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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Industrial Permit No. **UT0025801**

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

DUCHESNE VALLEY WATER TREATMENT PLANT

is hereby authorized to discharge from its facility to receiving waters named **STARVATION RESERVOIR**,

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

This permit shall become effective on August 1, 2016

This permit expires at midnight on July 31, 2021.

Signed this 26 day of July, 2016.

Walter L. Baker, P.E.
Director

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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*.

Outfall	Description of Discharge Point
001	Located at latitude 40° 11' 45" and longitude 110° 26' 10". The discharge is gravity flow through a 10-inch diameter pipe leading from the solids basin to Starvation Reservoir.

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.

Parameter	Effluent Limitations a/			
	30 - Day Average	Maximum 7 - Day Average	Daily Minimum	Daily Maximum
BOD_5, mg/L	25	35	NA	NA
Total Suspended Solids, mg/L	25	35	NA	NA
Total Dissolved Solids, mg/L	NA	NA	NA	1200
Total Dissolved Solids, tons/day	NA	NA	NA	1.0
pH, Standard Units	NA	NA	6.5	9.0
Aluminum, mg/l e/	3.89	NA	NA	7.24
Aluminum, lbs/day e/	3.2	NA	NA	6.0
Iron, mg/L f/	NA	NA	NA	0.168
Iron, lbs/day f/	NA	NA	NA	0.1
WET, Chronic Biomonitoring	NA	NA	NA	IC_{25} > 10.1% of Effluent

NA – Not Applicable

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
Total Suspended Solids	Monthly	Grab	mg/L
Total Dissolved Solids c/	Monthly	Grab	mg/L, tons/day
WET, Chronic Biomonitoring d/	Quarterly	Composite	Pass/Fail
Aluminum e/	Monthly	Grab	mg/L
Iron f/	Monthly	Grab	mg/L
pH	Weekly	Grab	SU

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

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

c/ In addition to the total dissolved solids (TDS) effluent concentration limitation, TDS effluent loading is limited to one-ton/day. If the one-ton/day effluent loading limitation cannot be met, then the permittee is limited to 366-tons/year total TDS effluent loading from the facility. It is the responsibility of the permittee to maintain annual TDS loading information and upon request the permittee shall submit to the Director the annual TDS loading information.

d/ The Chronic toxicity occurs when the IC_{25} is observed for either test species at greater than 10.1% effluent dilution.

e/ Aluminum will not need to be monitored if there is no Alum used in the treatment process.

f/ Iron will not need to be monitored if there is no Ferric Chloride used in the treatment process

2. Chronic Whole Effluent Toxicity (WET) Testing.

   a. *Whole Effluent Testing – Chronic Toxicity.* Starting immediately, the permittee shall quarterly, conduct chronic short-term toxicity tests on a composite sample of the final effluent. The sample shall be collected at outfall 001.

      The monitoring frequency shall be quarterly. Samples shall be collected on a two-day progression; i.e., if the first sample is on a Monday, during the next sampling period, sampling shall be on a Wednesday. A five dilution test plus

the control shall be used. If chronic toxicity is detected, the test shall be repeated in less than four weeks from the date the initial sample was taken. The need for any additional samples, and/or a Toxicity Reduction Evaluation (TRE), see *Part I.C.2.e.*, shall be determined by the Director. If the second test shows no chronic toxicity, routine monitoring shall be resumed.

The chronic toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, 4th Edition, (EPA 821/R-02-13), October 2002* as per 40 CFR 136.3(a) *TABLE 1A-LIST OF APPROVED BIOLOGICAL METHODS,* and the *Region VIII EPA NPDES Chronic Test Conditions - Static Renewal Whole Effluent Toxicity Test*. Test species shall consist of Ceriodaphnia dubia and Pimephales promelas (fathead minnow) alternating quarterly.

Chronic toxicity occurs when the survival, growth, or reproduction for either test species, when exposed to a dilution of 10.1 percent effluent or lower, is less (at 95% confidence level) than that of the control specimens. Dilutions of 10.1 percent only will be required, plus the control. If any of the acceptable control performance criteria are not met, the test shall be considered invalid. IC_{25} is the inhibition concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the reporting calendar quarter (e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28). 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 revision of the *Region VIII Guidance for Chronic Whole Effluent Reporting (August, 1997)* and shall include all the physical testing as specified.

If the results for a minimum of ten consecutive tests indicate no chronic toxicity, the permittee may request a reduction in testing frequency and/or reduction to one species. The Director may approve, partially approve, or deny the request based on results and other available information. If approval is given, the modification will take place without a public notice.

The current Utah whole effluent toxicity (WET) policy is in the process of being updated and revised to assure its consistency with the Environmental Protection Agency's national and regional WET policy. When said revised WET policy has been finalized and officially adopted, this permit will be reopened and modified to incorporate satisfactory follow-up chronic toxicity language (chronic pattern of toxicity, PTI and/or TIE/TRE, etc.) without a public notice, as warranted and appropriate.

b. *Preliminary Toxicity Investigation.*

(1) When a pattern of toxicity is detected the permittee will notify the Director in writing within five (5) days and begin an evaluation of the possible causes of the toxicity. The permittee will have fifteen (15) working days from demonstration of the pattern 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.

(2) If the PTI identifies a probable toxicant and/or a probable source of toxicity the permittee shall submit, as part of its final results written notification of that effect to the Director. Within thirty (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 a plan within seven (7) days following approval. The control program, as submitted to or revised by the Director, may be incorporated into the permit.

(3) If no probable explanation for toxicity is identified in the PTI, the permittee shall notify the Director as part of its final report, along with a schedule for conducting a Phase I Toxicity Reduction Evaluation (TRE) (See *Part I.C.2.e, Toxicity Reduction Evaluation*).

(4) 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 b. of this section.

c. *Toxicity Reduction Evaluation (TRE).* 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 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 28th 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

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.

The facility's SIC code is 4941: Water Supply, there is no bulk storage of any contaminants at the facility. Therefore, a storm water industrial UPDES permit is not required. A storm water re-opener provision is included in the permit should storm water requirements become necessary in the future.

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

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.

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;

(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:

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

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.

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_{50}").

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;

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.

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.

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*

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*

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;

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
DUCHESNE VALLEY WATER TREATMENT PLANT
RENEWAL PERMIT
UPDES PERMIT NUMBER: UT0025801
MINOR INDUSTRIAL

FACILITY CONTACTS

Chuck Hale, Facility Manager

(801) 785-5725

Mailing Address: P.O. Box 912
Duchesne, UT 84021

Facility Address: 23419 West State Park Road
Duchesne, UT 84021

DESCRIPTION OF FACILITY

Central Utah Water Conservancy District (District) owns and operates the Duchesne Valley Water Treatment Plant (DVWTP) located on the east side of Starvation Dam in Duchesne Utah. The DVWTP is a direct filtration water treatment plant that was constructed in the early 1980's. The original plant is designed to treat 8 million gallons. The plant process pumps raw water from Starvation Reservoir up to the treatment plant where aluminum sulfate (alum) or ferric chloride (ferric) is rapidly mixed with the raw water (coagulation) to neutralize the surface charge of particles found in the raw water. The raw water is then mechanically mixed (flocculation) to form larger floc particles which can then be removed in the next process (filtration). After the (duel media) filtration process, chlorine is mixed into the filtered water (disinfection). The high quality treated drinking water then enters finished water storage reservoirs to await delivery to the consumer.

Removing the potential harmful particles from the raw water is enhanced with the addition of a metal salt (alum or ferric), and then in the filtration process both particle and metal salt are collected in the filter. When the filter has collected or filtered a pre-determined amount material from the water, the filtration process is stopped, and clean drinking water is pumped in the reverse direction through the filter media to wash out all the collected particles within the filter. This (backwash) water then flows to one of two 1.1 million gallon drying/settling basins, where the backwash particles in the water settle out in the basin, and the clarified decant water flows, at a selected rate, from the top water level in the basin through adjustable gates and can then flow back to Starvation Reservoir at latitude 40° 11' 45" and longitude 110° 26' 10". The SIC code is 4941: Water Supply.

DISCHARGE

DESCRIPTION OF DISCHARGE

Outfall	Description of Discharge Point
001	Located at latitude 40° 11' 45" and longitude 110° 26' 10". The discharge is gravity flow through a 10-inch diameter pipe leading from the solids basin to Starvation Reservoir.

RECEIVING WATERS AND STREAM CLASSIFICATION

The discharge flows into the Starvation Reservoir. Starvation Reservoir is Class 1C, 2A, 2B, 3A, and 4, according to *Utah Administrative Code (UAC) R317-2-13*:

Class 1C - Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

Class 2A - Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.

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 3A - Protected for cold water species of game fish and other cold water aquatic life, 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_5), and pH are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. Limits for Aluminum and Iron are based on the WLA. Limitations for Total Dissolved Solids (TDS) are based on the State Water Quality Standard for concentration, as well as the Colorado River Basin Salinity Control Forum (CRBSCF) for loading, as authorized in *UAC R317-2-4*. Discharges from the permittee eventually reach the Colorado River, which places it under the guidance of the CRBSCF. Total dissolved solids are limited in loading by the CRBSCF and in February 1977 they produced the *"Policy For Implementation of Colorado River Salinity Standards Through the NPDES Permit Program"* (Policy). This Policy is still in effect, and recently updated in October 2014. The permittee will be an intermittent discharger, discharging less than 366 tons TDS per year total. Therefore, the effluent will be limited to a maximum discharge of 1.0 ton per day TDS or 366 tons per year if the 1 ton/day limitation cannot be met. It is the responsibility of the permittee to maintain annual TDS loading information and submit it to the Director. The permit limitations are:

Parameter	Effluent Limitations a/			
	30 - Day Average	Maximum 7 - Day Average	Daily Minimum	Daily Maximum
BOD_5, mg/L	25	35	NA	NA
Total Suspended Solids, mg/L	25	35	NA	NA
Total Dissolved Solids, mg/L	NA	NA	NA	1200
Total Dissolved Solids, tons/day	NA	NA	NA	1.0
pH, Standard Units	NA	NA	6.5	9.0
Aluminum, mg/l e/	3.89	NA	NA	7.24
Aluminum, lbs/day e/	3.2	NA	NA	6.0
Iron, mg/L f/	NA	NA	NA	0.168
Iron, lbs/day f/	NA	NA	NA	0.1
WET, Chronic Biomonitoring	NA	NA	NA	IC_{25} > 10.1% of Effluent

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 28th day of the month following the completed reporting period. Lab sheets for biomonitoring must be attached to the biomonitoring DMR.

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
Total Suspended Solids	Monthly	Grab	mg/L
Total Dissolved Solids c/	Monthly	Grab	mg/L, tons/day
WET, Chronic Biomonitoring d/	Quarterly	Composite	Pass/Fail
Aluminum e/	Monthly	Grab	mg/L
Iron f/	Monthly	Grab	mg/L
pH	Weekly	Grab	SU

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

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

c/ In addition to the total dissolved solids (TDS) effluent concentration limitation, TDS effluent

loading is limited to one-ton/day. If the one-ton/day effluent loading limitation cannot be met, then the permittee is limited to 366-tons/year total TDS effluent loading from the facility. It is the responsibility of the permittee to maintain annual TDS loading information and upon request the permittee shall submit to the Director the annual TDS loading information.

d/ The Chronic toxicity occurs when the IC_{25} is observed for either test species at greater than 10.1% effluent dilution.

e/ Aluminum will not need to be monitored if there is no Alum used in the treatment process.

f/ Iron will not need to be monitored if there is no Ferric Chloride used in the treatment process.

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 required. DVWTP completed an ADR on April 13, 2010. Since DVWTP has not changed any treatment processes or increased the flow, a new ADR is not required.

STORM WATER

The facility's SIC code is 4941: Water Supply, there is no bulk storage of any contaminants at the facility. Therefore, a storm water industrial UPDES permit is not required. A storm water re-opener provision is included in the permit should storm water requirements become necessary in the future.

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*.

The renewal permit will require Whole Effluent Toxicity (WET) testing. Acute toxicity testing will no longer be required, as there were no violations of the acute biomonitoring limit during the previous permit period. Chronic toxicity tests will be conducted quarterly, alternating between Ceriodaphnia dubia and Pimephales promelas (fathead minnows) species, as detailed in the permit. Alternating species has been previously granted to the permittee, and will continue in this permit renewal as well, based upon the absence of confirmed toxicity and the permitting authorities best professional judgment.

The permit will contain the standard requirements for a TRE (Toxicity Reduction Evaluation) as necessary. The permit will also contain a toxicity limitation re-opener provision. This provision allows for modification of the permit at any time to include WET limitations and/or increased WET monitoring, should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

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

Drafted by
Matthew Garn, P.E.
Utah Division of Water Quality
February 9, 2016

PUBLIC NOTICE

Began: May 24, 2016
Ended: June 24, 2016
Public Noticed in The Vernal Express

Comments were received during the public comment period. These comments did not warrant substantive changes to the permit.

July 12, 2016

DWQ-2016-009667

ATTACHMENT 1

Wasteload Analysis

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY

Discharging Facility:	**Starvation WTP**		
UPDES No:	UT0025801		
Current Flow:	0.10	MGD	Design Flow
Design Flow	0.10	MGD	

Receiving Water:	**Starvation Reservoir**	
Lake Classification:	1C, 2A, 3A, 4	
TDS (mg/l)	385.00	Average
Hardness (mg/l)	300.00	Average
pH	7.70	Average
Temp (C)	13.5	Average

Selected Effluent Limit Summary:				**WQ Standard:**
Flow, MGD:	0.10	MGD	Design Flow	
BOD, mg/l:	25.0	All Season	5	Indicator
Dissolved Oxygen, mg/l:	5.00	All Season	6.50	30 Day Average
TNH3, Chronic, mg/l:	434.17	All Season	Varies	Function of pH and Temperature
TDS, mg/l:	8431.75	All Season	1200	
Zinc, ug/l	2115.80	All Season	Varies	Function of Hardness
Copper, ug/l	256.56	All Season	Varies	Function of Hardness

Modeling Parameters:

Acute Dilution Ratio	9.87 to 1
Chronic Dilution Ratio:	56.42 to 1

Level 1 Antidegradation Level Completed: Level II Review required -Discharge to a 1C water

Date: 7/17/2015

Permit Writer:		
WLA by:	Neil McCann	7/17/15
WQM Sec. Approval:		
TMDL Sec. Approval:		

Wasteload Analysis - Total Maximum Daily Load (Lake TMDL)

7/17/2015 14:55

Facility: **Starvation WTP** **UPDES No: UT- UT0025801**
Discharging to: **Starvation Reservoir**

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 interms 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

Starvation Reservoir	1C, 2A, 3A, 4

III. Numeric Water Quality Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Function of Temperature and pH	pH	Temp
	7.09 mg/l as N (4 Day Average)	2.31	13.5
	39.00 mg/l as N (1 Hour Average)	2.35	13.5
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average)		
	0.019 mg/l (1 Hour Average)		
Chronic Dissolved Oxygen (DO)	6.50 mg/l (30 Day Average)		
	5.00 mg/l (7Day Average)		
	4.00 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

Asbestos	ug/l		ug/l
Barium	ug/l	1000.00	ug/l
Beryllium	ug/l		ug/l
Cadmium	0.472 ug/l	4.74	ug/l
Chromium III	159.218 ug/l	3331.15	ug/l
ChromiumVI	11.000 ug/l	16.00	ug/l
Copper	17.700 ug/l	28.37	ug/l
Cyanide	5.200 ug/l	22.00	ug/l
Iron	ug/l	1000.00	ug/l
Lead	8.261 ug/l	211.98	ug/l
Mercury	0.012 ug/l	2.40	ug/l
Nickel	166.34 ug/l	884.52	ug/l
Selenium	5.000 ug/l	20.00	ug/l
Silver	ug/l	13.74	ug/l
Thallium			
Zinc	226.108 ug/l	226.11	ug/l
Based upon a Hardness of 211.6 mg/l as CaCO3		Based upon 219.12 mg/l as CaCO3	

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard Concentration	1 Hour Average (Acute) Standard 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

	1 Hour Average (Acute) Standard Concentration	
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	1 Hour Average (Acute) Standard Concentration	
Arsenic	10	ug/l
Barium	1000	ug/l

Cadmium	10	ug/l
Chromium	50	ug/l
Lead	15	ug/l
Mercury	2	ug/l
Selenium	50	ug/l
Silver	50	ug/l
Fluoride (3)	1400	ug/l
to	2400	ug/l
Nitrates as N	10000	ug/l
Chlorophenoxy Herbicides		
2,4-D	0	ug/l
2,4,5-TP	0	ug/l
Methoxychlor	0	ug/l

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

	Maximum Conc., ug/l - Acute Standards	
	Class 1C	**Class 3A, 3B, 3C, 3D**
	[2 Liters/Day for 70 Kg Person over 70 Yr.	[6.5 g for 70 Kg Person over 70 Y
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(2ethylhexl)adipate	400 ug/l	
Dichlorobromopropane	0.2	

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
Ethyldibromide	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	B	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-Chloroisopropy1Ether	1400 ug/l		65,000 ug/l
Bis2-EthylbexylPhthalate	1.2 ug/l		2.20 ug/l

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
Dibenzoa, hAnthracene	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
Hexachlorobutedine	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:	**9.9 to 1**
Chronic Dilution Ration:	**56.4 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 NH3-N, mg/l
BOD5, mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

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

Lake Information	Temp. Deg. C	pH	T-NH3 mg/l as N	BOD mg/l	DO mg/l	TRC mg/l	TDS mg/l	Metals ug/l
	13.5	2.3	0.00	N/A	N/A	0.00	385.0	0.0

Discharge Information	Season	Flow,	Temp.
	All Seasons	0.1	13.5

IX. Effluent Limitations based upon Water Quality Standards

Effluent Limitation for Flow

All Seasons

Not to Exceed:	0.10 MGD	Daily Average
	0.15 cfs	Daily Average

WET Requirements — As determined by Permits & Compliance Branch

Effluent Limitation for Biological Oxygen Demand (BOD)

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

Effluent Limitation for Dissolved Oxygen (DO)

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

Effluent Limitation for Total Ammonia

	4 Day Average [Chronic]	
	Concentration	**Load**

All Seasons	434.17 mg/l as N	362.0 lbs/day

1 Hour Average [Acute] Concentration	Load
390.6 mg/l as N	325.7 lbs/day

Effluent Limitation for Total Residual Chlorine

	4 Day Average [Chronic] Concentration	Load
All Seasons	0.621 mg/l	0.5 lbs/day

1 Hour Average [Acute] Concentration	Load
0.188 mg/l	0.2 lbs/day

Effluent Limitations for Metals

	4 Day Average (Chronic) Concentration	Load	1 Hour Average (Acute) Concentration	Load
Aluminum	3894.28 ug/l*	2.1 lbs/day	7242.61 ug/l	3.9 lbs/day
Arsenic	8252.25 ug/l	4.4 lbs/day	3323.21 ug/l*	1.8 lbs/day
Barium			9873.32 ug/l	5.3 lbs/day
Cadmium	12.27 ug/l*	0.0 lbs/day	40.83 ug/l	0.0 lbs/day
Chromium III	5519.41 ug/l*	3.0 lbs/day	10341.51 ug/l	5.6 lbs/day
ChromiumVI	411.12 ug/l	0.2 lbs/day	124.43 ug/l*	0.1 lbs/day
Copper	825.67 ug/l	0.4 lbs/day	256.56 ug/l*	0.1 lbs/day
Cyanide	51.34		217.21	
Iron			168.41 ug/l	0.1 lbs/day
Lead	182.38 ug/l*	0.1 lbs/day	1459.40 ug/l	0.8 lbs/day
Mercury	0.51 ug/l*	0.000 lbs/day	23.67 ug/l	0.0 lbs/day
Nickel	4169.22 ug/l*	2.2 lbs/day	8758.97 ug/l	4.7 lbs/day
Selenium	195.80 ug/l	0.1 lbs/day	171.46 ug/l*	0.1 lbs/day
Silver			90.06 ug/l	0.0 lbs/day
Zinc	92442.18 ug/l	49.8 lbs/day	2115.80 ug/l*	1.1

* Most stringent between Chronic & Acute Effluent Limitations

Effluent Limitations for Organics [Pesticides]

Pesticide	4 Day Average Concentration	Load	1 Hour Average Concentration	Load
Aldrin			14.8100 ug/l	0.008 lbs/day
Chlordane	0.2426 ug/l*	0.000 lbs/day	11.8480 ug/l	0.006 lbs/day
DDT, DDE	0.0564 ug/l*	0.000 lbs/day	5.4303 ug/l	0.003 lbs/day
Dieldrin	0.3159 ug/l*	0.000 lbs/day	2.3696 ug/l	0.001 lbs/day
Endosulfan	3.1595 ug/l	0.002 lbs/day	1.0861 ug/l*	0.001 lbs/day

Endrin	2.0311 ug/l	0.001 lbs/day	0.8491 ug/l*	0.000 lbs/day
Guthion			0.0000 ug/l	0.000 lbs/day
Heptachlor	0.2144 ug/l*	0.000 lbs/day	2.5671 ug/l	0.001 lbs/day
Lindane	4.5135 ug/l*	0.002 lbs/day	9.8733 ug/l	0.005 lbs/day
Methoxychlor			0.2962 ug/l	0.000 lbs/day
Mirex			0.0099 ug/l	0.000 lbs/day
Parathion			0.6516 ug/l	0.000 lbs/day
PCB's	0.7899 ug/l	0.000 lbs/day	0.0000 ug/l*	0.000 lbs/day
Pentachlorophenol	846.2844 ug/l	0.456 lbs/day	187.5930 ug/l*	0.101 lbs/day
Toxephene	0.0113 ug/l*	0.000 lbs/day	7.2075 ug/l	0.004 lbs/day

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

	1 Hour Average (Acute) Standard	
Metals	**Concentration**	**Load**
Arsenic	0.00 ug/l	0.00 lbs/day
Barium	0.00 ug/l	0.00 lbs/day
Cadmium	0.00 ug/l	0.00 lbs/day
Chromium	0.00 ug/l	0.00 lbs/day
Lead	0.00 ug/l	0.00 lbs/day
Mercury	0.00 ug/l	0.00 lbs/day
Selenium	0.00 ug/l	0.00 lbs/day
Silver	0.00 ug/l	0.00 lbs/day
Fluoride	0.00 ug/l	0.00 lbs/day
to	0.00 ug/l	0.00 lbs/day
Nitrates as N	0.00 ug/l	0.00 lbs/day
Pesticides		
2,4-D	0.00 ug/l	0.00 lbs/day
2,4,5-TP	0.00 ug/l	0.00 lbs/day
Methoxychlor	0.00 ug/l	0.00 lbs/day

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

	Maximum Conc., ug/l - Acute Standards			
	Class 1C		**Class 3A, 3B**	
Toxics Rule Parameters	[2 Liters/Day for 70 Kg Person over 70 Yr.		[6.5 g for 70 Kg Person over 70 Yr. Period]	
Antimony	0.00 ug/l	0.00 lbs/day	55.29 ug/l	0.0 lbs/day
Arsenic				
Beryllium				
Cadmium				
Chromium III				
Chromium VI				
Copper	0.00 ug/l	0.00 lbs/day	12835.31 ug/l	6.9 lbs/day
Lead				
Mercury		lbs/day	987.33 ug/l	0.5 lbs/day
Nickel	0.00 ug/l	0.00 lbs/day		
Selenium			73062.55 ug/l	39.4 lbs/day
Silver			1382.26 ug/l	0.7 lbs/day
Thallium	0.00 ug/l	0.00 lbs/day		

Zinc	0.00 ug/l	0.00 lbs/day	1875.93 ug/l	1.0 lbs/day
Cyanide	0.00 ug/l	0.00 lbs/day	0.50 ug/l	0.0 lbs/day
Asbestos	0.00 ug/l	0.00E+00 lbs/day	42.46 ug/l	0.0 lbs/day
0	0.00 ug/l	0.00 lbs/day		
2,3,7,8-TCDD Dioxin	0.00 ug/l	0.00 lbs/day	987.33 ug/l	0.5 lbs/day
Acrolein	0.00 ug/l	0.00 lbs/day	3.95 ug/l	0.0 lbs/day
Acrylonitrile	0.00 ug/l	0.00 lbs/day		
Benzene	0.00 ug/l	0.00 lbs/day		
Bromoform	0.00 ug/l	0.00 lbs/day	56.28 ug/l	0.0 lbs/day
Carbon Tetrachloride	0.00 ug/l	0.00 lbs/day		
Chlorobenzene	0.00 ug/l	0.00 lbs/day		
Chlorodibromomethane	0.00 ug/l	0.00 lbs/day	3.75 ug/l	0.0 lbs/day
Chloroethane	0.00 ug/l	0.00 lbs/day	69.11 ug/l	0.0 lbs/day
2-Chloroethylvinyl Ether	0.00 ug/l	0.00 lbs/day	4.94 ug/l	0.0 lbs/day
Chloroform	0.00 ug/l	0.00 lbs/day	3.36 ug/l	0.0 lbs/day
Dichlorobromomethane	0.00 ug/l	0.00 lbs/day	464.05 ug/l	0.3 lbs/day
1,1-Dichloroethane	0.00 ug/l	0.00 lbs/day		
1,2-Dichloroethane	0.00 ug/l	0.00 lbs/day	45.42 ug/l	0.0 lbs/day
1,1-Dichloroethylene	0.00 ug/l	0.00 lbs/day	1.68 ug/l	0.0 lbs/day
1,2-Dichloropropane	0.00 ug/l	0.00 lbs/day	9873.32 ug/l	5.3 lbs/day
1,3-Dichloropropene	0.00 ug/l	0.00 lbs/day	5.83 ug/l	0.0 lbs/day
Ethylbenzene	0.00 ug/l	0.00 lbs/day	24.68 ug/l	0.0 lbs/day
Methyl Bromide	0.00 ug/l	0.00 lbs/day	0.25 ug/l	0.0 lbs/day
Methyl Chloride	0.00 ug/l	0.00 lbs/day	799.74 ug/l	0.4 lbs/day
Methylene Chloride	0.00 ug/l	0.00 lbs/day	760.25 ug/l	0.4 lbs/day
1,1,2,2-Tetrachloroethane	0.00 ug/l	0.00 lbs/day	3751.86 ug/l	2.0 lbs/day
Tetrachloroethylene	0.00 ug/l	0.00 lbs/day	128.35 ug/l	0.1 lbs/day
Toluene	0.00 ug/l	0.00 lbs/day		
1,2 -Trans-Dichloroethylene	0.00 ug/l	0.00 lbs/day		
1,1,1-Trichloroethane	0.00 ug/l	0.00 lbs/day	2.67 ug/l	0.0 lbs/day
1,1,2-Trichloroethane	0.00 ug/l	0.00 lbs/day	207339.67 ug/l	111.8 lbs/day
Trichloroethylene	0.00 ug/l	0.00 lbs/day	13.82 ug/l	0.0 lbs/day
Vinyl Chloride	0.00 ug/l	0.00 lbs/day	6615.12 ug/l	3.6 lbs/day
2-Chlorophenol	0.00 ug/l	0.00 lbs/day		
2,4-Dichlorophenol	0.00 ug/l	0.00 lbs/day	81948.54 ug/l	44.2 lbs/day
2,4-Dimethylphenol	0.00 ug/l	0.00 lbs/day		
2-Methyl-4,6-Dinitrophenol	0.00 ug/l	0.00 lbs/day	0.04 ug/l	0.0 lbs/day
2,4-Dinitrophenol	0.00 ug/l	0.00 lbs/day	0.04 ug/l	0.0 lbs/day
2-Nitrophenol	0.00 ug/l	0.00 lbs/day	0.04 ug/l	0.0 lbs/day
4-Nitrophenol	0.0000 ug/l	0.0000 lbs/day		
3-Methyl-4-Chlorophenol	0.0000 ug/l	0.0000 lbs/day	0.04 ug/l	0.000 lbs/day
Penetachlorophenol	0.0000 ug/l	0.0000 lbs/day		
Phenol	0.0000 ug/l	0.00E+00 lbs/day	0.30 ug/l	0.000 lbs/day
2,4,6-Trichlorophenol	0.0000 ug/l	0.0000 lbs/day	13822.64 ug/l	7.450 lbs/day
Acenaphthene	0.00 ug/l	0.00 lbs/day		
Acenaphthylene	0.00 ug/l	0.00 lbs/day	14809.98 ug/l	8.0 lbs/day
Anthracene	0.00 ug/l	0.00 lbs/day	9873.32 ug/l	5.3 lbs/day
Benzidine	0.00 ug/l	0.00 lbs/day		
BenzoaAnthracene	0.00 ug/l	0.00 lbs/day	0.04 ug/l	0.0 lbs/day
BenzoaPyrene	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.0 lbs/day
BenzobFluoranthene	0.00 ug/l	0.00 lbs/day	4146.79 ug/l	2.2 lbs/day
BenzoghiPerylene	0.00 ug/l	0.00 lbs/day	3159.46 ug/l	1.7 lbs/day
BenzokFluoranthene				
Bis2-ChloroethoxyMethane				

Bis2-ChloroethylEther	0.0000 ug/l	0.00000 lbs/day	1.68E+05 ug/l	9.05E+01 lbs/day
Bis2-Chloroisopropy1Ether	0.0000 ug/l	0.00E+00 lbs/day	2.67E+06 ug/l	1.44E+03 lbs/day
Bis2-EthylbexylPhthalate	0.0000 ug/l	0.00000 lbs/day	######### ug/l	10.64344 lbs/day
4-Bromophenyl Phenyl Ether	0.0000 ug/l	0.00000 lbs/day	1.08606 ug/l	0.00059 lbs/day
Butylbenzyl Phthalate	0.0000 ug/l	0.00E+00 lbs/day		
2-Chloronaphthalene	0.0000 ug/l	0.00000 lbs/day		
4-Chlorophenyl Phenyl Ether	0.0000 ug/l	0.00000 lbs/day	0.35544 ug/l	0.00019 lbs/day
Chrysene	0.0000 ug/l	0.00000 lbs/day	######### ug/l	0.69182 lbs/day
Dibenzoa, hAnthracene	0.0000 ug/l	0.00000 lbs/day	######### ug/l	5.85389 lbs/day
1,2-Dichlorobenzene	0.0000 ug/l	0.00000 lbs/day	0.00276 ug/l	0.00000 lbs/day
1,3-Dichlorobenzene	0.0000 ug/l	0.00000 lbs/day	4.34426 ug/l	0.00234 lbs/day
1,4-Dichlorobenzene	0.0000 ug/l	0.00000 lbs/day	13.82264 ug/l	0.00745 lbs/day
3,3-Dichlorobenzidine				
Diethyl Phthalate				
Dimethyl Phthalate				
Di-n-Butyl Phthalate	0.00000 ug/l	0.00000 lbs/day		
2,4-Dinitrotoluene	0.00000 ug/l	0.00000 lbs/day	######### ug/l	0.090469 lbs/day
2,6-Dinitrotoluene	0.00000 ug/l	0.00000 lbs/day	0.006813 ug/l	0.000004 lbs/day
Di-n-Octyl Phthalate	0.00000 ug/l	0.00000 lbs/day	0.049367 ug/l	0.000027 lbs/day
1,2-Diphenylhydrazine	0.00000 ug/l	0.00000 lbs/day	32.581948 ug/l	0.017562 lbs/day
Fluoranthene	0.00000 ug/l	0.00000 lbs/day		
Fluorene	0.00000 ug/l	0.00000 lbs/day	8.19E+03 ug/l	4.42E+00 lbs/day
Hexachlorobenzene				
Hexachlorobutedine				
Hexachloroethane	0.00 ug/l	0.00 lbs/day		
Hexachlorocyclopentadiene				
Ideno 1,2,3-cdPyrene				
Isophorone	0.00 ug/l	0.00 lbs/day		
Naphthalene				
Nitrobenzene				
N-Nitrosodimethylamine	0.00 ug/l	0.00 lbs/day		
N-Nitrosodi-n-Propylamine	0.00 ug/l	0.00 lbs/day	0.00 ug/l	0.0 lbs/day
N-Nitrosodiphenylamine	0.00E+00 ug/l	0.00E+00 lbs/day		
Phenanthrene	0.00 ug/l	0.00 lbs/day	612.15 ug/l	0.3 lbs/day
Pyrene	0.00 ug/l	0.00 lbs/day		
1,2,4-Trichlorobenzene			612.15 ug/l	0.3 lbs/day
Aldrin			0.58 ug/l	0.0 lbs/day
alpha-BHC	0.00000000 ug/l	0.000000 lbs/day		
beta-BHC	0.00000000 ug/l	0.000000 lbs/day		
gamma-BHC (Lindane)	0.00000000 ug/l	0.000000 lbs/day		
delta-BHC		0.000000 lbs/day		
Chlordane	0.00000000 ug/l	0.000000 lbs/day		
4,4-DDT	0.00000000 ug/l	0.000000 lbs/day		
4,4-DDE	0.00000000 ug/l	0.000000 lbs/day		
4,4-DDD	0.00000000 ug/l	0.000000 lbs/day		
Dieldrin		0.000000 lbs/day		
alpha-Endosulfan	0.00 ug/l	0.000 lbs/day		
beta-Endosulfan	0.00 ug/l	0.000 lbs/day		
Endosulfan Sulfate	0.00 ug/l	0.000 lbs/day		

Endrin	0.00000000 ug/l	0.000 lbs/day
Endrin Aldehyde	0.00000000 ug/l	0.000 lbs/day
Heptachlor		lbs/day
Heptachlor Epoxide		lbs/day
Polychlorinated Biphenyls		lbs/day
0	0.00000000 ug/l	0.000000 lbs/day
Toxaphene	0.00000000 ug/l	0.000000 lbs/day

Specific Parameter: TDS	0 ug/l	0.000000 lbs/day	8431.75 mg/l	4.5 tons / day

Effluent Limitations for the Protection of Agriculture

	1 Hour Average (Acute) Standard Concentration	Load
Arsenic	987.33 ug/l	0.53 lbs / day
Boron	7404.99 ug/l	3.99 lbs / day
Cadmium	98.73 ug/l	0.05 lbs / day
Chromium	987.33 ug/l	0.53 lbs / day
Copper	493.67 ug/l	0.27 lbs / day
Lead	987.33 ug/l	0.53 lbs / day
Selenium	493.67 ug/l	0.27 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		7242.61				7242.61	3894.28
Antimony			0.00			0.00	
Arsenic	987.33	3323.21			10.00	10.00	8252.25
Asbestos							
Barium		9873.32			1000.00	1000.00	
Boron							
Cadmium	98.73	40.83			0.00	0.00	12.27
Chromium (III)		10341.5			50.00	50.00	5519.41
Chromium (VI)	987.33	124.43				124.43	411.12
Copper	493.67	256.56				256.56	825.67
Cyanide		217.21		0.00		0.00	51.34
Iron		168.41				168.41	
Lead	987.33	1459.40			15.00	15.00	182.38
Mercury		23.6693			0.00	0.00	0.5108
Nickel		8758.97		0.00		0.00	4169.22
Selenium	493.67	171.46			50.00	50.00	195.80
Silver		90.06			0.00	0.00	
Thallium				0.00		0.00	
Zinc		2115.80				2115.80	92442.18

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

	Acute		Chronic	
	ug/l	lbs/day	ug/l	lbs/day
Aluminum	7242.61	6.0	3894.28	3.2
Antimony				
Arsenic	10.00	0.0	8252.25	6.9
Asbestos				
Cadmium	0.00	0.0	12.27	0.0
Chromium (III)	50.00	0.0	5519.41	4.6
Chromium (VI)	124.43	0.1	411.12	0.3
Copper	256.56	0.2	825.67	0.7
Cyanide	0.00	0.0	51.34	0.0
Iron	168.41	0.1		
Lead	15.00	0.0	182.38	0.2
Mercury	0.00	0.0	0.51	0.0
Nickel	0.00	0.0	4169.22	3.5
Selenium	50.00	0.0	195.80	0.2
Silver	0.00	0.0		
Zinc	2115.80	1.8	92442.18	77.1

Effluent Indicators / Targets for Pollution Indicators

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

	Indicator / Target	Target	
	mg/l	mg/l	lbs/day
Gross Beta (pCi/l)	50.0 pCi/L		
BOD	5.0	49.37	15012.29
Nitrates as N	4.0	39.49	12009.83
Total Phosphorus as P	0.05	0.49	150.12
Total Suspended Solids	90.0	888.60	270221.22

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 interfer 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 wataer benefical 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 limite 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 permitee.

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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