissolved Solids	2 x Month	Grab	mg/L
Total Phosphorous	2 x Month	Grab	mg/L
pH	2 x Month	Grab	SU
WET, Acute Biomonitoring	Quarterly	Composite	Pass/Fail

Outfall 005

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
Ammonia	2 x Month	Grab	lbs/day
Phenols (4AAP)	2 x Month	Grab	lbs/day
Benzene	2 x Month	Grab	lbs/day
Naphthalene	2 x Month	Grab	lbs/day
Benzo(a)pyrene	2 x Month	Grab	lbs/day

**WASTE LOAD ANALYSIS AND ANTIDegradation REVIEW**

Effluent limitations are also derived using a waste load analysis (WLA), which is appended to this statement of basis. The WLA incorporates Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters.

During the UPDES permit development, a WLA and ADR were performed. An ADR Level I review was performed and the conclusion was that an ADR level II review was not required. A copy of the ADR review form is appended to this document.

## STORM WATER

### **STORMWATER REQUIREMENTS**

Storm water provisions are included in this combined UPDES permit.

Storm water requirements are included in the permit. Geneva Steel is required to develop a storm water pollution prevention plan in compliance with the permit conditions.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include:

1. The development of a pollution prevention team:
2. Development of drainage maps and materials stockpiles:
3. An inventory of exposed materials:
4. Spill reporting and response procedures:
5. A preventative maintenance program:
6. Employee training:
7. Certification that storm water discharges are not mixed with non-storm water discharges:
8. Compliance site evaluations and potential pollutant source identification, and:
9. Visual examinations of storm water discharges.

### PRETREATMENT REQUIREMENTS

There is no discharge of process wastewater to any municipal wastewater treatment facility. Any process wastewater that the facility may discharge to the public sanitary sewer, either as direct discharge or as a hauled waste, is subject to federal, state and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated in 40 CFR Section 403, the State Pretreatment Requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

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

### BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317-2-7.2.*

Since the permittee is a major discharger, the renewal permit will require Whole Effluent Toxicity (WET) testing. Acute toxicity tests will be conducted quarterly, alternating between Ceriodaphnia dubia and Pimephales promelas (fathead minnows) species, as detailed in the permit. The permit will contain the standard requirements for accelerated testing upon failure of a WET test, and a PTI (Preliminary Toxicity Investigation) and TRE (Toxicity Reduction Evaluation) as necessary. Since the effluent is dispersed into Utah Lake through a 1500-foot long diffuser, the potential for toxicity is not deemed sufficient to require chronic testing or more frequent biomonitoring in the permit.

The permit will contain the standard requirements for accelerated testing upon failure of a WET test and a PTI (Preliminary Toxicity Investigation) and TRE (Toxicity Reduction Evaluation) as necessary.

### **PERMIT DURATION**

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

Drafted by  
Matthew Garn, P.E.  
Utah Division of Water Quality  
January 11, 2016

### **PUBLIC NOTICE**

Began: February 12, 2016  
Ended: March 14, 2016  
Public Noticed in The Daily Herald Newspaper

There were no comments received during the public notice period.

March 23, 2016

Preliminary RP Results

		Effluent				
		Parameter	Cyanide	Lead	Zinc	Ammonia
		ARP Val	0.10861	0.49367	1.191	14.9
		CRP Val	0.02567	0.15146	46.228	202.94
Metals, mg/L	2012	jan	0.005	0.1	0.1	7.2
		feb	0.005	0.1	0.1	5.2
		mar	0.005	0.1	0.1	4.1
		april	0.005	0.1	0.1	3.2
		may	<.005	0.1	0.1	2
		june	0.005	0.1	0.1	5.3
		july	0.005	0.1	0.1	5.4
		aug	0.005	0.05	0.05	5
		sept	0.01	0.1	0.1	1.1
		oct	0.005	0.1	0.1	0.2
		nov	0.005	0.1	0.1	1.1
		dec	0.005	0	0.1	1
	2013	jan	0.005	0.1	0.1	1.5
		feb	0.005	0.1	0.1	7.1
		mar	0.003	0	0.1	1.1
		april	0.003	0	0.1	0.3
		may	0.005	0	0.1	0.3
		june	0.003	0.025	0.1	1.1
		july	0.005	0	0	0.6
		aug	0.005	0	0.1	0.3
		sept	0.001	0.025	0.1	0.3
		oct	0.005	0	0	0.3
		nov	0.003	0	0	1.2
		dec	0.005	0	0	1.2
	2014	jan	0.005	0	0	1
		feb	0.003	0	0	0.6
		mar	0.003	0	0.1	0
		april	0.003	0	0.1	0.3
		may	0.005	0	0.1	0.3
		june	0.003	0	0.1	0.3
		july	0.005	0.025	0.2	0.7
		aug	0.005	0	0.1	0.3
		sept	0.01	0	0.4	5.6
		oct	0.005	0	0	0.3
		nov	0.005	0.025	0.025	0.3
		dec	0.005	0	0	1.5
	2015	jan	0.005	0	0	0.8
		feb	0.005	0.05	0.05	0.5
		mar	0	0	0.16	0.5
		april	0.005	0	0	0.3
		may	<.005	0.11	0.11	0.5
		june	0.005	0	0.1	0.3
		july	0.005	0	0.1	0.5
		aug	0.005	0.1	0.1	0.5
	ND Value		0	0	0	0
	Max		0.01	0.11	0.4	7.2
	Run A RP?		No	No	No	No
	Run C RP?		No	YES	No	No



# Antidegradation Review Form

## Part A: Applicant Information

Facility Name: Geneva Facility

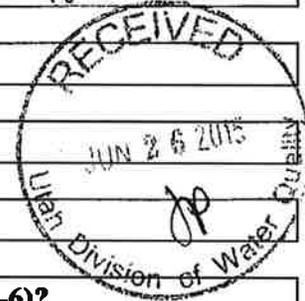
Facility Owner: Anderson Geneva Development

Facility Location: Approximately 40° 19' 20" 111° 45' 12"

Form Prepared By: Jerry Graver Site Engineer

Outfall Number: 001, 005

Receiving Water: Utah Lake



**What Are the Designated Uses of the Receiving Water (R317-2-6)?**  
Domestic Water Supply: None  
Recreation: None  
Aquatic Life: None  
Agricultural Water Supply: None  
Great Salt Lake: None

Category of Receiving Water (R317-2-3.2, -3.3, and -3.4): Category 1

UPDES Permit Number (if applicable): UT0000361

**Effluent Flow Reviewed:**  
Typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.

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

- A UPDES permit for a new facility, project, or outfall.
- A UPDES permit renewal with an expansion or modification of an existing wastewater treatment works.
- A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.
- A UPDES permit renewal with no changes in facility operations.

Document Date 6/24/2015



**Part B. Is a Level II ADR required?**

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

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

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

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

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

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

**No** No Level II ADR is required and there is no need to proceed further with review questions.

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

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

**No** No Level II ADR is required and there is no need to proceed further with review questions.

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

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

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

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

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

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

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

Additional justification, as needed:

**Level II ADR**

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

**Optional Report Name:**

**Part C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located?** *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in this section. More information is available in Section 6.2 of the Implementation Guidance.*

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

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

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

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

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

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

**Parameters of Concern:**

<b>Rank</b>	<b>Pollutant</b>	<b>Ambient Concentration</b>	<b>Effluent Concentration</b>
1			
2			
3			
4			
5			

**Pollutants Evaluated that are not Considered Parameters of Concern:**

<b>Pollutant</b>	<b>Ambient Concentration</b>	<b>Effluent Concentration</b>	<b>Justification</b>

**Part E. Alternative Analysis Requirements of a Level II**

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

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

**Yes** (Proceed to Part F)

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

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

**Report Name:**

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

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

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

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

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

Yes

No

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

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

## **Part F. Optional Information**

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

No

Yes

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

No

Yes

**Report Name:**

**Part G. Certification of Antidegradation Review**

**G1. Applicant Certification**

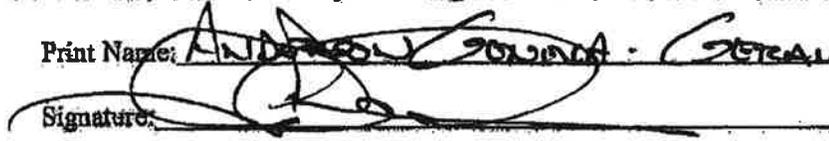
*The form should be signed by the same responsible person who signed the accompanying permit application or certification.*

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

Print Name:

~~ANDREW SOLUNA~~ - GERALD ANDERSON

Signature:



Date:

6/24/15

**G2. DWO Approval**

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

Water Quality Management Section

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



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

**Date:** October 1, 2015

**Prepared by:** Dave Wham   
Standards and Technical Services Section

**Facility:** Anderson Geneva Development, Inc.  
UPDES No. UT0000361

**Receiving water:** Utah Lake (2B, 3C, 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

Outfall 001: All wastewater, groundwater, and storm-water generated at the facility is discharged to Utah Lake through a 1500 foot long, 24 inch diameter diffuser with 20, 6" portals with a design capacity of 20 MGD.

The mean monthly design discharge is 5.00 MGD for the facility.

Receiving Water

The receiving water for Outfall 001 is Utah Lake. Per UAC R317-2-13.12, the designated beneficial uses for Utah Lake 2B, 3C, 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 3C - Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.*
- *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

Utah Lake is listed as impaired total phosphorous (TP) and total dissolved solids (TDS) according to the 2012 303(d) list. A TMDL has not been developed for either constituent. No numeric criteria are available for TP. The water quality standard for TDS is 1200 mg/l. Since no assimilative capacity exists for this constituent, the standard of 1200 mg/l will need to be met at end-of-pipe.

#### Mixing Zone

The maximum allowable mixing zone for discharge to lakes is 35 feet for acute conditions and 200 feet for chronic conditions, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone. Mixing zone calculations were made using the Utah Lake Model. The simplifying (and conservative) assumption of a single discharge from a 24" diameter inch pipe was used in developing effluent limits.

#### Parameters of Concern

The potential parameters of concern identified for the discharge/receiving water were total dissolved solids and ammonia as determined in consultation with the UPDES Permit Writer.

#### WET Limits

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 LC<sub>50</sub> (lethal concentration, 50%) percent effluent for acute toxicity and the IC<sub>25</sub> (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 LC<sub>50</sub> is typically 100% effluent and does not need to be determined by the WLA.

Table 2: WET Limits for IC<sub>25</sub>

Outfall	Percent Effluent
Outfall 001	3.5%

#### Wasteload Allocation Methods

Effluent limits were determined for conservative constituents using a simple mass balance mixing analysis. 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 Utah Lake Model uses mixing and ammonia decay to determine ammonia effluent limits. The mass balance analysis and resulting effluent limits are summarized in Appendix A.

Utah Division of Water Quality  
Wasteload Analysis  
Anderson Geneva.  
UPDES No. UT0000361

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, as there is no increase in concentration or load over that authorized in the current permit.

Documents:

WLA Document: Anderson-Geneva\_WLA\_9-10-15.docx  
Wasteload Analysis: Anderson-Geneva\_WLA\_9-15-15.xlsm

**WASTELOAD ANALYSIS [WLA]  
Addendum: Statement of Basis  
SUMMARY**

**Discharging Facility:** Anderson Geneva  
UPDES No: 0000361  
Current Flow: 5.00 MGD Design Flow  
Design Flow 5.00 MGD

**Receiving Water:** Utah Lake  
Lake Classification: 2B, 3B, 3D, 4

TDS (mg/l)	1058.00	Average
Hardness (mg/l)	400.00	Average
pH	8.40	Average
Temp (C)	12	Average

<b>Selected Effluent Limit Summary:</b>		<b>WQ Standard:</b>
Flow, MGD:	5.00 MGD	Design Flow
BOD, mg/l:	25.0 All Season	5 Indicator
Dissolved Oxygen, mg/l:	5.00 All Season	5.50 30 Day Average
TNH <sub>3</sub> , Acute, mg/l:	14.90 All Season	Varies Function of pH and Temperature
TDS, mg/l:	1200.00 All Season	1200 Receiving water is impaired for TDS
Zinc, ug/l	1191.87 All Season	Varies Function of Hardness
Copper, ug/l	151.37 All Season	Varies Function of Hardness

**Modeling Parameters:**

Acute Dilution Ratio 4.94 to 1  
Chronic Dilution Ratio: 28.21 to 1

**Level 1 Antidegradation Level Completed: Level II Review not required -  
No increase over in concentration or load of pollutants over previous permit**

Date: 10/1/2015

Permit Writer:

WLA by:

WQM Sec. Approval:

TMDL Sec. Approval:

*John M. Wilson*

10-1-15

Wasteload Analysis - Total Maximum Daily Load (Lake TMDL)

10/1/2015 13:41

Facility: Anderson Geneva  
 Discharging to: Utah Lake

UPDES No: UT- 0000361

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 lake water quality. The wasteload analysis does not take 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 water quality parameters of concern may include metals (as a function of hardness), total dissolved solids (TDS), total residual chlorine (TRC), unionized 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 water quality response to point source discharges. Models aid in the effort of anticipating water quality at future effluent flows at critical environmental conditions (e.g., high temperature, high pH, etc).

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

II. Receiving Water and Lake / Reservoir Classification

Utah Lake 2B, 3B, 3D, 4

III. Numeric Water Quality Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Function of Temperature and pH	pH	Temp
	0.72 mg/l as N (4 Day Average)	8.56	21.9
	3.02 mg/l as N (1 Hour Average)	8.53	20.2
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average)		
	0.019 mg/l (1 Hour Average)		
Chronic Dissolved Oxygen (DO)	5.50 mg/l (30 Day Average)		
	4.00 mg/l (7Day Average)		
	3.00 mg/l (1 Day Average)		
Maximum Total Dissolved Solids [Class 4 Ag]	1200 mg/l		
Maximum Boron [Class 4 Ag]	750 mg/l		

Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard Concentration	1 Hour Average (Acute) Standard Concentration
Aluminum	87.000 ug/l	750 ug/l
Antimony	ug/l	ug/l
Arsenic	190.000 ug/l	360.00 ug/l

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Asbestos	ug/l		ug/l
Barium	ug/l	1000.00	ug/l
Beryllium	ug/l		ug/l
Cadmium	0.723 ug/l	8.31	ug/l
Chromium III	255.438 ug/l	5344.26	ug/l
Chromium VI	11.000 ug/l	16.00	ug/l
Copper	28.985 ug/l	48.86	ug/l
Cyanide	5.200 ug/l	22.00	ug/l
Iron	ug/l	1000.00	ug/l
Lead	17.223 ug/l	441.97	ug/l
Mercury	0.012 ug/l	2.40	ug/l
Nickel	271.06 ug/l	1441.36	ug/l
Selenium	5.000 ug/l	20.00	ug/l
Silver	ug/l	37.07	ug/l
Thallium			
Zinc	368.725 ug/l	368.73	ug/l

Based upon a Hardness of 376.85 mg/l as CaCO3

Based upon 380.86 mg/l as CaCO3

Organics [Pesticides]

	4 Day Average (Chronic) Standard	1 Hour Average (Acute) Standard	
Parameter	Concentration	Concentration	
Aldrin		1.500	ug/l
Chlordane	0.0043 ug/l	1.200	ug/l
DDT, DDE	0.001 ug/l	0.550	ug/l
Dieldrin	0.0056 ug/l	0.240	ug/l
Endosulfan, a & b	0.056 ug/l	0.110	ug/l
Endrin	0.036 ug/l	0.086	ug/l
Guthion			
Heptachlor & H. epoxide	0.0038 ug/l	0.260	ug/l
Lindane	0.08 ug/l	1.000	ug/l
Methoxychlor		0.030	ug/l
Mirex		0.001	ug/l
Parathion	0.0130 ug/l	0.066	ug/l
PCB's	0.014 ug/l		
Pentachlorophenol	15.00 ug/l	19.000	ug/l
Toxephene	0.0002 ug/l	0.730	ug/l

IV. Numeric Water Quality Standards for Protection of Agriculture

TDS	1200	mg/l
Arsenic	100	ug/l
Boron	750	ug/l
Cadmium	10	ug/l
Chromium	100	ug/l
Copper	200	ug/l
Lead	100	ug/l
Selenium	50	ug/l

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

Metals  
Arsenic  
Barium

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Cadmium  
Chromium  
Lead  
Mercury  
Selenium  
Silver  
Fluoride (3)  
to  
Nitrates as N

Chlorophenoxy Herbicides  
2,4-D  
2,4,5-TP  
Methoxychlor

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

	Maximum Conc., ug/l - Acute Standards	
	Class 1C [2 Liters/Day for 70 Kg Person over 70 Yr.]	Class 3A, 3B, 3C, 3D [6.5 g for 70 Kg Person over 70 Yr.]
Antimony	5.6 ug/l	640 ug/l
Arsenic	A	A
Beryllium	C	C
Cadmium	C	C
Chromium III	C	C
Chromium VI	C	C
Copper	1,300 ug/l	
Lead	C	C
Mercury	A	A
Nickel	100 ug/l	4,600 ug/l
Selenium	A	4,200 ug/l
Silver		
Thallium	0.24 ug/l	6.3 ug/l
Zinc	7400 ug/l	26,000 ug/l
Cyanide	140 ug/l	220,000 ug/l
Asbestos	7.00E+06 Fibers/L	
2,3,7,8-TCDD Dioxin	5.0 E-9 ug/l	5.1 E-9 ug/l
Acrolein	190 ug/l	290 ug/l
Acrylonitrile	0.051 ug/l	0.25 ug/l
Alachlor	2 ug/l	
Benzene	2.2 ug/l	51 B ug/l
Bromoform	4.3 ug/l	140.00 ug/l
Carbofuran	40	
Carbon Tetrachloride	0.23 ug/l	1.60 ug/l
Chlorobenzene	100 ug/l	21,000 ug/l
Chlorodibromomethane	0.4 ug/l	13.00 ug/l
Chloroethane		
2-Chloroethylvinyl Ether		
Chloroform	5.7 ug/l	470.00 ug/l
Dalapon	200 ug/l	
Di(2ethylhexyl)adipate	400 ug/l	
Dichlorobromopropane	0.2	

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Dichlorobromomethane	0.55 ug/l	17.00 ug/l
1,1-Dichloroethane		
1,2-Dichloroethane	0.38 ug/l	37.00 ug/l
1,1-Dichloroethylene	7 ug/l	3.20 ug/l
Dichloroethylene (cis-1,2)	70	
Dinoseb	7	
Diquat	20	
1,2-Dichloropropane	0.5 ug/l	15.00 ug/l
1,3-Dichloropropene	0.34 ug/l	1,700 ug/l
Endothall	100	
Ethylbenzene	530 ug/l	29,000 ug/l
Ethylidibromide	0.05 ug/l	
Glyphosate	700 ug/l	
Haloacetic acids	60 ug/l E	
Methyl Bromide	47 ug/l	1,500 ug/l
Methyl Chloride	F	F
Methylene Chloride	4.6 ug/l	590.00 ug/l
Ocamyl (vidate)	200 ug/l	
Picloram	500 ug/l	
Simazine	4 ug/l	
Styrene	100 ug/l	
1,1,2,2-Tetrachloroethane	0.17 ug/l	4.00 ug/l
Tetrachloroethylene	0.69 ug/l	3.30 ug/l
Toluene	1000 ug/l	200,000 ug/l
1,2 -Trans-Dichloroethylene	100 ug/l	140,000 ug/l
1,1,1-Trichloroethane	200 ug/l	F
1,1,2-Trichloroethane	0.59 ug/l	16.00 ug/l
Trichloroethylene	2.5 ug/l	30.00 ug/l
Vinyl Chloride	0.025 ug/l	530.00 ug/l
Xylenes	10000 ug/l	
2-Chlorophenol	81 ug/l	150 ug/l
2,4-Dichlorophenol	77 ug/l	290 ug/l
2,4-Dimethylphenol	380 ug/l	850 ug/l
2-Methyl-4,6-Dinitrophenol	13 ug/l	280 ug/l
2,4-Dinitrophenol	69 ug/l	5,300 ug/l
2-Nitrophenol		
4-Nitrophenol		
3-Methyl-4-Chlorophenol		
Penetachlorophenol	0.27 ug/l	3.00 ug/l
Phenol	21000 ug/l	1,700,000 ug/l
2,4,6-Trichlorophenol	1.4 ug/l	2.40 ug/l
Acenaphthene	670 ug/l	990 ug/l
Acenaphthylene	ug/l	ug/l
Anthracene	8300 ug/l	40,000 ug/l
Benzidine	0.000086 ug/l	0.00 ug/l
BenzoaAnthracene	0.0038 ug/l	0.02 ug/l
BenzoaPyrene	0.0038 ug/l	0.02 ug/l
BenzobFluoranthene	0.0038 ug/l	0.02 ug/l
BenzoghiPerylene	ug/l	
BenzokFluoranthene	0.0038 ug/l	0.02 ug/l
Bis2-ChloroethoxyMethane	ug/l	
Bis2-ChloroethylEther	0.03 ug/l	0.53 ug/l
Bis2-ChloroisopropylEther	1400 ug/l	65,000 ug/l
Bis2-EthylbexylPhthalate	1.2 ug/l	2.20 ug/l

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4-Bromophenyl Phenyl Ether	ug/l		
Butylbenzyl Phthalate	1500 ug/l		1,900 ug/l
2-Chloronaphthalene	1000 ug/l		1,600 ug/l
4-Chlorophenyl Phenyl Ether	ug/l		
Chrysene	0.0038 ug/l		0.02 ug/l
Dibenzo(a,h)Anthracene	0.0038 ug/l		0.02 ug/l
1,2-Dichlorobenzene	420 ug/l		17,000 ug/l
1,3-Dichlorobenzene	320 ug/l		960 ug/l
1,4-Dichlorobenzene	63 ug/l		2,600 ug/l
3,3-Dichlorobenzidine	0.021 ug/l		0.03 ug/l
Diethyl Phthalate	17000 ug/l		44,000 ug/l
Dimethyl Phthalate	270000 ug/l		1,100,000 ug/l
Di-n-Butyl Phthalate	2000 ug/l		4,500 ug/l
2,4-Dinitrotoluene	0.11 ug/l		3.40 ug/l
2,6-Dinitrotoluene	ug/l		
Di-n-Octyl Phthalate	ug/l		
1,2-Diphenylhydrazine	0.036 ug/l		0.20 ug/l
Fluoranthene	130 ug/l		140.00 ug/l
Fluorene	1100 ug/l		5,300 ug/l
Hexachlorobenzene	0.00028 ug/l		0.00029 B ug/l
Hexachlorobutenedine	0.44 ug/l		18.00 ug/l
Hexachloroethane	1.4 ug/l		3.30 ug/l
Hexachlorocyclopentadiene	40 ug/l		17,000 ug/l
Ideno 1,2,3-cdPyrene	0.0038 ug/l		0.02 ug/l
Isophorone	35 ug/l	B	960.00 ug/l
Naphthalene			
Nitrobenzene	17 ug/l		690 ug/l
N-Nitrosodimethylamine	0.00069 ug/l		3.00 ug/l
N-Nitrosodi-n-Propylamine	0.005 ug/l		0.51 ug/l
N-Nitrosodiphenylamine	3.3 ug/l		6.00 ug/l
Phenanthrene			
Pyrene	830 ug/l		4,000 ug/l
1,2,4-Trichlorobenzene	260 ug/l		940 ug/l
Aldrin	0.000049 ug/l		0.000050 ug/l
alpha-BHC	0.0026 ug/l		0.00 ug/l
beta-BHC	0.0091 ug/l		0.02 ug/l
gamma-BHC (Lindane)	0.2 ug/l		0.06 ug/l
delta-BHC			
Chlordane	0.0008 ug/l		0.00 ug/l
4,4-DDT	0.00022 ug/l		0.00 ug/l
4,4-DDE	0.00022 ug/l		0.00 ug/l
4,4-DDD	0.00031 ug/l		0.00 ug/l
Dieldrin	0.000052 ug/l	B	0.000054 ug/l
alpha-Endosulfan	62 ug/l		89 ug/l
beta-Endosulfan	62 ug/l		89 ug/l
Endosulfan Sulfate	62 ug/l		89 ug/l
Endrin	0.059 ug/l		0.81 ug/l
Endrin Aldehyde	0.29 ug/l		0.30 ug/l
Heptachlor	0.000079 ug/l	B	0.000079 ug/l
Heptachlor Epoxide	0.000039 ug/l	B	0.000039 ug/l
Polychlorinated Biphenyls	0.000064 ug/l	B,D	0.000064 ug/l
Toxaphene	0.00028 ug/l		0.00028 ug/l

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 Water Quality Quality

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

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

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

QUAL2E (EPA, Athens, GA).

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

(3) 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.

The Utah Reservoir and Lake Model is a simple round jet model which was received from EPA Region 8. It assumes a discharge expands into the receiving water as a 1/2 cone from the point of discharge with the appropriate dilution.

The dilution ratios for this wasteload analysis are as follows:

Acute Dilution Ratio:	4.9 to 1
Chronic Dilution Ratio:	28.2 to 1

## VIII. Modeling Information

The required information for the model may include the following information for both the lake and effluent conditions:

Temperature, Deg. C.	Total Residual Chlorine (TRC), mg/l
pH	Total NH <sub>3</sub> -N, mg/l
BOD <sub>5</sub> , mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

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D.O. mg/l

**Other Conditions**

In addition to the lake 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**

<b>Lake Information</b>	<b>Temp.</b>	<b>pH</b>	<b>T-NH3</b>	<b>BOD</b>	<b>DO</b>	<b>TRC</b>	<b>TDS</b>	<b>Metals</b>
	<b>Deg. C</b>		<b>mg/l as N</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>ug/l</b>
	22.3	8.6	0.00	N/A	N/A	0.00	1058.0	0.0
<b>Discharge Information</b>	<b>Season</b>		<b>Flow,</b>	<b>Temp.</b>				
	All Seasons		5.0	12.0				

**IX. Effluent Limitations based upon Water Quality Standards**

**Effluent Limitation for Flow**

All Seasons		
Not to Exceed:	5.00 MGD	Daily Average
	7.74 cfs	Daily Average
WET Requirements	As determined by Permits & Compliance Branch	

**Effluent Limitation for Biological Oxygen Demand (BOD)**

	<b>Concentration</b>
30 Day Average	25.0 mg/l as BOD5
30 Day Average	20.0 mg/l as CBOD5

**Effluent Limitation for Dissolved Oxygen (DO)**

	<b>Concentration</b>
	<b>1 Day Average (Acute)</b>
30 Day Average	5.00 mg/l

**Effluent Limitation for Total Ammonia**

	<b>4 Day Average [Chronic]</b>	
	<b>Concentration</b>	<b>Load</b>



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Endrin	1.0155 ug/l	0.027 lbs/day	0.4246 ug/l*	0.011 lbs/day
Guthion			0.0000 ug/l	0.000 lbs/day
Heptachlor	0.1072 ug/l*	0.003 lbs/day	1.2835 ug/l	0.035 lbs/day
Lindane	2.2568 ug/l*	0.061 lbs/day	4.9367 ug/l	0.133 lbs/day
Methoxychlor			0.1481 ug/l	0.004 lbs/day
Mirex			0.0049 ug/l	0.000 lbs/day
Parathion			0.3258 ug/l	0.009 lbs/day
PCB's	0.3949 ug/l	0.011 lbs/day	0.0000 ug/l*	0.000 lbs/day
Pentachlorophenol	423.1422 ug/l	11.404 lbs/day	93.7965 ug/l*	2.528 lbs/day
Toxephene	0.0056 ug/l*	0.000 lbs/day	3.6038 ug/l	0.097 lbs/day

**Effluent Limitations for Protection of Human Health (Class 1C Waters)**

<b>Metals</b>	<b>1 Hour Average (Acute) Standard Concentration</b>	<b>Load</b>
Arsenic		
Barium		
Cadmium		
Chromium		
Lead		
Mercury		
Selenium		
Silver		
Fluoride		
to		
Nitrates as N		
<b>Pesticides</b>		
2,4-D		
2,4,5-TP		
Methoxychlor		

**Effluent Limitations for Protection of Human Health [Toxics Rule]**

**Based upon Water Quality Standards (Most stringent of 1C or 3A & 3B as appropriate.)**

<b>Toxics Rule Parameters</b>	<b>Maximum Conc., ug/l - Acute Standards</b>	
	<b>Class 1C</b> [2 Liters/Day for 70 Kg Person over 70 Yr.	<b>Class 3A, 3B</b> [6.5 g for 70 Kg Person over 70 Yr. Period]
Antimony		27.65 ug/l
Arsenic		0.7 lbs/day
Beryllium		
Cadmium		
Chromium III		
Chromium VI		
Copper		6417.66 ug/l
Lead		173.0 lbs/day
Mercury		493.67 ug/l
Nickel		13.3 lbs/day
Selenium		36531.28 ug/l
Silver		984.5 lbs/day
Thallium		691.13 ug/l
		18.6 lbs/day

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Zinc	937.97 ug/l	25.3 lbs/day
Cyanide	0.25 ug/l	0.0 lbs/day
Asbestos	21.23 ug/l	0.6 lbs/day
0		
2,3,7,8-TCDD Dioxin	493.67 ug/l	13.3 lbs/day
Acrolein	1.97 ug/l	0.1 lbs/day
Acrylonitrile		
Benzene		
Bromoform	28.14 ug/l	0.8 lbs/day
Carbon Tetrachloride		
Chlorobenzene		
Chlorodibromomethane	1.88 ug/l	0.1 lbs/day
Chloroethane	34.56 ug/l	0.9 lbs/day
2-Chloroethylvinyl Ether	2.47 ug/l	0.1 lbs/day
Chloroform	1.68 ug/l	0.0 lbs/day
Dichlorobromomethane	232.02 ug/l	6.3 lbs/day
1,1-Dichloroethane		
1,2-Dichloroethane	22.71 ug/l	0.6 lbs/day
1,1-Dichloroethylene	0.84 ug/l	0.0 lbs/day
1,2-Dichloropropane	4936.66 ug/l	133.0 lbs/day
1,3-Dichloropropene	2.91 ug/l	0.1 lbs/day
Ethylbenzene	12.34 ug/l	0.3 lbs/day
Methyl Bromide	0.12 ug/l	0.0 lbs/day
Methyl Chloride	399.87 ug/l	10.8 lbs/day
Methylene Chloride	380.12 ug/l	10.2 lbs/day
1,1,2,2-Tetrachloroethane	1875.93 ug/l	50.6 lbs/day
Tetrachloroethylene	64.18 ug/l	1.7 lbs/day
Toluene		
1,2 -Trans-Dichloroethylene		
1,1,1-Trichloroethane	1.33 ug/l	0.0 lbs/day
1,1,2-Trichloroethane	103669.84 ug/l	2793.9 lbs/day
Trichloroethylene	6.91 ug/l	0.2 lbs/day
Vinyl Chloride	3307.56 ug/l	89.1 lbs/day
2-Chlorophenol		
2,4-Dichlorophenol	40974.27 ug/l	1104.3 lbs/day
2,4-Dimethylphenol		
2-Methyl-4,6-Dinitrophenol	0.02 ug/l	0.0 lbs/day
2,4-Dinitrophenol	0.02 ug/l	0.0 lbs/day
2-Nitrophenol	0.02 ug/l	0.0 lbs/day
4-Nitrophenol		
3-Methyl-4-Chlorophenol	0.02 ug/l	0.001 lbs/day
Penetachlorophenol		
Phenol	0.15 ug/l	0.004 lbs/day
2,4,6-Trichlorophenol	6911.32 ug/l	186.260 lbs/day
Acenaphthene		
Acenaphthylene	7404.99 ug/l	199.6 lbs/day
Anthracene	4936.66 ug/l	133.0 lbs/day
Benzidine		
Benzoanthracene	0.02 ug/l	0.0 lbs/day
Benzoapyrene	0.0 ug/l	0.0 lbs/day
Benzofluoranthene	2073.40 ug/l	55.9 lbs/day
Benzoghiperylene	1579.73 ug/l	42.6 lbs/day
Benzokfluoranthene		
Bis2-ChloroethoxyMethane		

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Bis2-ChloroethylEther	8.39E+04 ug/l	2.26E+03 lbs/day
Bis2-Chloroisopropyl Ether	1.33E+06 ug/l	3.59E+04 lbs/day
Bis2-EthylhexylPhthalate	##### ug/l	266.08591 lbs/day
4-Bromophenyl Phenyl Ether	0.54303 ug/l	0.01463 lbs/day
Butylbenzyl Phthalate		
2-Chloronaphthalene		
4-Chlorophenyl Phenyl Ether	0.17772 ug/l	0.00479 lbs/day
Chrysene	641.76565 ug/l	17.29558 lbs/day
Dibenzo(a,h)Anthracene	##### ug/l	146.34725 lbs/day
1,2-Dichlorobenzene	0.00138 ug/l	0.00004 lbs/day
1,3-Dichlorobenzene	2.17213 ug/l	0.05854 lbs/day
1,4-Dichlorobenzene	6.91132 ug/l	0.18626 lbs/day
3,3-Dichlorobenzidine		
Diethyl Phthalate		
Dimethyl Phthalate		
Di-n-Butyl Phthalate		
2,4-Dinitrotoluene	83.923201 ug/l	2.261730 lbs/day
2,6-Dinitrotoluene	0.003406 ug/l	0.000092 lbs/day
Di-n-Octyl Phthalate	0.024683 ug/l	0.000665 lbs/day
1,2-Diphenylhydrazine	16.290974 ug/l	0.439042 lbs/day
Fluoranthene		
Fluorene	4.10E+03 ug/l	1.10E+02 lbs/day
Hexachlorobenzene		
Hexachlorobutenedine		
Hexachloroethane		
Hexachlorocyclopentadiene		
Ideno 1,2,3-cdPyrene		
Isophorone		
Naphthalene		
Nitrobenzene		
N-Nitrosodimethylamine		
N-Nitrosodi-n-Propylamine	0.00 ug/l	0.0 lbs/day
N-Nitrosodiphenylamine		
Phenanthrene	306.07 ug/l	8.2 lbs/day
Pyrene		
1,2,4-Trichlorobenzene	306.07 ug/l	8.2 lbs/day
Aldrin	0.29 ug/l	0.0 lbs/day
alpha-BHC		
beta-BHC		
gamma-BHC (Lindane)		
delta-BHC		
Chlordane		
4,4-DDT		
4,4-DDE		
4,4-DDD		
Dieldrin		
alpha-Endosulfan		
beta-Endosulfan		
Endosulfan Sulfate		

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Endrin  
 Endrin Aldehyde  
 Heptachlor  
 Heptachlor Epoxide  
 Polychlorinated Biphenyls  
 0  
 Toxaphene

Specific Parameter: TDS                      0                      1759.01 mg/l                      47.4 tons / day

**Effluent Limitations for the Protection of Agriculture**

	1 Hour Average (Acute) Standard Concentration	Standard Load
Arsenic	493.67 ug/l	13.30 lbs / day
Boron	3702.49 ug/l	99.78 lbs / day
Cadmium	49.37 ug/l	1.33 lbs / day
Chromium	493.67 ug/l	13.30 lbs / day
Copper	246.83 ug/l	6.65 lbs / day
Lead	493.67 ug/l	13.30 lbs / day
Selenium	246.83 ug/l	6.65 lbs / day

**Metals Effluent Limitations for Protection of All Beneficial Uses  
 Based upon Water Quality Standards and Toxics Rules**

	Class 4 Acute Agricultural ug/l	Class 3 Acute Aquatic Wildlife ug/l	Acute Toxics Drinking Water Source ug/l	Acute Toxics Wildlife ug/l	1C Acute Health Criteria ug/l	Acute Most Stringent ug/l	Class 3 Chronic Aquatic Wildlife ug/l
Aluminum		3616.87				3616.87	1862.42
Antimony						0.00	
Arsenic	493.67	1628.47				493.67	3885.86
Asbestos							
Barium		4936.66				4936.66	
Boron							
Cadmium	49.37	23.59				23.59	8.61
Chromium (III)		5767.8				5767.84	2834.79
Chromium (VI)	493.67	68.16				68.16	235.48
Copper	246.83	151.37				151.37	454.44
Cyanide		108.61				108.61	25.67
Iron		106.67				106.67	
Lead	493.67	844.42				493.67	151.46
Mercury		11.8362				11.84	0.2569
Nickel		4893.81				4893.81	2139.92
Selenium	246.83	82.17				82.17	69.90
Silver		58.17				58.17	
Thallium						0.00	
Zinc		1191.87				1191.87	46228.59

## Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

	Acute		Chronic	
	ug/l	lbs/day	ug/l	lbs/day
Aluminum	3616.87	150.8	1862.42	77.6
Antimony				
Arsenic	493.67	20.6	3885.86	162.0
Asbestos				
Cadmium	23.59	1.0	8.61	0.4
Chromium (III)	5767.84	240.5	2834.79	118.2
Chromium (VI)	68.16	2.8	235.48	9.8
Copper	151.37	6.3	454.44	18.9
Cyanide	108.61	4.5	25.67	1.1
Iron	106.67	4.4		
Lead	493.67	20.6	151.46	6.3
Mercury	11.84	0.5	0.26	0.0
Nickel	4893.81	204.0	2139.92	89.2
Selenium	82.17	3.4	69.90	2.9
Silver	58.17	2.4		
Zinc	1191.87	49.7	46228.59	1927.3

## Effluent Indicators / Targets for Pollution Indicators

Water quality targets for pollution Indicators will be met with an effluent limit as follows:

	Indicator / Target mg/l	Target	
		mg/l	lbs/day
Gross Beta (pCi/l)	50.0 pCi/L		
BOD	5.0	24.68	3753.07
Nitrates as N	4.0	19.75	3002.46
Total Phosphorus as P	0.05	0.25	37.53
Total Suspended Solids	90.0	444.30	67555.31

Other Effluent Limitations are based upon R317-1.

## 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 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 water users.

Category III waters fall under special rules for the determination of effluent limits. These rules allow more stringent effluent limitations based upon additional factors, including: "blue-ribbon" fisheries, special recreation areas, and drinking water sources.

**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 shown that this is not attainable. Refer to the Forum's Guidelines for additional information.

The permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations.

**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.

The permit writers may utilize other information to adjust these limits or to determine other limits based upon best available technology and other considerations. Under no circumstances however, may those alterations allow for the violation of water quality standards by the permittee.

**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.

**XIV. Notice of Availability of Information**

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

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