

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. **UT0025577**

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

OLDCASTLE INFRASTRUCTURE

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

PLAIN CITY CANAL TO OGDEN NATURE PRESERVE TO MILL CREEK,

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

This permit shall become effective on December 1, 2019

This permit expires at midnight on November 30, 2024.

Signed this 1st day of December, 2019.



Erica B. Gaddis, PhD
Director

DWQ-2019-010144

**MINOR INDUSTRIAL
DISCHARGE PERMIT NO. UT0025577**

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

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

Outfall Number
001

Location of Discharge Outfall
 Located at latitude 41°14'40" and longitude 112°00'00". The discharge is through a 4-inch diameter pipe leading from the sedimentation pond into the Ogden City storm drain and discharges into the Plain City Canal thence to Mill Creek.

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
Total Suspended Solids, mg/L	25	35	NA	NA
Dissolved Oxygen, mg/L	NA	NA	5.5	NA
Oil & Grease, mg/L	NA	NA	NA	10.0
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

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WASTEWATER

Table 2. Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/	Monthly	Instantaneous	gpd
Total Suspended Solids	Monthly	Grab	mg/L
Dissolved Oxygen	Monthly	Instantaneous	mg/L
Oil & Grease c/	Monthly (If sheen is present)	Visual/Grab	mg/L
pH	Monthly	Grab	SU
Metals d/	Monthly	Grab	mg/L

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

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

c/ The analytical sample for oil & grease is only required when a sheen is observed or there is another reason to believe oil & grease may be present.

d/ 10 monthly sampling events for metals shall occur during the first 10 months that Bronco Emery Mine is discharging. These months are not required to be consecutive. Reasonable potential analysis will then be conducted on this data set. RP analysis for arsenic, cadmium, chromium, copper, mercury, nickel, selenium, lead, silver, zinc and cyanide will be conducted.

2. There shall be no visible sheen or floating solids or visible foam in other than trace amounts present in the discharge.
3. Samples taken in compliance with the monitoring requirements specified above shall be taken at Outfall 001.

Reporting of Monitoring Results.

2. 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 VII.G)*, and submitted by NetDMR, or to the Division of Water Quality at the following address:

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

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

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PRETREATMENT

II. PRETREATMENT REQUIREMENTS

A. Definitions.

1. POTW or publicly owned treatment works means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

B. Discharges to a POTW. Any process wastewater that the facility may discharge to the sanitary sewer, either as direct discharge or as hauled waste, is subject to federal, state and local pretreatment regulations. Pursuant to Section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in *40 CFR Part 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.

C. Hazardous Waste Requirements. In accordance with *40 CFR Part 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 Part 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

D. Hauled Hazardous Waste. Hauled hazardous waste shall not be discharged to a POTW without notification to the Division of Water Quality.

III. BIOSOLIDS REQUIREMENTS

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

IV. STORM WATER REQUIREMENTS.

- A. Storm Water Permit. The permittee's facility falls under an Industrial Storm Water Sector. Therefore the permittee must obtain Industrial Storm Water permit coverage or submit a no exposure certification for the Industrial Storm Water Sector to the Director, within 90 days of the permit being issued. If the facility already has coverage under a Storm Water General Permit, then that coverage must be maintained during the life of this permit.

- B. 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".

V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10 and 40CFR Part 503*, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10 and 40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.
- F. Records Contents. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) and time(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and,
 6. The results of such analyses.
- G. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location
- H. Twenty-four Hour Notice of Noncompliance Reporting.
1. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.

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2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4300 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any noncompliance which may endanger health or the environment;
 - b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part VI.G, Bypass of Treatment Facilities.*);
 - c. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H, Upset Conditions.*);
 - d. Violation of a daily discharge limitation for any of the pollutants listed in the permit; or,
 - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part V.H.3*
- J. Inspection and Entry The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

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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.

VI. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions or the Act is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under UCA 19-5-115(2) a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at Part VI.G, *Bypass of Treatment Facilities* and Part VI.H, *Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.
- G. Bypass of Treatment Facilities.
1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.
 2. Prohibition of Bypass.
 - a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

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- (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (3) The permittee submitted notices as required under *section VI.G.3*.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections VI.G.2.a (1), (2) and (3)*.
3. Notice.
- a. *Anticipated bypass*. Except as provided above in *section VI.G.2* and below in *section VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages:
 - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
 - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
 - (6) Any additional information requested by the Director.
 - b. *Emergency Bypass*. Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *section VI.G.3.a.(1) through (6)* to the extent practicable.
 - c. *Unanticipated bypass*. The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part IV.H*, Twenty Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural

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Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under *Part V.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
 - d. The permittee complied with any remedial measures required under *Part VI.D, Duty to Mitigate*.
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

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

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

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

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2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 ug/L);
 - b. One milligram per liter (1 mg/L) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
 - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

VII. GENERAL REQUIREMENTS

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

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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 VII.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph VII.G.2* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

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

- H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
 1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;

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2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
 2. A final waste-load allocation is developed and approved by the State and/or EPA for incorporation in this permit.
 3. Revisions to the current CWA § 208 area-wide 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 WET testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.
- R. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".

VIII. DEFINITIONS

A. Wastewater.

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

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- c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,
 - d. Continuous sample volume, with sample collection rate proportional to flow rate.
- 9. “CWA,” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
 - 10. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
 - 11. “EPA,” means the United States Environmental Protection Agency.
 - 12. “Director,” means Director of the Division of Water Quality.
 - 13. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
 - 14. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
 - 15. “Severe Property Damage,” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - 16. “Upset,” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- 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 I* 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.

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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);

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- 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

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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;

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- 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 (l) 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 1 acre 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 AND STATEMENT OF BASIS
OLDCASTLE INFRASTRUCTURE
RENEWAL PERMIT: DISCHARGE & STORM WATER
UPDES PERMIT NUMBER: UT0025577
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT NUMBER: UTR000619
MINOR INDUSTRIAL**

FACILITY CONTACTS

Person Name:	Ray Young	Person Name:	Dale Egbert
Position:	Production Manager	Position:	Safety Manager
Phone Number:	(801) 626-1310	Phone Number:	(801) 624-7032

Facility Name: Oldcastle Infrastructure
Mailing and Facility Address: 801 West 12th Street
Ogden UT 84404

Telephone: (801) 399-1171

Actual Address: 801 West 12th Street
Ogden UT 84404

DESCRIPTION OF FACILITY

Oldcastle Infrastructure produces pre-cast concrete pipe and other concrete products. These products are manufactured with Portland cement, fly ash, and small aggregate rock. Oldcastle Infrastructure has a sediment pond that can contain up to 20,000 gallons of storm water runoff and process wastewater. The only time there is a discharge is during, or just after major precipitation events. Old castle Infrastructure has a Standard Industrial Classification (SIC) code of 3272, for "Concrete Products, except Block and Brick".

The sediment pond is just north of the pre-cast building. Outfall 001 flows into a 24 inch concrete storm drain on the north side of the sediment pond. Then flow's approximately 1000', where the Oldcastle Precast storm drain discharges into the Ogden City storm drain and discharges to the Plain City Canal which flows through the Ogden Nature Preserve thence to Mill Creek. The outfall of the pond is at latitude 41°14'40" and longitude 112°00'00".

DISCHARGE

DESCRIPTION OF DISCHARGE

Almost all of the water that flows into the sediment pond is storm water runoff. There is some process wastewater which contributes about two thousand gallons a year to the sediment pond, thus the need for a Utah Pollutant Discharge Elimination Permit. The process wastewater consists of wash down water from the cleaning of products, boiler room water, quality assurance laboratory water, and some maintenance shop water. The parameters of concern in the discharge from Oldcastle Precast are total suspended solids (TSS), pH and oil and grease.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 41°14'40" and longitude 112°00'00". The discharge is through a 4-inch diameter pipe leading from the sedimentation pond into the Ogden City storm drain and discharges into the Plain City Canal thence to Mill Creek.

No effluent discharge data is included in this FSSOB because the facility only had 1 discharge in previous permit cycle (September 2015).

RECEIVING WATERS AND STREAM CLASSIFICATION

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge flows into the Plain City Canal thence to Mill Creek. Mill Creek is classified as 2B, 3C, 3D and 4 according to Utah Administrative Code (UAC) R317-2-13.4:

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

BASIS FOR EFFLUENT LIMITATIONS

Utah Administrative Code (UAC) R317-1-3 lists State secondary treatment standards for five-day biochemical oxygen demand (BOD5), total suspended solids (TSS), fecal coliforms, total coliforms, and pH. Based on data provided in the original permit application, and because the effluent is composed only of industrial wastewater, BOD5, and E. coli limitations are not necessary, thus will not be included in this permit. However, Total Suspended Solids and pH are applicable to this discharge permit and will be included in this renewal permit. Numeric limitations for these parameters can be found in the Table below.

Effluent flow limitations were not included in this renewal permit because the parameters for Outfall 001 are based on secondary treatment standards or water quality based standards where the concentration is not dependent on flow.

In 2014, the Utah Division of Water Quality adopted UAC R317-1-3.3, Technology-Based Phosphorus Effluent Limit (TBPEL) Rule. The TBPEL rule as it relates to "non-lagoon" wastewater treatment plants establishes new regulations for the discharge of phosphorus to surface waters and is self-implementing. The TBPEL rule requires that all non-lagoon wastewater treatment works discharging wastewater to surface waters of the state shall provide treatment processes which will produce effluent less than or equal to an annual mean of 1.0 mg/L for total phosphorus. This TBPEL shall be achieved by January 1, 2020. However, since phosphorus is not a constituent of concern and not expected to be in the effluent, the facility is exempt from the TBPEL rule and phosphorus limits are not included in this permit.

REASONABLE POTENTIAL ANALYSIS

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required

A qualitative RP check was performed on metals to determine if there was enough data to perform a reasonable potential analysis on the outfall. Because of their process water only consists of wash down water from the cleaning of products, boiler room water, quality assurance laboratory water, and some maintenance shop water, Oldcastle infrastructure was not required to sample metals during the previous permit cycle, and as a result there is no metals data to analyze for RP.

As a result, this renewed permit will require accelerated metals analysis for the first 10 samples where the facility is discharging. Because the discharges at the facility may be sporadic, it is acceptable if sampling events are conducted during concurrent months when the facility is not discharging. The metals to be analyzed include arsenic, cadmium, chromium, copper, mercury, nickel, lead, silver, zinc and boron.

Once 10 data points are completed, a more robust RP analysis will be conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance. At which point, if required this permit will be modified to reflect the outcome of the analysis.

NUMERIC PERMIT LIMITATIONS

The permit limitations are:

Parameter	Effluent Limitations a/			
	30 - Day Average	Maximum 7 - Day Average	Daily Minimum	Daily Maximum
Total Suspended Solids, mg/L	25	35	NA	NA
Dissolved Oxygen, mg/L	NA	NA	5.5	NA
Oil & Grease, mg/L	NA	NA	NA	10.0
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Table 2. Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/	Monthly	Instantaneous	gpd
Total Suspended Solids	Monthly	Grab	mg/L
Dissolved Oxygen	Monthly	Instantaneous	mg/L
Oil & Grease c/	Monthly (If sheen is present)	Visual/Grab	mg/L
pH	Monthly	Grab	SU
Metals d/	Monthly	Grab	mg/L

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

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

c/ The analytical sample for oil & grease is only required when a sheen is observed or there is another reason to believe oil & grease may be present.

d/ 10 monthly sampling events for metals shall occur during the first 10 months that Bronco Emery Mine is discharging. These months are not required to be consecutive. Reasonable potential analysis will then be conducted on this data set. RP analysis for arsenic, cadmium, chromium, copper, mercury, nickel, selenium, lead, silver, zinc and cyanide will be conducted.

2. There shall be no visible sheen or floating solids or visible foam in other than trace amounts present in the discharge.
3. Samples taken in compliance with the monitoring requirements specified above shall be taken at Outfall 001.

BIOSOLIDS

For clarification purposes, sewage sludge is considered solids, until treatment or testing shows that the solids are safe, and meet beneficial use standards. After the solids are tested or treated, the solids are then known as biosolids. Class A biosolids, may be used for high public contact sites, such as home lawns and gardens, parks, or playing fields, etc. Class B biosolids may be used for low public contact sites, such as

farms, rangeland, or reclamation sites, etc.

SUBSTANTIAL BIOSOLIDS TREATMENT CHANGES

There are no significant changes to this renewal permit.

BIOSOLIDS LIMITATIONS

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

PRETREATMENT REQUIREMENTS

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste. 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 the permittee discharges 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 Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

The permittee is a minor municipal facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Also, the receiving irrigation ditch is regularly dry; therefore there is not any available data to conclude that the irrigation ditch is impaired. Based on these considerations, and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

TMDL REQUIREMENTS

According to the Utah's 2016 303(d) Water Quality Assessment Report, the receiving water for the discharge from Outfall 001 is the a Storm Drain to Plain City Canal To Mill Creek (Weber County) is not listed as impaired for any of its beneficial uses. Therefore no additional monitoring or permit limits are required to satisfy any TMDL requirement.

PERMIT DURATION

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

Drafted by
Lonnie Shull, Discharge, Biosolids
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Michael George, Storm Water
Dave Wham, Wasteload Analysis
Elise Hinman, TMDL
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: October 11, 2019
Ended: November 11, 2019

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

The Public Noticed of the draft permit was published in the Ogden Standard Examiner from October 11, 2019 through November 11, 2019.

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

No public comments were received during the public comment period.

ATTACHMENT 1

Wasteload Analysis

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

Date: March 29, 2019

Prepared by: Dave Wham 
Standards and Technical Services

Facility: Oldcastle Precast, UPDES Permit No. UT0025577
Receiving water: Storm Drain => Plain City Canal => Mill Creek (2B, 3C, 3D, 4)

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

Discharge

001 Process water 0.0001 MGD

Receiving Water

The discharge flows to an Ogden City storm drain which discharges to the Plain City Canal which flows through the Ogden Nature Preserve for approximately ½ mile before emptying into Mill Creek. Mill Creek is tributary to the Weber River. Per UAC R317-2-13.4, the designated beneficial uses of the Weber River from the Great Salt Lake to Slaterville diversion (with exceptions) are:

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

- *Class 4 - Protected for agricultural uses including irrigation of crops and stock watering.*

Flow

Typically, the critical flow for the wasteload analysis is considered the lowest stream flow for seven consecutive days with a ten year return frequency (7Q10). No flow data was available for the receiving stream. Based on past site visits and consultation with Ogden Nature Conservancy staff, the critical low flow in Mill Creek was estimated at 1.0 cfs. Receiving water quality was estimated using best professional judgement.

TMDL

According to the Utah's 2016 303(d) Water Quality Assessment Report, the receiving water for the discharge is listed as not assessed.

Mixing Zone

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

Complete mixing was assumed based on the receiving water being a storm drain/canal. Acute and chronic limits were calculated using 100% of the critical low flow.

Parameters of Concern

No potential parameters of concern were identified for the discharge based on review of the impairment status of the receiving water and review of the previous permit.

WET Limits

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

IC₂₅ WET limits for Outfall 002 should be based on 0.012 % effluent.

Wasteload Allocation Methods

Effluent limits were determined for conservative constituents using a simple mass balance mixing analysis (UDWQ 2012). The mass balance analysis is summarized in the Wasteload Addendums.

The water quality standard for chronic ammonia toxicity is dependent on temperature and pH, and the water quality standard for acute ammonia toxicity is dependent on pH. The AMMTOX Model developed by University of Colorado and adapted by Utah DWQ and EPA Region VIII was used to determine ammonia effluent limits (Lewis et al. 2002). The analysis is summarized in the Wasteload Addendum.

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Wasteload Analysis
Oldcastle Precast
UPDES Permit No. UT0025577

Models and supporting documentation are available for review upon request.

Antidegradation Level I Review

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

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

Documents:

WLA Document: *OldcastlePrecast_WLADoc_3-29-19.docx*

Wasteload Analysis and Addendums: *OldcastlePrecast_WLA_3-29-19.xlsm*

References:

Utah Division of Water Quality. 2012. *Utah Wasteload Analysis Procedures Version 1.0.*

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WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis

29-Mar-19

Facilities: Oldcastle Precast
Discharging to: Storm Drain=>Plain City Canal=>Mill Creek
Design Flow: 0.0001 MGD

UPDES No: UT-0025577

THIS IS A DRAFT DOCUMENT

I. Introduction

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

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

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

II. Receiving Water and Stream Classification

Storm Drain=>Plain City Canal=>Mill Cr 2B, 3C, 3D, 4
Antidegradation Review: Level I review completed. Level II review not required.

III. Numeric Stream Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average) 0.019 mg/l (1 Hour Average)
Chronic Dissolved Oxygen (DO)	5.00 mg/l (30 Day Average) N/A mg/l (7Day Average) 3.00 mg/l (1 Day Average)
Maximum Total Dissolved Solids	1200.0 mg/l

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Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aluminum	87.00 ug/l**	0.000 lbs/day	750.00	ug/l	0.001 lbs/day
Arsenic	190.00 ug/l	0.000 lbs/day	340.00	ug/l	0.000 lbs/day
Cadmium	1.98 ug/l	0.000 lbs/day	5.29	ug/l	0.000 lbs/day
Chromium III	211.93 ug/l	0.000 lbs/day	4433.90	ug/l	0.004 lbs/day
ChromiumVI	11.00 ug/l	0.000 lbs/day	16.00	ug/l	0.000 lbs/day
Copper	23.85 ug/l	0.000 lbs/day	39.42	ug/l	0.000 lbs/day
Iron			1000.00	ug/l	0.001 lbs/day
Lead	12.88 ug/l	0.000 lbs/day	330.62	ug/l	0.000 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.000 lbs/day
Nickel	132.14 ug/l	0.000 lbs/day	1188.49	ug/l	0.001 lbs/day
Selenium	4.60 ug/l	0.000 lbs/day	20.00	ug/l	0.000 lbs/day
Silver	N/A ug/l	N/A lbs/day	25.04	ug/l	0.000 lbs/day
Zinc	303.95 ug/l	0.000 lbs/day	303.95	ug/l	0.000 lbs/day

* Allowed below discharge

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

Metals Standards Based upon a Hardness of 300.02 mg/l as CaCO3

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aldrin			1.500	ug/l	0.000 lbs/day
Chlordane	0.004 ug/l	0.023 lbs/day	1.200	ug/l	0.000 lbs/day
DDT, DDE	0.001 ug/l	0.005 lbs/day	0.550	ug/l	0.000 lbs/day
Dieldrin	0.002 ug/l	0.010 lbs/day	1.250	ug/l	0.000 lbs/day
Endosulfan	0.056 ug/l	0.302 lbs/day	0.110	ug/l	0.000 lbs/day
Endrin	0.002 ug/l	0.012 lbs/day	0.090	ug/l	0.000 lbs/day
Guthion			0.010	ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.020 lbs/day	0.260	ug/l	0.000 lbs/day
Lindane	0.080 ug/l	0.431 lbs/day	1.000	ug/l	0.000 lbs/day
Methoxychlor			0.030	ug/l	0.000 lbs/day
Mirex			0.010	ug/l	0.000 lbs/day
Parathion			0.040	ug/l	0.000 lbs/day
PCB's	0.014 ug/l	0.075 lbs/day	2.000	ug/l	0.000 lbs/day
Pentachlorophenol	13.00 ug/l	70.081 lbs/day	20.000	ug/l	0.000 lbs/day
Toxephene	0.0002 ug/l	0.001 lbs/day	0.7300	ug/l	0.000 lbs/day

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IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	0.00 lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			1200.0 mg/l	0.00 tons/day

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

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Metals				
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3)			ug/l	lbs/day
to			ug/l	lbs/day
Nitrates as N			ug/l	lbs/day
Chlorophenoxy Herbicides				
2,4-D			ug/l	lbs/day
2,4,5-TP			ug/l	lbs/day
Endrin			ug/l	lbs/day
cyclohexane (Lindane)			ug/l	lbs/day
Methoxychlor			ug/l	lbs/day
Toxaphene			ug/l	lbs/day

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

	Maximum Conc., ug/l - Acute Standards			
	Class 1C [2 Liters/Day for 70 Kg Person over 70 Yr.]		Class 3A, 3B [6.5 g for 70 Kg Person over 70 Yr.]	
Toxic Organics				
Acenaphthene	ug/l	lbs/day	2700.0 ug/l	14.56 lbs/day
Acrolein	ug/l	lbs/day	780.0 ug/l	4.20 lbs/day
Acrylonitrile	ug/l	lbs/day	0.7 ug/l	0.00 lbs/day
Benzene	ug/l	lbs/day	71.0 ug/l	0.38 lbs/day
Benzidine	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Carbon tetrachloride	ug/l	lbs/day	4.4 ug/l	0.02 lbs/day
Chlorobenzene	ug/l	lbs/day	21000.0 ug/l	113.21 lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Dichloroethane	ug/l	lbs/day	99.0 ug/l	0.53 lbs/day

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1,1,1-Trichloroethane				
Hexachloroethane	ug/l	lbs/day	8.9 ug/l	0.05 lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	ug/l	lbs/day	42.0 ug/l	0.23 lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day	11.0 ug/l	0.06 lbs/day
Chloroethane			0.0 ug/l	0.00 lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	1.4 ug/l	0.01 lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2-Chloronaphthalene	ug/l	lbs/day	4300.0 ug/l	23.18 lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	6.5 ug/l	0.04 lbs/day
p-Chloro-m-cresol			0.0 ug/l	0.00 lbs/day
Chloroform (HM)	ug/l	lbs/day	470.0 ug/l	2.53 lbs/day
2-Chlorophenol	ug/l	lbs/day	400.0 ug/l	2.16 lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	17000.0 ug/l	91.64 lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	14.02 lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	14.02 lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	0.1 ug/l	0.00 lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	3.2 ug/l	0.02 lbs/day
1,2-trans-Dichloroethylene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	790.0 ug/l	4.26 lbs/day
1,2-Dichloropropane	ug/l	lbs/day	39.0 ug/l	0.21 lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	1700.0 ug/l	9.16 lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	2300.0 ug/l	12.40 lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	9.1 ug/l	0.05 lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	0.5 ug/l	0.00 lbs/day
Ethylbenzene	ug/l	lbs/day	29000.0 ug/l	156.33 lbs/day
Fluoranthene	ug/l	lbs/day	370.0 ug/l	1.99 lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) ether	ug/l	lbs/day	170000.0 ug/l	916.44 lbs/day
Bis(2-chloroethoxy) methane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methylene chloride (HM)	ug/l	lbs/day	1600.0 ug/l	8.63 lbs/day
Methyl chloride (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methyl bromide (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Bromoform (HM)	ug/l	lbs/day	360.0 ug/l	1.94 lbs/day
Dichlorobromomethane	ug/l	lbs/day	22.0 ug/l	0.12 lbs/day
Chlorodibromomethane	ug/l	lbs/day	34.0 ug/l	0.18 lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	50.0 ug/l	0.27 lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day	17000.0 ug/l	91.64 lbs/day
Isophorone	ug/l	lbs/day	600.0 ug/l	3.23 lbs/day
Naphthalene				
Nitrobenzene	ug/l	lbs/day	1900.0 ug/l	10.24 lbs/day
2-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	14000.0 ug/l	75.47 lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	765.0 ug/l	4.12 lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	8.1 ug/l	0.04 lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	16.0 ug/l	0.09 lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day	1.4 ug/l	0.01 lbs/day
Pentachlorophenol	ug/l	lbs/day	8.2 ug/l	0.04 lbs/day

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Phenol	ug/l	lbs/day	4.6E+06 ug/l	2.48E+04 lbs/day
Bis(2-ethylhexyl)phthala	ug/l	lbs/day	5.9 ug/l	0.03 lbs/day
Butyl benzyl phthalate	ug/l	lbs/day	5200.0 ug/l	28.03 lbs/day
Di-n-butyl phthalate	ug/l	lbs/day	12000.0 ug/l	64.69 lbs/day
Di-n-octyl phthlate				
Diethyl phthalate	ug/l	lbs/day	120000.0 ug/l	646.90 lbs/day
Dimethyl phthlate	ug/l	lbs/day	2.9E+06 ug/l	1.56E+04 lbs/day
Benzo(a)anthracene (P/	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(b)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(k)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Chrysene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dibenzo(a,h)anthracene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Indeno(1,2,3-cd)pyrene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Pyrene (PAH)	ug/l	lbs/day	11000.0 ug/l	59.30 lbs/day
Tetrachloroethylene	ug/l	lbs/day	8.9 ug/l	0.05 lbs/day
Toluene	ug/l	lbs/day	200000 ug/l	1078.17 lbs/day
Trichloroethylene	ug/l	lbs/day	81.0 ug/l	0.44 lbs/day
Vinyl chloride	ug/l	lbs/day	525.0 ug/l	2.83 lbs/day
				lbs/day
				lbs/day
Pesticides				
Aldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dieldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Chlordane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDT	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDE	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDD	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
alpha-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.01 lbs/day
beta-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.01 lbs/day
Endosulfan sulfate	ug/l	lbs/day	2.0 ug/l	0.01 lbs/day
Endrin	ug/l	lbs/day	0.8 ug/l	0.00 lbs/day
Endrin aldehyde	ug/l	lbs/day	0.8 ug/l	0.00 lbs/day
Heptachlor	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Heptachlor epoxide				
PCB's				
PCB 1242 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1254 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1221 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1232 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1248 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1260 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1016 (Arochlor 10	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Pesticide				
Toxaphene	ug/l		0.0 ug/l	0.00 lbs/day
Dioxin				
Dioxin (2,3,7,8-TCDD)	ug/l	lbs/day		

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Metals

Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	23.18 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	1185.98 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	24.80 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			6.30 ug/l	0.03 lbs/day
Zinc				

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

VII. Mathematical Modeling of Stream Quality

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

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

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

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

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

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

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

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

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

VIII. Modeling Information

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

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

Other Conditions

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

Model Inputs

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

Current Upstream Information

	Stream							
	Critical Low							
	Flow	Temp.	pH	T-NH3	BOD5	DO	TRC	TDS
	cfs	Deg. C		mg/l as N	mg/l	mg/l	mg/l	mg/l
Summer (Irrig. Season)	1.00	20.0	8.2	0.10	1.00	6.98	0.00	400.0
Fall	1.00	16.0	8.2	0.10	1.00	---	0.00	400.0
Winter	1.00	4.0	8.1	0.10	1.00	---	0.00	400.0
Spring	1.00	12.0	8.1	0.10	1.00	---	0.00	400.0
Dissolved Metals	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
All Seasons	2.385*	0.795*	0.0795*	0.795*	3.975*	0.8*	1.25*	0.795*
Dissolved Metals	Hg	Ni	Se	Ag	Zn	Boron		
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
All Seasons	0.0000	0.795*	1.59*	0.15*	0.0795*	1.59*		

* ~80% MDL

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Projected Discharge Information

Season	Flow, MGD	Temp.
Summer	0.00010	20.0
Fall	0.00010	16.0
Winter	0.00010	4.0
Spring	0.00010	12.0

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

IX. Effluent Limitations

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

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

Effluent Limitation for Flow based upon Water Quality Standards

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

Season	Daily Average	
Summer	0.0001 MGD	0.0002 cfs
Fall	0.0001 MGD	0.0002 cfs
Winter	0.0001 MGD	0.0002 cfs
Spring	0.0001 MGD	0.0002 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.0001 MGD. If the discharger is allowed to have a flow greater than 0.0001 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

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

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

WET Requirements	LC50 >	100.0% Effluent	[Acute]
	IC25 >	0.015% Effluent	[Chronic]

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

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

Season	Concentration	
Summer	25.0 mg/l as BOD5	0.0 lbs/day
Fall	25.0 mg/l as BOD5	0.0 lbs/day
Winter	25.0 mg/l as BOD5	0.0 lbs/day
Spring	25.0 mg/l as BOD5	0.0 lbs/day

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

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

Season	Concentration
Summer	5.50
Fall	5.50
Winter	5.50
Spring	5.50

Effluent Limitation for Total Ammonia based upon Water Quality Standards

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

Season		Concentration	Load
Summer	4 Day Avg. - Chronic	8296.06 mg/l as N	6.9 lbs/day
	1 Hour Avg. - Acute	26526.6 mg/l as N	22.1 lbs/day
Fall	4 Day Avg. - Chronic	13600.8 mg/l as N	11.3 lbs/day
	1 Hour Avg. - Acute	30962.3 mg/l as N	25.8 lbs/day
Winter	4 Day Avg. - Chronic	13281.3 mg/l as N	11.1 lbs/day
	1 Hour Avg. - Acute	30278.0 mg/l as N	25.2 lbs/day
Spring	4 Day Avg. - Chronic	10633.2 mg/l as N	8.9 lbs/day
	1 Hour Avg. - Acute	25899.8 mg/l as N	21.6 lbs/day

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

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Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards

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

Season		Concentration	Load
Summer	4 Day Avg. - Chronic	64.527 mg/l	0.05 lbs/day
	1 Hour Avg. - Acute	116.148 mg/l	0.10 lbs/day
Fall	4 Day Avg. - Chronic	64.527 mg/l	0.05 lbs/day
	1 Hour Avg. - Acute	116.148 mg/l	0.10 lbs/day
Winter	4 Day Avg. - Chronic	64.527 mg/l	0.05 lbs/day
	1 Hour Avg. - Acute	116.148 mg/l	0.10 lbs/day
Spring	4 Day Avg. - Chronic	64.527 mg/l	0.05 lbs/day
	1 Hour Avg. - Acute	116.148 mg/l	0.10 lbs/day

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season		Concentration	Load
Summer	Maximum, Acute	##### mg/l	2.16 tons/day
Fall	Maximum, Acute	##### mg/l	2.16 tons/day
Winter	Maximum, Acute	##### mg/l	2.16 tons/day
Spring	Maximum, Acute	##### mg/l	2.16 tons/day
Colorado Salinity Forum Limits		Determined by Permitting Section	

Effluent Limitations for Total Recoverable Metals based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Metals will be met with an effluent limitation as follows (based upon a hardness of 300.02 mg/l):

	4 Day Average		1 Hour Average	
	Concentration	Load	Concentration	Load
Aluminum*	N/A	N/A	#####	ug/l 2.0 lbs/day
Arsenic*	1.22E+06 ug/l	0.7 lbs/day	#####	ug/l 0.9 lbs/day
Cadmium	12,297.95 ug/l	0.0 lbs/day	16,861.3	ug/l 0.0 lbs/day
Chromium III	1.36E+06 ug/l	0.7 lbs/day	1.43E+07	ug/l 12.0 lbs/day
Chromium VI*	45,421.47 ug/l	0.0 lbs/day	38,881.5	ug/l 0.0 lbs/day
Copper	149,075.79 ug/l	0.1 lbs/day	124,862.1	ug/l 0.1 lbs/day
Iron*	N/A	N/A	#####	ug/l 2.7 lbs/day
Lead	78,157.08 ug/l	0.0 lbs/day	#####	ug/l 0.9 lbs/day
Mercury*	77.52 ug/l	0.0 lbs/day	7,759.3	ug/l 0.0 lbs/day
Nickel	849,144.02 ug/l	0.5 lbs/day	#####	ug/l 3.2 lbs/day
Selenium*	19,461.61 ug/l	0.0 lbs/day	59,522.3	ug/l 0.0 lbs/day
Silver	N/A ug/l	N/A lbs/day	80,965.4	ug/l 0.1 lbs/day

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Zinc	1.96E+06 ug/l	1.1 lbs/day	982,423.9	ug/l	0.8 lbs/day
Cyanide*	33,618.65 ug/l	0.0 lbs/day	71,127.4	ug/l	0.1 lbs/day

*Limits for these metals are based on the dissolved standard.

**Effluent Limitations for Heat/Temperature based upon
Water Quality Standards**

Summer	25,880.5 Deg. C.	46,616.9 Deg. F
Fall	25,876.5 Deg. C.	46,609.7 Deg. F
Winter	25,864.5 Deg. C.	46,588.1 Deg. F
Spring	25,872.5 Deg. C.	46,602.5 Deg. F

**Effluent Limitations for Organics [Pesticides]
Based upon Water Quality Standards**

In-stream criteria of downstream segments for Organics [Pesticides] will be met with an effluent limit as follows:

	4 Day Average		1 Hour Average		
	Concentration	Load	Concentration		Load
Aldrin			1.5E+00	ug/l	1.94E-06 lbs/day
Chlordane	4.30E-03 ug/l	3.59E-06 lbs/day	1.2E+00	ug/l	1.55E-06 lbs/day
DDT, DDE	1.00E-03 ug/l	8.34E-07 lbs/day	5.5E-01	ug/l	7.11E-07 lbs/day
Dieldrin	1.90E-03 ug/l	1.58E-06 lbs/day	1.3E+00	ug/l	1.62E-06 lbs/day
Endosulfan	5.60E-02 ug/l	4.67E-05 lbs/day	1.1E-01	ug/l	1.42E-07 lbs/day
Endrin	2.30E-03 ug/l	1.92E-06 lbs/day	9.0E-02	ug/l	1.16E-07 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.29E-08 lbs/day
Heptachlor	3.80E-03 ug/l	3.17E-06 lbs/day	2.6E-01	ug/l	3.36E-07 lbs/day
Lindane	8.00E-02 ug/l	6.67E-05 lbs/day	1.0E+00	ug/l	1.29E-06 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	3.88E-08 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.29E-08 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	5.17E-08 lbs/day
PCB's	1.40E-02 ug/l	1.17E-05 lbs/day	2.0E+00	ug/l	2.58E-06 lbs/day
Pentachlorophenol	1.30E+01 ug/l	1.08E-02 lbs/day	2.0E+01	ug/l	2.58E-05 lbs/day
Toxephene	2.00E-04 ug/l	1.67E-07 lbs/day	7.3E-01	ug/l	9.43E-07 lbs/day

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**Effluent Targets for Pollution Indicators
Based upon Water Quality Standards**

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

	1 Hour Average	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	0.0 lbs/day
Nitrates as N	4.0 mg/l	0.0 lbs/day
Total Phosphorus as P	0.05 mg/l	0.0 lbs/day
Total Suspended Solids	90.0 mg/l	0.1 lbs/day

Note: Pollution indicator targets are for information purposes only.

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

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

	Maximum Concentration	
	Concentration	Load
Toxic Organics		
Acenaphthene	1.75E+07 ug/l	1.46E+01 lbs/day
Acrolein	5.04E+06 ug/l	4.20E+00 lbs/day
Acrylonitrile	4.27E+03 ug/l	3.56E-03 lbs/day
Benzene	4.59E+05 ug/l	3.83E-01 lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	2.84E+04 ug/l	2.37E-02 lbs/day
Chlorobenzene	1.36E+08 ug/l	1.13E+02 lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	4.98E+00 ug/l	4.15E-06 lbs/day
1,2-Dichloroethane	6.40E+05 ug/l	5.34E-01 lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	5.75E+04 ug/l	4.80E-02 lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	2.72E+05 ug/l	2.26E-01 lbs/day
1,1,2,2-Tetrachloroethane	7.11E+04 ug/l	5.93E-02 lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	9.05E+03 ug/l	7.55E-03 lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	2.78E+07 ug/l	2.32E+01 lbs/day
2,4,6-Trichlorophenol	4.20E+04 ug/l	3.50E-02 lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	3.04E+06 ug/l	2.53E+00 lbs/day
2-Chlorophenol	2.59E+06 ug/l	2.16E+00 lbs/day
1,2-Dichlorobenzene	1.10E+08 ug/l	9.16E+01 lbs/day
1,3-Dichlorobenzene	1.68E+07 ug/l	1.40E+01 lbs/day

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1,4-Dichlorobenzene	1.68E+07 ug/l	1.40E+01 lbs/day
3,3'-Dichlorobenzidine	4.98E+02 ug/l	4.15E-04 lbs/day
1,1-Dichloroethylene	2.07E+04 ug/l	1.73E-02 lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	5.11E+06 ug/l	4.26E+00 lbs/day
1,2-Dichloropropane	2.52E+05 ug/l	2.10E-01 lbs/day
1,3-Dichloropropylene	1.10E+07 ug/l	9.16E+00 lbs/day
2,4-Dimethylphenol	1.49E+07 ug/l	1.24E+01 lbs/day
2,4-Dinitrotoluene	5.88E+04 ug/l	4.91E-02 lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	3.49E+03 ug/l	2.91E-03 lbs/day
Ethylbenzene	1.87E+08 ug/l	1.56E+02 lbs/day
Fluoranthene	2.39E+06 ug/l	1.99E+00 lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	1.10E+09 ug/l	9.16E+02 lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	1.03E+07 ug/l	8.63E+00 lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	2.33E+06 ug/l	1.94E+00 lbs/day
Dichlorobromomethane(HM)	1.42E+05 ug/l	1.19E-01 lbs/day
Chlorodibromomethane (HM)	2.20E+05 ug/l	1.83E-01 lbs/day
Hexachlorocyclopentadiene	1.10E+08 ug/l	9.16E+01 lbs/day
Isophorone	3.88E+06 ug/l	3.23E+00 lbs/day
Naphthalene		
Nitrobenzene	1.23E+07 ug/l	1.02E+01 lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	9.05E+07 ug/l	7.55E+01 lbs/day
4,6-Dinitro-o-cresol	4.95E+06 ug/l	4.12E+00 lbs/day
N-Nitrosodimethylamine	5.24E+04 ug/l	4.37E-02 lbs/day
N-Nitrosodiphenylamine	1.03E+05 ug/l	8.63E-02 lbs/day
N-Nitrosodi-n-propylamine	9.05E+03 ug/l	7.55E-03 lbs/day
Pentachlorophenol	5.30E+04 ug/l	4.42E-02 lbs/day
Phenol	2.97E+10 ug/l	2.48E+04 lbs/day
Bis(2-ethylhexyl)phthalate	3.81E+04 ug/l	3.18E-02 lbs/day
Butyl benzyl phthalate	3.36E+07 ug/l	2.80E+01 lbs/day
Di-n-butyl phthalate	7.76E+07 ug/l	6.47E+01 lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	7.76E+08 ug/l	6.47E+02 lbs/day
Dimethyl phthlate	1.87E+10 ug/l	1.56E+04 lbs/day
Benzo(a)anthracene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Benzo(a)pyrene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Benzo(b)fluoranthene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Benzo(k)fluoranthene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Chrysene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	2.00E+02 ug/l	1.67E-04 lbs/day

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Pyrene (PAH)	7.11E+07 ug/l	5.93E+01 lbs/day
Tetrachloroethylene	5.75E+04 ug/l	4.80E-02 lbs/day
Toluene	1.29E+09 ug/l	1.08E+03 lbs/day
Trichloroethylene	5.24E+05 ug/l	4.37E-01 lbs/day
Vinyl chloride	3.39E+06 ug/l	2.83E+00 lbs/day

Pesticides

Aldrin	9.05E-01 ug/l	7.55E-07 lbs/day
Dieldrin	9.05E-01 ug/l	7.55E-07 lbs/day
Chlordane	3.81E+00 ug/l	3.18E-06 lbs/day
4,4'-DDT	3.81E+00 ug/l	3.18E-06 lbs/day
4,4'-DDE	3.81E+00 ug/l	3.18E-06 lbs/day
4,4'-DDD	5.43E+00 ug/l	4.53E-06 lbs/day
alpha-Endosulfan	1.29E+04 ug/l	1.08E-02 lbs/day
beta-Endosulfan	1.29E+04 ug/l	1.08E-02 lbs/day
Endosulfan sulfate	1.29E+04 ug/l	1.08E-02 lbs/day
Endrin	5.24E+03 ug/l	4.37E-03 lbs/day
Endrin aldehyde	5.24E+03 ug/l	4.37E-03 lbs/day
Heptachlor	1.36E+00 ug/l	1.13E-06 lbs/day
Heptachlor epoxide		

PCB's

PCB 1242 (Arochlor 1242)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1254 (Arochlor 1254)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1221 (Arochlor 1221)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1232 (Arochlor 1232)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1248 (Arochlor 1248)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1260 (Arochlor 1260)	2.91E-01 ug/l	2.43E-07 lbs/day
PCB-1016 (Arochlor 1016)	2.91E-01 ug/l	2.43E-07 lbs/day

Pesticide

Toxaphene	4.85E+00 ug/l	4.04E-06 lbs/day
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Metals

Antimony	ug/l	lbs/day
Arsenic	ug/l	lbs/day
Asbestos	ug/l	lbs/day
Beryllium		
Cadmium		
Chromium (III)		
Chromium (VI)		
Copper	ug/l	lbs/day
Cyanide	ug/l	lbs/day
Lead		
Mercury	ug/l	lbs/day
Nickel	ug/l	lbs/day
Selenium		
Silver		
Thallium	ug/l	lbs/day
Zinc		

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Dioxin
Dioxin (2,3,7,8-TCDD) 9.05E-05 ug/l 7.55E-11 lbs/day

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

	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		2417088.1				2417088.1	N/A
Antimony				2.78E+07		2.78E+07	
Arsenic	646512.4	1096671.6				646512.4	1223234.6
Barium							
Beryllium						0.0	
Cadmium	64137.3	16861.3				16861.3	12298.0
Chromium (III)		1.43E+07				1.43E+07	1364988.0
Chromium (VI)	641373.4	38881.5				38881.55	45421.47
Copper	1287885.8	124862.1				124862.1	149075.8
Cyanide		71127.4	1.42E+09			71127.4	33618.6
Iron		3229022.0				3229022.0	
Lead	641373.4	1066353.1				641373.4	78157.1
Mercury		7759.32		969.77		969.77	77.517
Nickel		3839892.3		2.97E+07		3839892.3	849144.0
Selenium	312978.2	59522.3				59522.3	19461.6
Silver		80965.4				80965.4	
Thallium				40730.3		40730.3	
Zinc		982423.9				982423.9	1964543.9
Boron	4848843.1					4848843.1	
Sulfate	12930248.2					1.29E+07	

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

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

	WLA Acute ug/l	WLA Chronic ug/l	
Aluminum	2417088.1	N/A	
Antimony	2.78E+07		
Arsenic	646512.4	1223234.6	Acute Controls
Asbestos			
Barium			
Beryllium			
Cadmium	16861.3	12298.0	
Chromium (III)	1.43E+07	1364988	
Chromium (VI)	38881.5	45421.5	Acute Controls
Copper	124862.1	149075.8	Acute Controls

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Cyanide	71127.4	33618.6	
Iron	3229022.0		
Lead	641373.4	78157.1	
Mercury	969.769	77.517	
Nickel	3839892.3	849144	
Selenium	59522.3	19461.6	
Silver	80965.4	N/A	
Thallium	40730.3		
Zinc	982423.9	1964543.9	Acute Controls
Boron	4.85E+06		
Sulfate	1.29E+07		N/A at this Waterbody

Other Effluent Limitations are based upon R317-1.

E. coli 126.0 organisms per 100 ml

X. Antidegradation Considerations

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

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an Antidegradation Level II Review is not required. The proposed permit is a simple renewal, with no increase in flow or concentration over that which was approved in the existing permit.

XI. Colorado River Salinity Forum Considerations

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

XII. Summary Comments

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