

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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Municipal Permit No. **UT0025241**

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

**STANSBURY PARK IMPROVEMENT DISTRICT**

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

**Un-named Ditch to Meadow Wetland then Playa area adjacent to the Great Salt Lake**

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

This permit shall become effective on May 1, 2019

This permit expires at midnight on April 30, 2023.

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



Erica Brown Gaddis, PhD  
Director

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**I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS**

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

<u>Outfall Numbers</u>	<u>Location of Discharge Outfalls</u>
001	Located at latitude 40°39'30" and longitude 112°18'00". The discharge is through a gate to a flume then to an 8 inch diameter gravity flow pipe leading to an unnamed ditch which flows under I-80, and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad, or through the gate to the rapid infiltration basin.
002	Located near latitude 40°39'30" and longitude 112°18'00". The discharge is 1300 feet south of outfall 001 to the same ditch. It is to an unnamed ditch which flows under I-80, and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad.

B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately, and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfalls 001 and 002 as defined in *Part VIII*.
2.
  - a. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfalls 001 and 002. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Outfall 001 and 002 Effluent Limitations <sup>1</sup>				
	Maximum Monthly Avg	Maximum Weekly Avg	Average Annual	Daily Minimum	Daily Maximum
Total Flow <sup>2</sup>	1.5	-	-	-	-
BOD <sub>5</sub> , mg/L	45	65	-	-	-
BOD <sub>5</sub> Min. % Removal	85	-	-	-	-
TSS, mg/L	45	65	-	-	-
TRC, mg/L	-	-	-	-	0.73

<sup>1</sup> See Definitions, Part VIII, for definition of terms.

<sup>2</sup> The total combined flow from all outfalls may not exceed the flow limit of 1.5 MGD.

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Parameter	Outfall 001 and 002 Effluent Limitations <sup>1</sup>				
	Maximum Monthly Avg	Maximum Weekly Avg	Average Annual	Daily Minimum	Daily Maximum
<i>E. coli</i> , No./100mL	126	158	-	-	-
pH, Standard Units	-	-	-	6.5	9
Total Phosphorus, lbs/year	-	-	8966	-	-

Self-Monitoring and Reporting Requirements <sup>1, 3</sup>			
Parameter	Frequency	Sample Type	Units
Total Flow <sup>2, 4, 5</sup>	Continuous	Recorder	MGD
BOD <sub>5</sub> , Influent <sup>6</sup>	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
TSS, Influent <sup>4</sup>	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
<i>E. coli</i>	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU
TRC, mg/L	Weekly	Grab	mg/L
Total Ammonia (as N)	Monthly	Composite	mg/L
Orthophosphate, (as P) <sup>7</sup>			
Effluent	Monthly	Composite	mg/L
Phosphorus, Total <sup>5</sup>			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen, TKN (as N) <sup>5</sup>			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO <sub>3</sub> <sup>5</sup>	Monthly	Composite	mg/L
Nitrite, NO <sub>2</sub> <sup>5</sup>	Monthly	Composite	mg/L
Total Mercury <sup>8, 9, 10</sup> Influent	2 X Yearly	Grab	mg/L
Effluent	2 X Yearly	Grab	mg/L
Metals <sup>7, 8</sup> Influent	Yearly <sup>11</sup>	Composite	mg/L
Effluent	Yearly	Composite	mg/L
Organic Toxics <sup>7, 12</sup> Influent	2 <sup>nd</sup> year of the permit cycle		
Effluent		Grab/Composite	mg/L

<sup>3</sup> These are the Self-Monitoring and Reporting Requirements for both Outfall 001 and 002. If there is no discharge to the ditch from an Outfall during a monitoring period then no monitoring is required for that Outfall.

<sup>4</sup> Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained

<sup>5</sup> If the rate of discharge is controlled, the rate and duration of discharge shall be reported

<sup>6</sup> In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge

<sup>7</sup> These reflect changes required with the adoption of UCA R317-1-3.3, Technology-based Phosphorus Effluent Limits rule

<sup>8</sup> Stansbury will be required to have the effluent analyzed for mercury using a method that is sensitive enough to demonstrate a presence or absence of mercury in the effluent, such as EPA Method 245.7 or 1631.

<sup>9</sup> Testing for metals listed in the table below and organic toxics must be performed during the first discharge of the renewed permits life cycle. The testing is conducted to support future RP analysis.

<sup>10</sup> See Part II of the permit for additional requirements regarding sampling for metals and organic toxics.

<sup>11</sup> This is the monitoring frequency for the metals listed in the table below (Metals to be monitored for RP) with the exception mercury which must be monitored as indicated above.

<sup>12</sup> A list of the organics to be tested can be found in 40CFR122 appendix D table II.

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Metals to be Monitored for RP
Total Arsenic
Total Cadmium
Total Chromium
Total Copper
Total Cyanide
Total Lead
Total Mercury <sup>13</sup>
Total Molybdenum
Total Nickel
Total Selenium
Total Silver
Total Zinc

3. Compliance Schedule

- a. There is no Compliance Schedule included in this renewal permit. or Compliance Schedule Language, or

4. Acute/Chronic Whole Effluent Toxicity (WET) Testing.

As part of the nationwide effort to control toxics, biomonitoring requirements are being included in all major permits and in minor permits for facilities where effluent toxicity is an existing or potential concern. Authorization for requiring effluent biomonitoring is provided for in UAC R317-8-4.2 and R317-8-5.3. The Whole Effluent Toxicity (WET) Control Guidance Document, February 15, 1991, outlines guidance to be used by Utah Division of Water Quality staff and by permittee's for implementation of WET control through the UPDES discharge permit program.

Stansbury is a minor facility with no reasonable potential for toxicity in the effluent. As a result, biomonitoring of the effluent will not be required. However, the permit will contain a WET reopener provision.

D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported and entered into NetDMR no later than the 28<sup>th</sup> day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part 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

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<sup>13</sup> Stansbury will be required to have the effluent analyzed for mercury using a method that is sensitive enough to demonstrate a presence or absence of mercury in the effluent, such as EPA Method 245.7 or 1631.

## **II. INDUSTRIAL PRETREATMENT PROGRAM**

### **A. Definitions.**

For this section the following definitions shall apply:

1. Indirect Discharge means the introduction of pollutants into a POTW from any non-domestic source regulated under section 307 (b), (c) or (d) of the Act.
2. Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
  - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
  - b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
3. Local Limit is defined as a limit designed to prevent pass through and/or interference. And is developed in accordance with 40 CFR 403.5(c).
4. Pass Through means a Discharge which exits the POTW into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's UPDES permit (including an increase in the magnitude or duration of a violation).
5. Significant industrial user (SIU) is defined as an industrial user discharging to a publicly-owned treatment works (POTW) that satisfies any of the following:
  - a. Has a process wastewater flow of 25,000 gallons or more per average work day;
  - b. Has a flow greater than five percent of the flow carried by the municipal system receiving the waste;
  - c. Is subject to Categorical Pretreatment Standards, or
  - d. Has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.
6. User or Industrial User means a source of Indirect Discharge

### **B. Self-Monitoring and Reporting Requirements.**

1. Because the design capacity of this municipal wastewater treatment facility is less than 5 MGD, the permittee will not be required to develop a State-approved industrial

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pretreatment program at this time. However, in order to determine if development of an industrial pretreatment program is warranted, the permittee shall conduct an **industrial waste survey**, as described in *Part II.C.1*, and submit it to the Division of Water Quality within **sixty (60) calendar days** of the effective date of this permit and shall sample and analyze both the influent and effluent annually, for the following parameters.

Monitoring for Pretreatment Program				
Parameter	MDL <sup>14</sup>	Sample Type	Frequency	Units
Total Mercury	0.000012	Grab	2 X Yearly	mg/L
Total Arsenic	0.19	Composite	Yearly	
Total Cadmium	0.0008			
Total Chromium	0.268			
Total Copper	0.0305			
Total Cyanide	0.0052	Grab		
Total Lead	0.0186	Composite		
Total Molybdenum	NA	Composite		
Total Nickel	0.169			
Total Selenium	0.046			
Total Silver	0.041			
Total Zinc	0.387			
TTOs <sup>15</sup>	NA	Composite/Grab	2 <sup>nd</sup> Year of the Permit Cycle	

C. Industrial Waste Survey (IWS).

1. As required by *Part II.B.1*, the industrial waste survey consists of;
  - a. Identifying each industrial user (IU) and determining if the IU is a significant industrial user (SIU),
  - b. Determination of the qualitative and quantitative characteristics of each discharge, and
  - c. Appropriate production data.
2. The IWS must be maintained and updated with IU information as necessary, to ensure that all IUs are properly permitted and/or controlled at all times. Updates must be submitted to the Director sixty (60) days following a change to the IWS.
3. Evaluate all significant industrial users at least once every two years to determine if they need to develop a slug prevention plan. If a slug prevention plan is required, the permittee shall notify the Director.

<sup>14</sup> The minimum detection limit (MDL) of the test method used for analysis must be below this limit, if a test method is not available the permittee must submit documentation to the Director regarding the method that will be used

<sup>15</sup> In addition, the permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D Table II (Organic Toxic Pollutants). The pesticides fraction of Appendix D, Table II is suspended unless pesticides are expected to be present.

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4. Notify all significant industrial users of their obligation to comply with applicable requirements under *Subtitles C and D* of the *Resource Conservation and Recovery Act (RCRA)*.
  5. The permittee must notify the Director of any new introductions by new or existing SIUs or any substantial change in pollutants from any major industrial source. Such notice must contain the information described in 1. above, and be forwarded no later than sixty (60) days following the introduction or change.
- D. General and Specific Prohibitions
1. General Prohibitions. No User shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes Pass Through or Interference. These general prohibitions apply to all Users of the POTW whether or not they are subject to categorical Pretreatment Standards or any other National, State, or local Pretreatment Standards or Requirements.
  2. Developed pursuant to *Section 307 of The Water Quality Act of 1987* require that under no circumstances shall the permittee allow introduction of the following pollutants into the waste treatment system from any source of non-domestic discharge:
    - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste-streams with a closed cup flashpoint of less than 140°F (60°C);
    - b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;
    - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
    - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at such volume or strength as to cause interference in the POTW;
    - e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C);
    - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
    - g. Pollutants which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems; or,
    - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
    - i. Any pollutant that causes pass through or interference at the POTW.
  3. In addition to the general and specific limitations expressed above, more specific pretreatment limitations have been and will be promulgated for specific industrial categories under *Section 307 of the Water Quality Act of 1987 as amended (WQA)*. (See *40 CFR, Subchapter N, Parts 400 through 500*, for specific information).

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E. Signification Industrial Users Discharging to the POTW.

The permittee shall provide adequate notice to the Director and the Division of Water Quality Industrial Pretreatment Coordinator of;

1. Any new introduction of pollutants into the treatment works from an indirect discharger (i.e., industrial user) which would be subject to *Sections 301 or 306* of the *WQA* if it were directly discharging those pollutants;
2. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit; and
3. For the purposes of this section, adequate notice shall include information on:
  - a. The quality and quantity of effluent to be introduced into such treatment works; and,
  - b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from such publicly owned treatment works.
4. Any SIU that must comply with applicable requirements under *Subtitles C and D* of the *Resource Conservation and Recovery Act (RCRA)*.

F. Change of Conditions.

At such time as a specific pretreatment limitation becomes applicable to an industrial user of the permittee, the Director may, as appropriate, do the following:

1. Amend the permittee's UPDES discharge permit to specify the additional pollutant(s) and corresponding effluent limitation(s) consistent with the applicable national pretreatment limitation;
2. Require the permittee to specify, by ordinance, contract, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's facility for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the *General Pretreatment Regulations at 40 CFR 403*;
3. Require the permittee to monitor its discharge for any pollutant, which may likely be discharged from the permittee's facility, should the industrial user fail to properly pretreat its waste; and/or,
4. Require the permittee to develop an approved pretreatment program.

G. Legal Action.

The Director retains, at all times, the right to take legal action against the industrial user and/or the treatment works, in those cases where a permit violation has occurred because of the failure of an industrial user to discharge at an acceptable level. If the permittee has failed to properly delineate maximum acceptable industrial contributor levels, the Director will look primarily to the permittee as the responsible party.

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H. Local Limits.

If local limits are developed per R317-8-8.5(4)(b) to protect the POTW from pass through or interference, then the POTW must submit limits to DWQ for review and public notice, as required by R317-8-8.5(4)(c).

### **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, since this facility is a lagoon, there is not any regular sludge production. Therefore 40 CFR 503 does not apply at this time. In the future, if the sludge needs to be removed from the lagoons and is disposed in some way, the Division of Water Quality must be contacted prior to the removal of the sludge to ensure that all applicable state and federal regulations are met.

**IV. STORM WATER REQUIREMENTS.**

Wastewater treatment facilities, which includes treatment lagoons, are required to comply with storm water permit requirements if they meet one or both of the following criteria,

1. The facility has an approved pretreatment program as described in 40 CFR Part 403.
2. The facility has a design flow of 1.0 MGD or greater.

The Stansbury Park Improvement District fits one of these criteria. The Stansbury Park Improvement District also fits one of the criteria for exclusion from a UPDES Storm Water Permit by a No Exposure Certification. The facility only recently became required to submit a No Exposure Certification. They have submitted a No Exposure Certification for coverage during this permit cycle and have met all requirements. Therefore, no storm water permitting requirements will be required at this time

**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 maximum daily discharge limitation for any of the pollutants listed in the permit; or,
  - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
  - a. A description of the noncompliance and its cause;
  - b. The period of noncompliance, including exact dates and times;
  - c. The estimated time noncompliance is expected to continue if it has not been corrected;
  - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
  - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part 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 judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
  - (3) The permittee submitted notices as required under *section VI.G.3*.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections VI.G.2.a (1), (2) and (3)*.
3. Notice.
- a. *Anticipated bypass*. Except as provided above in *section VI.G.2* and below in *section VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
    - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
    - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
    - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
    - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
    - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
    - (6) Any additional information requested by the Director.
  - b. *Emergency Bypass*. Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *section VI.G.3.a.(1) through (6)* to the extent practicable.
  - c. *Unanticipated bypass*. The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part IV.H*, Twenty Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural

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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.

**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 wasteload 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, whole effluent toxicity (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

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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 species at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the effluent results to be considered valid.
5. “Bypass,” means the diversion of waste streams from any portion of a treatment facility.
6. “Chronic toxicity” occurs when during a chronic toxicity test, the 25% inhibition concentration (IC<sub>25</sub>) calculated on the basis of test organism survival and growth, or survival and reproduction, is less than or equal to the effluent dilution designated as the receiving water concentration (RWC).
7. "IC<sub>25</sub>" (inhibition concentration) is a point estimate of the toxicant concentration that would cause a 25% reduction in a biological measurement of the test organism, such as reproduction or growth.
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;

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

**FACT SHEET AND STATEMENT OF BASIS  
STANSBURY PARK IMPROVEMENT DISTRICT  
RENEWAL PERMIT: DISCHARGE  
UPDES PERMIT NUMBER: UT0025241  
MINOR MUNICIPAL**

**FACILITY CONTACTS**

Person Name: Brett Palmer  
Position: General Manager  
Phone Number: (435) 882-7922

Facility Name: Stansbury Park Improvement District  
Mailing and Facility Address: # 10 Plaza  
Stansbury Park, Utah 84074  
Telephone: (435) 882-7922  
Actual Address: 3300 North 1200 West

**DESCRIPTION OF FACILITY**

The Stansbury Park Improvement District's (Stansbury Park) lagoon treatment facility consists of 7 facultative cells. The cells are contained on 164 acres. After chlorination, the effluent is discharged at outfall 002, or sent to a series of storage ponds, where the effluent may be discharged at outfall 001. The treatment facility was operated as a total containment treatment facility until 1996. The facility serves the City of Stansbury Park with a current population of about 8,500. In 2011, the facility underwent an upgrade to increase the design flow to 2.7 MGD. However, some of the system components limit the flow to 1.5 MGD. As a result, this will be the flow limit in the permit. The facility is located at latitude 40°39'30" and longitude 112°18'00".

A downstream evaluation was done by the Division of Water Quality (DWQ) in May 2010. As a result, it was determined that Stansbury Park discharges to a Class 3E ditch. The downstream receiving water north of I-80 where the ditch diffuses into a meadow wetland and ultimately a playa south of the railroad is classified as 2B and 3D. The Great Salt Lake (GSL) is on the north side of the railroad. Based on the observations of the diking, the discharge will not reach GSL at an elevation of 4208'.

As a result of the improvements at the facility, Stansbury Park has determined that they will not require the continuous use of the system's final three lagoon cells. They have also added a chlorination disinfection system to the system with the new outfall. This Outfall (002) is located 1600 feet (0.3 miles) south of Outfall 001, into the same ditch as Outfall 001. With the addition of chlorination to the system for disinfection, total residual chlorine limit and monitoring was added to the permit in 2011.

With these two changes, Stansbury Park plans to use the storage cells as a way to further treat the effluent during periods when they cannot meet effluent limits, including high TSS levels from algal growth. They will direct the flows to the first the storage cells to allow further treatment. When the levels have decreased, they plan to discharge to Outfall 001, or to the remaining storage cells for evaporation. An evaluation of the use of these two outfalls reveals that, as long as the combined flows of both discharges do not exceed the effluent flow limit for the permit (1.5 MGD) during any given day, the loading will

remain the same. DWQ determined that there is no need to complete a Level II ADR for the new outfall until the flows increase above 1.5 MGD.

According to the Utah Administrative Code (UAC) R317-1-3.2, the Director may allow, on a case-by-case basis, that the BOD5 and TSS effluent concentrations for discharging domestic wastewater lagoons shall not exceed 45 mg/L for a monthly average, nor 65 mg/L for a weekly average, provided certain criteria are met. Stansbury Park met all of the requirements, and the Director approved the new effluent limits according to the Utah Administrative Code (UAC) R317-1-3.2, thus, the limits were incorporated into their renewal permit.

Stansbury Park also requested a waiver from the Minimum Percent Removal Requirements for TSS. The request was based upon the significant inflow and infiltration (I&I) in the collection lines which dilutes the influent wastewater, therefore making it difficult to meet the minimum requirements consistently. In 1997, Stansbury Park overhauled its system to reduce the amount of I&I but is still plagued with the problem. The waiver was granted, and the Minimum Percent Removal Requirements for TSS have been removed from their permit.

## **SUMMARY OF CHANGES FROM THE PREVIOUS PERMIT**

### 1. WLA Model

A new model is used by DWQ to develop a waste load allocation (WLA) for dischargers to Waters of the State. In preparing for using this model, DWQ determined that the receiving stream should have a synoptic study completed to improve the understanding of the waterway and improve the WLA. This study was conducted during October 2013, and the information was incorporated in the WLA.

### 2. TRC

A study of the total residual chlorine (TRC) in the receiving water to determine an appropriate decay rate for the TRC in the WLA Model. As a result of this and the change in the WLA Model, the total residual chlorine (TRC) limit increased from the previous permit. The previous WLA indicated TRC limits of 0.73 mg/l for acute and 0.43 mg/l for chronic; the new WLA indicates TRC limits of 1.1 mg/l for acute and 0.63 mg/l for chronic. However, the limit will remain the same as in the previous permit.

### 3. RP

During the permit cycle, Water Quality has worked to improve our reasonable potential analysis (RP) for parameters to have limits included by using an EPA provided model. The results of the RP Analysis are included in Attachment 4 of the FSSOB.

### 4. Mercury Monitoring

Monitoring for mercury will be improved, but the frequency will not be increased as a result of the RP analysis included in Appendix 4 of the FSSOB. Stansbury will be required to have effluent analyzed for mercury by a method that is sensitive enough to demonstrate a presence or absence of mercury in the effluent, such as EPA Method 245.7 or 1631.

### 5. Metals and Organic Toxics Monitoring

Metals and organic toxics monitoring was added to the permit during the 2006 renewal to help establish a record of the presence or absence of pollutant in relation to possible pretreatment requirements. Currently, Stansbury Park does not meet the requirements for a pretreatment program and has not shown RP for the pollutants. It has been determined that the monitoring for metals and organic toxics will be reduced. Monitoring for metals other than mercury will be reduced to once a year. Monitoring for organic toxics

will be reduced to once during the second year of the permit cycle. Monitoring for mercury using a more sensitive method will remain at the current frequency of twice a year, or once every six months.

#### 6. TBPEL Rule

Water Quality adopted UAC R317-1-3.3, Technology-Based Phosphorus Effluent Limit (TBPEL) Rule on December 16, 2014. No TBPEL will be instituted for discharging treatment lagoons. Instead, each discharging lagoon was evaluated to determine the current annual average total phosphorus load measured in pounds per year based on monthly average flow rates and concentrations. Absent field data to determine these loads, and in case of intermittent discharging lagoons, the phosphorus load cap will be estimated by the Director.

The TBPEL discharging treatment works are required to implement, at a minimum, monthly monitoring of the following beginning July 1, 2015:

- R317-1-3.3, E, 1, a. Influent for total phosphorus (as P) and total Kjeldahl nitrogen (as N) concentrations;
- R317-1-3.3, E, 1, b. Effluent for total phosphorus and orthophosphate (as P), ammonia, nitrate-nitrite and total Kjeldahl nitrogen (as N);

In R317-1-3.3, E, 3 the rule states that all monitoring shall be based on 24-hour composite samples by use of an automatic sampler or a minimum of four grab samples collected a minimum of two hours apart.

A cap of 125% of the current annual total phosphorus load has been established and is referred to as phosphorus loading cap. It is the intent of *UAC R317-3.3.B* to provide capacity for growth within the facility's service area by setting the loading cap at 125 percent of the current annual total phosphorus load. Stansbury Park's current annual total phosphorus load was calculated based on the data reported on monthly discharge monitoring reports. Stansbury Park's phosphorus loading cap is 8,966 lbs/year and went into effect July 1, 2018.

Once the lagoon's phosphorus loading cap has been reached, the facility will have five years to construct treatment processes or implement treatment alternatives to prevent the total phosphorus loading cap from being exceeded.

The permit effluent limits will incorporate the following change as a result of the phosphorus loading cap:

Parameter	lbs./Year
Total Phosphorus, lbs	8966

## **DISCHARGE**

### **DESCRIPTION OF DISCHARGE**

Stansbury Park has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 3 years of data is attached. There were violations of their discharge limits for TSS and pH. However, the violations were not chronic in nature and did not require enforcement action.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40°39'30" and longitude 112°18'00". The discharge is through a gate to a flume then to an 8-inch diameter gravity flow pipe leading to an unnamed ditch which flows under I-80, and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad, or through the gate to the rapid infiltration basin.

<u>Outfall</u>	<u>Description of Discharge Point</u>
002	Located near latitude 40°39'30" and longitude 112°18'00". The discharge is 1300 feet south of outfall 001 to the same ditch. It is to an unnamed ditch which flows under I-80 and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad.

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

Stansbury Park will discharge to a Class 3E ditch. The downstream receiving water is north of I-80 where the ditch diffuses into a meadow wetland and ultimately a playa south of the railroad and is classified as 2B and 3D. Based on observations of the diking, the discharge will not reach GSL at an elevation of 4208'.

No Level II ADR is required because water quality will not be degraded (R317-3.5.b.1). DWQ did a Level ADR I to conclude that water quality standards will not be violated in the receiving waters.

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

### **BASIS FOR EFFLUENT LIMITATIONS**

The inclusion of and limitations on total suspended solids (TSS), biochemical oxygen demand (BOD5), *E. coli*, pH and percent removal for BOD5 are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. Attached is a WLA for this discharge into the unnamed irrigation ditch. The limit for TRC is from the WLA. It has been determined that this discharge will not cause a violation of water quality standards. An Antidegradation Level II review is not required since the Level I review shows that water quality impacts are minimal. The permittee is expected to be able to comply with these limitations. The permit limitations are:

### **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 analysis was performed using the effluent metals monitoring data to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. Based on the RP analysis, no metals were determined to have a reasonable potential to exceed the water quality

standard. In addition, the RP analysis for mercury indicates using a more sensitive analytical method is required. A copy of the RP analysis is included at the end of this Fact Sheet.

The permit limitations are:

Parameter	Outfall 001 and 002 Effluent Limitations <sup>1</sup>				
	Maximum Monthly Avg	Maximum Weekly Avg	Average Annual	Daily Minimum	Daily Maximum
Total Flow <sup>2</sup>	1.5	-	-	-	-
BOD <sub>5</sub> , mg/L	45	65	-	-	-
BOD <sub>5</sub> Min. % Removal	85	-	-	-	-
TSS, mg/L	45	65	-	-	-
TRC, mg/L	-	-	-	-	0.73
<i>E. coli</i> , No./100mL	126	158	-	-	-
pH, Standard Units	-	-	-	6.5	9
Total Phosphorus, lbs/year	-	-	8966	-	-

### SELF-MONITORING AND REPORTING REQUIREMENTS

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

Self-Monitoring and Reporting Requirements <sup>1, 3</sup>			
Parameter	Frequency	Sample Type	Units
Total Flow <sup>2, 4, 5</sup>	Continuous	Recorder	MGD
BOD <sub>5</sub> , Influent <sup>6</sup>	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
TSS, Influent <sup>4</sup>	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
<i>E. coli</i> .	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU
TRC, mg/L	Weekly	Grab	mg/L
Total Ammonia (as N)	Monthly	Composite	mg/L

<sup>1</sup> See Definitions, Part VIII, for definition of terms

<sup>2</sup> The total combine flow from all outfalls may not exceed the flow limit of 1.5 MGD.

<sup>3</sup> These are the Self-Monitoring and Reporting Requirements for both Outfall 001 and 002. If there is no discharge to the ditch from an Outfall during a monitoring period then no monitoring is required for that Outfall.

<sup>4</sup> Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained

<sup>5</sup> If the rate of discharge is controlled, the rate and duration of discharge shall be reported

<sup>6</sup> In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge

Self-Monitoring and Reporting Requirements <sup>1, 3</sup>			
Parameter	Frequency	Sample Type	Units
Orthophosphate, (as P) <sup>7</sup> Effluent	Monthly	Composite	mg/L
Phosphorus, Total <sup>6</sup> Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen, TKN (as N) <sup>6</sup> Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO <sub>3</sub> <sup>6</sup>	Monthly	Composite	mg/L
Nitrite, NO <sub>2</sub> <sup>6</sup>	Monthly	Composite	mg/L
Total Mercury <sup>8, 9, 10</sup> Influent	2 X Yearly	Grab	mg/L
Effluent	2 X Yearly	Grab	mg/L
Metals <sup>7, 8</sup> Influent	Yearly <sup>11</sup>	Grab/Composite	mg/L
Effluent	Yearly <sup>9</sup>	Grab/Composite	mg/L
Organic Toxics <sup>7, 12</sup> Influent	2 <sup>nd</sup> Year of the Permit	Grab/Composite	mg/L
Effluent	Cycle	Grab/Composite	mg/L

Metals to be Monitored for RP
Total Arsenic
Total Cadmium
Total Chromium
Total Copper
Total Cyanide
Total Lead
Total Mercury
Total Molybdenum
Total Nickel
Total Selenium
Total Silver
Total Zinc

**BIOSOLIDS**

<sup>7</sup> These reflect changes required with the adoption of UCA R317-1-3.3, Technology-based Phosphorus Effluent Limits rule.

<sup>8</sup> Stansbury will be required to have the effluent analyzed for mercury using a method that is sensitive enough to demonstrate a presence or absence of mercury in the effluent, such as EPA Method 245.7 or 1631.

<sup>9</sup> Testing for metals listed in the table below and organic toxics must be performed during the first discharge of the renewed permits life cycle. The testing is conducted to support future RP analysis.

<sup>10</sup> See Part II of the permit for additional requirements regarding sampling for metals and organic toxics.

<sup>11</sup> This is the monitoring frequency for the metals listed in the table below (Metals to be monitored for RP) with the exception mercury which must be monitored as indicated above.

<sup>12</sup> A list of the organics to be tested can be found in 40CFR122 appendix D table II.

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.

The State of Utah has adopted the *40 CFR 503* federal regulations for the disposal of sewage sludge (biosolids) by reference. However, since this facility is a lagoon, there is not any regular sludge production. Therefore, *40 CFR 503* does not apply at this time. In the future, if the sludge needs to be removed from the lagoons and is disposed of in some way, the Division of Water Quality must be contacted prior to the removal of the sludge to ensure that all applicable state and federal regulations are met.

## **STORM WATER**

### **STORM WATER REQUIREMENTS**

Wastewater treatment facilities, which includes treatment lagoons, are required to comply with storm water permit requirements if they meet one or both of the following criteria,

1. The facility has an approved pretreatment program as described in 40 CFR Part 403.
2. The facility has a design flow of 1.0 MGD or greater.

The Stansbury Park facility fits one of these criteria for exclusion from a UPDES Storm Water Permit by a No Exposure Certification. They have submitted a No Exposure Certification for coverage during this permit cycle and have met all requirements. Therefore, no storm water permitting requirements will be required at this time.

### **PRETREATMENT REQUIREMENTS**

The permittee has not been designated for pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than five (5) MGD, there are no categorical industries discharging to the treatment facility, industrial discharges comprise less than 1 percent of the flow through the treatment facility, and there is no indication of pass through or interference with the operation of the treatment facility such as upsets or violations of the POTW's UPDES permit limits.

Although the permittee does not have to develop a State-approved pretreatment program, any wastewater discharges to the sanitary sewer are subject to Federal, State and local 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 and the State Pretreatment Requirements found in UAC R317-8-8.

An industrial waste survey (IWS) is required of the permittee as stated in Part II of the permit. The IWS is to assess the needs of the permittee regarding pretreatment assistance. The IWS is required to be submitted within sixty (60) days after the issuance of the permit. If an Industrial User begins to discharge or an existing Industrial User changes their discharge the permittee must resubmit an IWS no later than sixty days following the introduction or change as stated in Part II of the permit.

It is required that the permittee submit for review, any local limits that are developed to the Division of Water Quality for review. If local limits are developed it is required that the permittee perform an annual evaluation of the need to revise or develop technically based local limits for pollutants of concern, to implement the general and specific prohibitions *40 CFR, Part 403.5(a)* and *Part 403.5(b)*. This evaluation may indicate that present local limits are sufficiently protective, need to be revised or should be developed.

### **BIOMONITORING REQUIREMENTS**

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

The 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.

### **PERMIT DURATION**

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

Drafted by  
Daniel Griffin, Discharge, Biosolids, Reasonable Potential Analysis  
Jennifer Robinson, Pretreatment  
Michael George, Storm Water  
Dave Wham, Wasteload Analysis  
Utah Division of Water Quality, (801) 536-4300

### **PUBLIC NOTICE**

Began: September 6, 2018  
Ended: October 5, 2018

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

The first Public Notice of the draft permit was published in the Tooele Transcript & Bulletin.

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.

### **Comments Summary**

One comment was received regarding the Stansbury Park Improvement District renewal permit which requires the documents to be public noticed to correct. The comment was submitted indicating that in the summary of changes from the previous permit it was mentioned that the frequency of monitoring for metals (excluding mercury) and total toxic organics were able to be reduced as a result of the RP evaluation. But in the monitoring frequency tables in the FSSOB and Part I, C, 2 of the Permit indicate all metals must be monitored twice a year. The corrections have been made, and as a result, the permit and FSSOB must be Public Noticed again.

### **SECOND PUBLIC NOTICE**

Began: March 18, 2019

Ended: April 18, 2019

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

The second Public Notice of the draft permit is published in the Tooele Transcript & Bulletin.

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 comments were received during the Public Notice Period. Therefore, it is recommended that the permit be issued as drafted.

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# **ATTACHMENT 1**

## *Industrial Waste Survey*

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# Industrial Pretreatment Wastewater Survey



Do you periodically experience any of the following treatment works problems?

- foam, floaties or unusual colors
- plugged collection lines caused by grease, sand, flour, etc.
- discharging excessive suspended solids, even in the winter
- smells unusually bad
- waste treatment facility doesn't seem to be treating the waste right

Perhaps the solution to a problem like one of these may lie in investigating the types and amounts of wastewater entering the sewer system from industrial users.

An industrial user (IU) is defined as a non-domestic user discharging to the waste treatment facility which meets any of the following criteria:

1. **has a lot of process wastewater (5% of the flow at the waste treatment facility or more than 25,000 gallons per work day.)**

Examples: Food processor, dairy, slaughterhouse, industrial laundry.

2. **is subject to Federal Categorical Pretreatment Standards;**

Examples: metal plating, cleaning or coating of metals, bluing of metals, aluminum extruding, circuit board manufacturing, tanning animal skins, pesticide formulating or packaging, and pharmaceutical manufacturing or packaging,

3. **is a concern to the POTW.**

Examples: septage hauler, restaurant and food service, car wash, hospital, photo lab, carpet cleaner, commercial laundry.

All users of the water treatment facility are **prohibited** from making the following types of discharges:

1. A discharge which creates a fire or explosion hazard in the collection system.
2. A discharge which creates toxic gases, vapor or fumes in the collection system.
3. A discharge of solids or thick liquids which creates flow obstructions in the collection system.
4. An acidic discharge (low pH) which causes corrosive damage to the collection system.
5. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause problems in the collection system or at the waste treatment facility.
6. Waste haulers are prohibited from discharging without permission. (No midnight dumping!)

When the solution to a sewer system problem may be found by investigating the types and amounts of wastewater entering the sewer system discharged from IUs, it's appropriate to conduct an Industrial Waste Survey.

## An Industrial Waste Survey consists of:

### Step 1: Identify Industrial Users

Make a list of all the commercial and industrial sewer connections.

Sources for the list:

business license, building permits, water and wastewater billing, Chamber of Commerce, newspaper, telephone book, yellow pages.

Split the list into two groups:

domestic wastewater only--no further information needed  
everyone else (IUs)

### Step 2: Preliminary Inspection

Go visit each IU identified on the "everybody else" list.

Fill out the **Preliminary Inspection Form** during the site visit.

### Step 3: Informing the State

Please fax or send a copy of the Preliminary inspection form (both sides) to:

**Jennifer Robinson**

Division of Water Quality  
195 North 1950 West  
PO Box 144870  
Salt Lake City, UT 84114-4870

Phone: (801) 536-4383  
Fax: (801) 536-4301  
E-mail: [jenrobinson@utah.gov](mailto:jenrobinson@utah.gov)

**PRELIMINARY INSPECTION FORM**

INSPECTION DATE \_\_\_\_ / \_\_\_\_ /

Name of Business \_\_\_\_\_ Person Contacted \_\_\_\_\_  
Address \_\_\_\_\_ Phone Number \_\_\_\_\_

Description of Business \_\_\_\_\_

Principal product or service: \_\_\_\_\_

Raw Materials used: \_\_\_\_\_

Production process is:  Batch  Continuous  Both

Is production subject to seasonal variation?  yes  no

If yes, briefly describe seasonal production cycle.

This facility generates the following types of wastes (check all that apply):

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Domestic wastes              | (Restrooms, employee showers, etc.)                    |
| 2. <input type="checkbox"/> Cooling water, non-contact   | 3. <input type="checkbox"/> Boiler/Tower blowdown      |
| 4. <input type="checkbox"/> Cooling water, contact       | 5. <input type="checkbox"/> Process                    |
| 6. <input type="checkbox"/> Equipment/Facility wash-down | 7. <input type="checkbox"/> Air Pollution Control Unit |
| 8. <input type="checkbox"/> Storm water runoff to sewer  | 9. <input type="checkbox"/> Other describe             |

Wastes are discharged to (check all that apply):

- |   |                                       |
|---|---------------------------------------|
| <input type="checkbox"/> Sanitary sewer   | <input type="checkbox"/> Storm sewer  |
| <input type="checkbox"/> Surface water    | <input type="checkbox"/> Ground water |
| <input type="checkbox"/> Waste haulers    | <input type="checkbox"/> Evaporation  |
| <input type="checkbox"/> Other (describe) |                                       |

Name of waste hauler(s), if used

Is a grease trap installed? Yes No

Is it operational? Yes No

Does the business discharge a lot of process wastewater?

- |   |     |    |
|---|-----|----|
| • More than 5% of the flow to the waste treatment facility? | Yes | No |
| • More than 25,000 gallons per work day?                    | Yes | No |

**Does the business do any of the following:**

- |   |  |
|---|--|
| <input type="checkbox"/> Adhesives                                    | <input type="checkbox"/> Car Wash                  |
| <input type="checkbox"/> Aluminum Forming                             | <input type="checkbox"/> Carpet Cleaner            |
| <input type="checkbox"/> Battery Manufacturing                        | <input type="checkbox"/> Dairy                     |
| <input type="checkbox"/> Copper Forming                               | <input type="checkbox"/> Food Processor            |
| <input type="checkbox"/> Electric & Electronic Components             | <input type="checkbox"/> Hospital                  |
| <input type="checkbox"/> Explosives Manufacturing                     | <input type="checkbox"/> Laundries                 |
| <input type="checkbox"/> Foundries                                    | <input type="checkbox"/> Photo Lab                 |
| <input type="checkbox"/> Inorganic Chemicals Mfg. or Packaging        | <input type="checkbox"/> Restaurant & Food Service |
| <input type="checkbox"/> Industrial Porcelain Ceramic Manufacturing   | <input type="checkbox"/> Septage Hauler            |
| <input type="checkbox"/> Iron & Steel                                 | <input type="checkbox"/> Slaughter House           |
| <input type="checkbox"/> Metal Finishing, Coating or Cleaning         |  |
| <input type="checkbox"/> Mining                                       |  |
| <input type="checkbox"/> Nonferrous Metals Manufacturing              |  |
| <input type="checkbox"/> Organic Chemicals Manufacturing or Packaging |  |
| <input type="checkbox"/> Paint & Ink Manufacturing                    |  |
| <input type="checkbox"/> Pesticides Formulating or Packaging          |  |
| <input type="checkbox"/> Petroleum Refining                           |  |
| <input type="checkbox"/> Pharmaceuticals Manufacturing or Packaging   |  |
| <input type="checkbox"/> Plastics Manufacturing                       |  |
| <input type="checkbox"/> Rubber Manufacturing                         |  |
| <input type="checkbox"/> Soaps & Detergents Manufacturing             |  |
| <input type="checkbox"/> Steam Electric Generation                    |  |
| <input type="checkbox"/> Tanning Animal Skins                         |  |
| <input type="checkbox"/> Textile Mills                                |  |

**Are any process changes or expansions planned during the next three years? Yes No**  
**If yes, attach a separate sheet to this form describing the nature of planned changes or expansions.**

---

Inspector

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Waste Treatment Facility

**Please send a copy of the preliminary inspection form (both sides) to:**

**Jennifer Robinson  
Division of Water Quality  
PO Box 144870  
Salt Lake City, Utah 84114-4870**

**Phone: (801) 536-4383  
Fax: (801) 536-4301  
E-Mail: [jenrobinson@utah.gov](mailto:jenrobinson@utah.gov)**

	<b>Industrial User</b>	<b>Jurisdiction</b>	<b>SIC Codes</b>	<b>Categorical Standard Number</b>	<b>Total Average Process Flow (gpd)</b>	<b>Total Average Facility Flow (gpd)</b>	<b>Facility Description</b>
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

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## **ATTACHMENT 2**

*Effluent Monitoring Data*

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# **ATTACHMENT 3**

## *Wasteload Analysis*

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

**Date:** March 26, 2018

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

**Facility:** Stansbury Park WWTP  
UPDES No. UT 0025241

**Receiving water:** Ditch=>Wetland=>Saline Playa

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 & 002 Combined plant discharge 1.5 MGD

Receiving Water

Stansbury Park's WWTP discharges into a constructed ditch that flows for approximately 1.3 miles before reaching a wetland area which transitions into a saline playa. As per UAC R317-2-13.10, the receiving ditch is classed 2B, 3E. As per r317-2-13.13, the transitional wetland was presumptively classified 2B, 3D.

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

Utah Division of Water Quality  
Wasteload Analysis  
Stansbury Park WWTP  
UPDES No. UT 0025241

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). Because the receiving water is a seasonally dry ditch (prior to discharge), the 7Q10 is assumed to be zero and effluent limits revert to end of pipe water quality standards.

Receiving water quality data was not available. Data inputs for temperature, pH, TDS and hardness were based on effluent water quality data. Limits for total residual chlorine and ammonia were calculated by considering modeled conditions where the flow enters the 3D classified wetlands and are protective of the use at that point.

#### TMDL

The receiving water is not listed as impaired according to the Utah's 2016 303(d) assessment.

#### Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and 2,500 feet for chronic conditions, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone. In this case, because the 7Q10 was assumed to be zero, no mixing zone was considered.

#### Parameters of Concern

The potential parameters of concern identified for the discharge/receiving water were total ammonia and total residual chlorine.

#### WET Limits

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

IC25 WET limits for Outfall 001 100% 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 Addendum.

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.

**Utah Division of Water Quality  
Wasteload Analysis  
Stansbury Park WWTP  
UPDES No. UT 0025241**

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: *StansburyPark\_WLADoc\_3-26-18.docx*  
Wasteload Analysis and Addendums: *StansburyPark\_WLA\_3-26-18*

References:

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

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

**Discharging Facility:** Stansbury Park WWTP  
UPDES No: UT-0025241  
Design Flow 1.50 MGD

**Receiving Water:** Ditch>Wetland>Playa  
Stream Classification: 2B, 3D, 3E  
Stream Flows [cfs]:  
0.00 Summer (July-Sept) 20th Percentile  
0.00 Fall (Oct-Dec) 20th Percentile  
0.00 Winter (Jan-Mar) 20th Percentile  
0.00 Spring (Apr-June) 20th Percentile  
1.0 Average  
Stream TDS Values:  
400.0 Summer (July-Sept) Average  
400.0 Fall (Oct-Dec) Average  
400.0 Winter (Jan-Mar) Average  
400.0 Spring (Apr-June) Average

<b>Effluent Limits:</b>		<b>WQ Standard:</b>	
Flow, MGD:	1.50 MGD	Design Flow	
BOD, mg/l:	25.0 Summer	5.0	Indicator
Dissolved Oxygen, mg/l	3.0 Summer	5.0	30 Day Average
TNH3, Chronic, mg/l:	5.4 Summer	Varies Function of pH and Temperature	
TDS, mg/l:	N/A Summer	0.0	Site Specific

**Modeling Parameters:**  
Acute River Width: 50.0%  
Chronic River Width: 100.0%

**Level 1 Antidegradation Level Completed: Amended Level II Review NOT required.**

Date: 3/27/2019

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

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

27-Mar-19

**Facilities:** Stansbury Park WWTP  
**Discharging to:** Ditch>Wetland>Playa  
**Design Flow** 1.50 MGD

**UPDES No:** UT-0025241

**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**

Ditch>Wetland>Playa:	2B, 3D, 3E
Antidegradation Review:	Level I review completed. Amended Level II review NOT requ

**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	N/A mg/l      3ackground

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

**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**	1.090 lbs/day	750.00	ug/l	9.399 lbs/day
Arsenic	190.00 ug/l	2.381 lbs/day	340.00	ug/l	4.261 lbs/day
Cadmium	0.76 ug/l	0.009 lbs/day	8.73	ug/l	0.109 lbs/day
Chromium III	268.22 ug/l	3.361 lbs/day	5611.60	ug/l	70.323 lbs/day
ChromiumVI	11.00 ug/l	0.138 lbs/day	16.00	ug/l	0.201 lbs/day
Copper	30.50 ug/l	0.382 lbs/day	51.68	ug/l	0.648 lbs/day
Iron			1000.00	ug/l	12.532 lbs/day
Lead	18.58 ug/l	0.233 lbs/day	476.81	ug/l	5.975 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.030 lbs/day
Nickel	168.54 ug/l	2.112 lbs/day	1515.89	ug/l	18.997 lbs/day
Selenium	4.60 ug/l	0.058 lbs/day	20.00	ug/l	0.251 lbs/day
Silver	N/A ug/l	N/A lbs/day	41.07	ug/l	0.515 lbs/day
Zinc	387.82 ug/l	4.860 lbs/day	387.82	ug/l	4.860 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 399.99 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	0.019 lbs/day
Chlordane	0.004 ug/l	0.054 lbs/day	1.200	ug/l	0.015 lbs/day
DDT, DDE	0.001 ug/l	0.013 lbs/day	0.550	ug/l	0.007 lbs/day
Dieldrin	0.002 ug/l	0.024 lbs/day	1.250	ug/l	0.016 lbs/day
Endosulfan	0.056 ug/l	0.700 lbs/day	0.110	ug/l	0.001 lbs/day
Endrin	0.002 ug/l	0.029 lbs/day	0.090	ug/l	0.001 lbs/day
Guthion			0.010	ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.048 lbs/day	0.260	ug/l	0.003 lbs/day
Lindane	0.080 ug/l	1.001 lbs/day	1.000	ug/l	0.013 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	0.001 lbs/day
PCB's	0.014 ug/l	0.175 lbs/day	2.000	ug/l	0.025 lbs/day
Pentachlorophenol	13.00 ug/l	162.604 lbs/day	20.000	ug/l	0.251 lbs/day
Toxephene	0.0002 ug/l	0.003 lbs/day	0.7300	ug/l	0.009 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			ug/l	lbs/day
Boron			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Copper			ug/l	lbs/day
Lead			ug/l	lbs/day
Selenium			ug/l	lbs/day
TDS, Summer			mg/l	tons/day

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

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

Toxic Organics	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.]	
Acenaphthene	ug/l	lbs/day	ug/l	lbs/day
Acrolein	ug/l	lbs/day	ug/l	lbs/day
Acrylonitrile	ug/l	lbs/day	ug/l	lbs/day
Benzene	ug/l	lbs/day	ug/l	lbs/day
Benzidine	ug/l	lbs/day	ug/l	lbs/day
Carbon tetrachloride	ug/l	lbs/day	ug/l	lbs/day
Chlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichloroethane	ug/l	lbs/day	ug/l	lbs/day

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1,1,1-Trichloroethane				
Hexachloroethane	ug/l	lbs/day	ug/l	lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	ug/l	lbs/day	ug/l	lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day	ug/l	lbs/day
Chloroethane			ug/l	lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	ug/l	lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	ug/l	lbs/day
2-Chloronaphthalene	ug/l	lbs/day	ug/l	lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	ug/l	lbs/day
p-Chloro-m-cresol			ug/l	lbs/day
Chloroform (HM)	ug/l	lbs/day	ug/l	lbs/day
2-Chlorophenol	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	ug/l	lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	ug/l	lbs/day
1,2-trans-Dichloroethylene	ug/l	lbs/day	ug/l	lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichloropropane	ug/l	lbs/day	ug/l	lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	ug/l	lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	ug/l	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	ug/l	lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	ug/l	lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	ug/l	lbs/day
Ethylbenzene	ug/l	lbs/day	ug/l	lbs/day
Fluoranthene	ug/l	lbs/day	ug/l	lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) e	ug/l	lbs/day	ug/l	lbs/day
Bis(2-chloroethoxy) met	ug/l	lbs/day	ug/l	lbs/day
Methylene chloride (HM)	ug/l	lbs/day	ug/l	lbs/day
Methyl chloride (HM)	ug/l	lbs/day	ug/l	lbs/day
Methyl bromide (HM)	ug/l	lbs/day	ug/l	lbs/day
Bromoform (HM)	ug/l	lbs/day	ug/l	lbs/day
Dichlorobromomethane	ug/l	lbs/day	ug/l	lbs/day
Chlorodibromomethane	ug/l	lbs/day	ug/l	lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	ug/l	lbs/day
Hexachlorocyclopentadi	ug/l	lbs/day	ug/l	lbs/day
Isophorone	ug/l	lbs/day	ug/l	lbs/day
Naphthalene				
Nitrobenzene	ug/l	lbs/day	ug/l	lbs/day
2-Nitrophenol	ug/l	lbs/day	ug/l	lbs/day
4-Nitrophenol	ug/l	lbs/day	ug/l	lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	ug/l	lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodi-n-propylami	ug/l	lbs/day	ug/l	lbs/day
Pentachlorophenol	ug/l	lbs/day	ug/l	lbs/day

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Phenol	ug/l	lbs/day	ug/l	lbs/day
Bis(2-ethylhexyl)phthala	ug/l	lbs/day	ug/l	lbs/day
Butyl benzyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Di-n-butyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Di-n-octyl phthlate				
Diethyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Dimethyl phthlate	ug/l	lbs/day	ug/l	lbs/day
Benzo(a)anthracene (P/	ug/l	lbs/day	ug/l	lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Benzo(b)fluoranthene (F	ug/l	lbs/day	ug/l	lbs/day
Benzo(k)fluoranthene (F	ug/l	lbs/day	ug/l	lbs/day
Chrysene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Dibenzo(a,h)anthracene	ug/l	lbs/day	ug/l	lbs/day
Indeno(1,2,3-cd)pyrene	ug/l	lbs/day	ug/l	lbs/day
Pyrene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Tetrachloroethylene	ug/l	lbs/day	ug/l	lbs/day
Toluene	ug/l	lbs/day	ug/l	lbs/day
Trichloroethylene	ug/l	lbs/day	ug/l	lbs/day
Vinyl chloride	ug/l	lbs/day	ug/l	lbs/day
<b>Pesticides</b>				lbs/day
Aldrin	ug/l	lbs/day	ug/l	lbs/day
Dieldrin	ug/l	lbs/day	ug/l	lbs/day
Chlordane	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDT	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDE	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDD	ug/l	lbs/day	ug/l	lbs/day
alpha-Endosulfan	ug/l	lbs/day	ug/l	lbs/day
beta-Endosulfan	ug/l	lbs/day	ug/l	lbs/day
Endosulfan sulfate	ug/l	lbs/day	ug/l	lbs/day
Endrin	ug/l	lbs/day	ug/l	lbs/day
Endrin aldehyde	ug/l	lbs/day	ug/l	lbs/day
Heptachlor	ug/l	lbs/day	ug/l	lbs/day
Heptachlor epoxide				
<b>PCB's</b>				
PCB 1242 (Arochlor 124	ug/l	lbs/day	ug/l	lbs/day
PCB-1254 (Arochlor 124	ug/l	lbs/day	ug/l	lbs/day
PCB-1221 (Arochlor 122	ug/l	lbs/day	ug/l	lbs/day
PCB-1232 (Arochlor 122	ug/l	lbs/day	ug/l	lbs/day
PCB-1248 (Arochlor 122	ug/l	lbs/day	ug/l	lbs/day
PCB-1260 (Arochlor 126	ug/l	lbs/day	ug/l	lbs/day
PCB-1016 (Arochlor 101	ug/l	lbs/day	ug/l	lbs/day
<b>Pesticide</b>				
Toxaphene	ug/l		ug/l	lbs/day
<b>Dioxin</b>				
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	ug/l	lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	ug/l	lbs/day
Lead	ug/l	lbs/day		
Mercury			ug/l	lbs/day
Nickel			ug/l	lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			ug/l	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**

	<b>Stream</b>								
	<b>Critical Low</b>								
	<b>Flow</b>	<b>Temp.</b>	<b>pH</b>	<b>T-NH3</b>	<b>BOD5</b>	<b>DO</b>	<b>TRC</b>	<b>TDS</b>	
	<b>cfs</b>	<b>Deg. C</b>		<b>mg/l as N</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
Summer (Irrig. Season)	0.00	20.0	7.6	0.00	0.10	11.35	0.00	400.0	
Fall	0.00	15.0	7.6	0.00	0.10	---	0.00	400.0	
Winter	0.00	12.0	7.5	0.00	0.10	---	0.00	400.0	
Spring	0.00	18.0	7.6	0.00	0.10	---	0.00	400.0	
Dissolved Metals	Al ug/l	As ug/l	Cd ug/l	CrIII ug/l	CrVI ug/l	Copper ug/l	Fe ug/l	Pb ug/l	
All Seasons	2.385*	0.795*	0.0795*	0.795*	3.975*	0.8*	1.25*	0.795*	
Dissolved Metals	Hg ug/l	Ni ug/l	Se ug/l	Ag ug/l	Zn ug/l	Boron ug/l			
All Seasons	0.159*	0.795*	1.59*	0.15*	0.0795*	1.59*	* ~80% MDL		

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**Projected Discharge Information**

Season	Flow, MGD	Temp.
Summer	1.50000	15.6
Fall	1.50000	15.6
Winter	1.50000	15.6
Spring	1.50000	15.6

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

**IX. Effluent Limitations**

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

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

**Effluent Limitation for Flow based upon Water Quality Standards**

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

Season	Daily Average	
Summer	1.500 MGD	2.321 cfs
Fall	1.500 MGD	2.321 cfs
Winter	1.500 MGD	2.321 cfs
Spring	1.500 MGD	2.321 cfs

**Flow Requirement or Loading Requirement**

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 1.5 MGD. If the discharger is allowed to have a flow greater than 1.5 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 >	100.0% 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	312.7 lbs/day
Fall	25.0 mg/l as BOD5	312.7 lbs/day
Winter	25.0 mg/l as BOD5	312.7 lbs/day
Spring	25.0 mg/l as BOD5	312.7 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	3.00
Fall	3.00
Winter	3.00
Spring	3.00

**Effluent Limitation for Total Ammonia based upon Water Quality Standards**

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

Season		Concentration	Load
Summer	4 Day Avg. - Chronic	5.4 mg/l as N	66.9 lbs/day
	1 Hour Avg. - Acute	28.2 mg/l as N	352.8 lbs/day
Fall	4 Day Avg. - Chronic	5.4 mg/l as N	67.0 lbs/day
	1 Hour Avg. - Acute	27.6 mg/l as N	345.2 lbs/day
Winter	4 Day Avg. - Chronic	5.4 mg/l as N	67.5 lbs/day
	1 Hour Avg. - Acute	28.2 mg/l as N	352.8 lbs/day
Spring	4 Day Avg. - Chronic	5.4 mg/l as N	67.0 lbs/day
	1 Hour Avg. - Acute	27.6 mg/l as N	345.2 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	0.630	mg/l	7.88	lbs/day
	1 Hour Avg. - Acute	1.100	mg/l	13.76	lbs/day
Fall	4 Day Avg. - Chronic	0.630	mg/l	7.88	lbs/day
	1 Hour Avg. - Acute	1.100	mg/l	13.76	lbs/day
Winter	4 Day Avg. - Chronic	0.630	mg/l	7.88	lbs/day
	1 Hour Avg. - Acute	1.100	mg/l	13.76	lbs/day
Spring	4 Day Avg. - Chronic	0.630	mg/l	7.88	lbs/day
	1 Hour Avg. - Acute	1.100	mg/l	13.76	lbs/day

**Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards**

Season		Concentration		Load	
Summer	Maximum, Acute	N/A	mg/l	N/A	tons/day
Fall	Maximum, Acute	N/A	mg/l	N/A	tons/day
Winter	Maximum, Acute	N/A	mg/l	N/A	tons/day
Spring	4 Day Avg. - Chronic	N/A	mg/l	N/A	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 399.99 mg/l):

	4 Day Average		1 Hour Average		Load
	Concentration	Load	Concentration	Load	
Aluminum*	N/A	N/A	750.0	ug/l	9.4 lbs/day
Arsenic*	190.01 ug/l	1.5 lbs/day	340.0	ug/l	4.3 lbs/day
Cadmium	0.76 ug/l	0.0 lbs/day	8.7	ug/l	0.1 lbs/day
Chromium III	268.23 ug/l	2.2 lbs/day	5,611.8	ug/l	70.3 lbs/day
Chromium VI*	11.00 ug/l	0.1 lbs/day	16.0	ug/l	0.2 lbs/day
Copper	30.50 ug/l	0.2 lbs/day	51.7	ug/l	0.6 lbs/day
Iron*	N/A	N/A	2,320.6	ug/l	29.1 lbs/day
Lead	18.58 ug/l	0.2 lbs/day	476.8	ug/l	6.0 lbs/day
Mercury*	0.01 ug/l	0.0 lbs/day	2.4	ug/l	0.0 lbs/day
Nickel	168.55 ug/l	1.4 lbs/day	1,516.0	ug/l	19.0 lbs/day
Selenium*	4.60 ug/l	0.0 lbs/day	20.0	ug/l	0.3 lbs/day
Silver	N/A ug/l	N/A lbs/day	41.1	ug/l	0.5 lbs/day

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Zinc	387.84 ug/l	3.1 lbs/day	387.8	ug/l	4.9 lbs/day
Cyanide*	5.20 ug/l	0.0 lbs/day	22.0	ug/l	0.3 lbs/day

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

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

Summer	24.0 Deg. C.	75.2 Deg. F
Fall	19.0 Deg. C.	66.2 Deg. F
Winter	16.0 Deg. C.	60.8 Deg. F
Spring	22.0 Deg. C.	71.6 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		Load
	Concentration	Load	Concentration	Load	
Aldrin			1.5E+00	ug/l	2.91E-02 lbs/day
Chlordane	4.30E-03 ug/l	5.38E-02 lbs/day	1.2E+00	ug/l	2.33E-02 lbs/day
DDT, DDE	1.00E-03 ug/l	1.25E-02 lbs/day	5.5E-01	ug/l	1.07E-02 lbs/day
Dieldrin	1.90E-03 ug/l	2.38E-02 lbs/day	1.3E+00	ug/l	2.42E-02 lbs/day
Endosulfan	5.60E-02 ug/l	7.00E-01 lbs/day	1.1E-01	ug/l	2.13E-03 lbs/day
Endrin	2.30E-03 ug/l	2.88E-02 lbs/day	9.0E-02	ug/l	1.74E-03 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.94E-04 lbs/day
Heptachlor	3.80E-03 ug/l	4.75E-02 lbs/day	2.6E-01	ug/l	5.04E-03 lbs/day
Lindane	8.00E-02 ug/l	1.00E+00 lbs/day	1.0E+00	ug/l	1.94E-02 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	5.82E-04 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.94E-04 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	7.75E-04 lbs/day
PCB's	1.40E-02 ug/l	1.75E-01 lbs/day	2.0E+00	ug/l	3.88E-02 lbs/day
Pentachlorophenol	1.30E+01 ug/l	1.63E+02 lbs/day	2.0E+01	ug/l	3.88E-01 lbs/day
Toxephene	2.00E-04 ug/l	2.50E-03 lbs/day	7.3E-01	ug/l	1.42E-02 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:

	<b>1 Hour Average</b>	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	62.7 lbs/day
Nitrates as N	4.0 mg/l	50.1 lbs/day
Total Phosphorus as P	0.05 mg/l	0.6 lbs/day
Total Suspended Solids	90.0 mg/l	1127.9 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:

	<b>Maximum Concentration</b>	
	Concentration	Load
<b>Toxic Organics</b>		
Acenaphthene	ug/l	lbs/day
Acrolein	ug/l	lbs/day
Acrylonitrile	ug/l	lbs/day
Benzene	ug/l	lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	ug/l	lbs/day
Chlorobenzene	ug/l	lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	ug/l	lbs/day
1,2-Dichloroethane	ug/l	lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	ug/l	lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	ug/l	lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	ug/l	lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	ug/l	lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	ug/l	lbs/day
2-Chlorophenol	ug/l	lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day

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1,4-Dichlorobenzene	ug/l	lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day
1,1-Dichloroethylene	ug/l	lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	ug/l	lbs/day
1,2-Dichloropropane	ug/l	lbs/day
1,3-Dichloropropylene	ug/l	lbs/day
2,4-Dimethylphenol	ug/l	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	ug/l	lbs/day
Ethylbenzene	ug/l	lbs/day
Fluoranthene	ug/l	lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	ug/l	lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	ug/l	lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	ug/l	lbs/day
Dichlorobromomethane(HM)	ug/l	lbs/day
Chlorodibromomethane (HM)	ug/l	lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day
Isophorone	ug/l	lbs/day
Naphthalene		
Nitrobenzene	ug/l	lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	ug/l	lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day
Pentachlorophenol	ug/l	lbs/day
Phenol	ug/l	lbs/day
Bis(2-ethylhexyl)phthalate	ug/l	lbs/day
Butyl benzyl phthalate	ug/l	lbs/day
Di-n-butyl phthalate	ug/l	lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	ug/l	lbs/day
Dimethyl phthlate	ug/l	lbs/day
Benzo(a)anthracene (PAH)	ug/l	lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day
Benzo(b)fluoranthene (PAH)	ug/l	lbs/day
Benzo(k)fluoranthene (PAH)	ug/l	lbs/day
Chrysene (PAH)	ug/l	lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	ug/l	lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	ug/l	lbs/day

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Pyrene (PAH)	ug/l	lbs/day
Tetrachloroethylene	ug/l	lbs/day
Toluene	ug/l	lbs/day
Trichloroethylene	ug/l	lbs/day
Vinyl chloride	ug/l	lbs/day

**Pesticides**

Aldrin	ug/l	lbs/day
Dieldrin	ug/l	lbs/day
Chlordane	ug/l	lbs/day
4,4'-DDT	ug/l	lbs/day
4,4'-DDE	ug/l	lbs/day
4,4'-DDD	ug/l	lbs/day
alpha-Endosulfan	ug/l	lbs/day
beta-Endosulfan	ug/l	lbs/day
Endosulfan sulfate	ug/l	lbs/day
Endrin	ug/l	lbs/day
Endrin aldehyde	ug/l	lbs/day
Heptachlor	ug/l	lbs/day
Heptachlor epoxide		

**PCB's**

PCB 1242 (Arochlor 1242)	ug/l	lbs/day
PCB-1254 (Arochlor 1254)	ug/l	lbs/day
PCB-1221 (Arochlor 1221)	ug/l	lbs/day
PCB-1232 (Arochlor 1232)	ug/l	lbs/day
PCB-1248 (Arochlor 1248)	ug/l	lbs/day
PCB-1260 (Arochlor 1260)	ug/l	lbs/day
PCB-1016 (Arochlor 1016)	ug/l	lbs/day

**Pesticide**

Toxaphene	ug/l	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) #N/A ug/l #N/A lbs/day

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

	<b>Class 4 Acute Agricultural ug/l</b>	<b>Class 3 Acute Aquatic Wildlife ug/l</b>	<b>Acute Toxics Drinking Water Source ug/l</b>	<b>Acute Toxics Wildlife ug/l</b>	<b>1C Acute Health Criteria ug/l</b>	<b>Acute Most Stringent ug/l</b>	<b>Class 3 Chronic Aquatic Wildlife ug/l</b>
Aluminum		750.0				750.0	N/A
Antimony				4300.2		4300.2	
Arsenic		340.0				340.0	190.0
Barium							
Beryllium							
Cadmium		8.7				8.7	0.8
Chromium (III)		5611.8				5611.8	268.2
Chromium (VI)		16.0				16.00	11.00
Copper		51.7				51.7	30.5
Cyanide		22.0	220009.5			22.0	5.2
Iron		2320.6				2320.6	
Lead		476.8				476.8	18.6
Mercury		2.40		0.15		0.15	0.012
Nickel		1516.0		4600.2		1516.0	168.5
Selenium		20.0				20.0	4.6
Silver		41.1				41.1	
Thallium				6.3		6.3	
Zinc		387.8				387.8	387.8
Boron	N/A						
Sulfate	N/A					N/A	

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

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

	<b>WLA Acute ug/l</b>	<b>WLA Chronic ug/l</b>
Aluminum	750.0	N/A
Antimony	4300.19	
Arsenic	340.0	190.0
Asbestos		
Barium		
Beryllium		
Cadmium	8.7	0.8
Chromium (III)	5611.8	268
Chromium (VI)	16.0	11.0
Copper	51.7	30.5

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Cyanide	22.0	5.2
Iron	2320.6	
Lead	476.8	18.6
Mercury	0.150	0.012
Nickel	1516.0	169
Selenium	20.0	4.6
Silver	41.1	N/A
Thallium	6.3	
Zinc	387.8	387.8
Boron		
Sulfate	N/A	N/A at this Waterbody

Other Effluent Limitations are based upon R317-1.

E. coli	126.0 organisms per 100 ml
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**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 required because the receiving water for the discharge is a Class 1C Drinking Water Source.

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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

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

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## **ATTACHMENT 4**

*Reasonable Potential Analysis*

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## **REASONABLE POTENTIAL ANALYSIS**

Water Quality has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided model. As a result of the model, more parameters may be included in the renewal permit. A Copy of the Reasonable Potential Analysis Guidance (RP Guide) is available at water Quality. There are four outcomes for the RP Analysis<sup>13</sup>. They are;

- Outcome A: A new effluent limitation will be placed in the permit.
- Outcome B: No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
- Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
- Outcome D: No limitation or routine monitoring requirements are in the permit.

### **(REASONABLE POTENTIAL LANGUAGE)**

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at three of the metals (cadmium, lead, mercury) is needed. A copy of the initial screening is included in the “Effluent Metals and RP Screening Results” table in this attachment. A closer look at the method reporting levels (MRL) for the metals chosen laboratory (Chemtech Ford) shows that the lab has switched methods and improved the MRL. Previously the used EPA Method 200.7 and have changed to EPA Method 200.8. When the higher MRL is eliminated and replaced by the lower ones and the results reevaluated, the screening indicates that mercury will require a more in-depth review.

For all metals but Mercury, this result would indicate that the monitoring may not be required.  
(Outcome D from Reasonable Potential Guide)

A review of the mercury results indicates that there are only nine samples and that most of the results are reported as non-detectable. A review of the method used by the lab indicated that they are using EP Method 245.1 with an MRL of 0.0002 mg/l, which is only 2 orders of magnitude higher than the WQBEL indicated in the WLA. Establishing a mercury limit at this time would require a compliance schedule which would include an in-depth study of the effluent using a more sensitive analysis method, several years for planning and several more of construction. In other instances where the MRL for mercury has been above the WQBEL, the chosen path has been to focus on improving the analysis then reevaluate during the next renewal.

This result indicates that the inclusion of an effluent limit for mercury is not required at this time, but routine monitoring requirements will be improved in the permit.  
(Outcome B from Reasonable Potential Guide)

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<sup>13</sup> See Reasonable Potential Analysis Guidance for definitions of terms

Metals Monitoring and RP Check

Effluent Metals												
Old MDL												
Month	Cyanide	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
Acute	0.022	0.1	0.0087	0.011	0.0305	0.0186	0.00015	1	1.516	4.6	0.0411	0.387
Chronic	0.0052	0.1	0.0008	0.011	0.0305	0.0186	0.000012	1	0.169	4.6	0.0411	0.387
Dec-13	0	0	0	0	0	0	0.0002	0.02	0		0	0
Jun-14	ND	ND	ND	ND	ND	ND	ND	0.01	ND	0.21	ND	ND
Dec-14	0	0	0	0	0	0	0	0	0		0	0.01
Jun-15	0.002	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	0.01
Dec-15	ND	ND	ND	ND	ND	ND	ND	0.02	ND	0.05	ND	ND
Jun-16	0.0002	0.0064	0	0.0014	0.0059	0.0008	0	0.0078	0.0079		0	0.03
Dec-16	0.002	0.0084	ND	0.0014	0.0042	0.0007	ND	0.0173	0.0079	0.0042	ND	0.01
Jun-17		0.009	ND	0.0006	0.0025	0.0006	ND	0.0206	0.0094		ND	ND
Dec-17		0.0061	ND	0.0008	0.0027	ND	ND	0.0122	0.0109		ND	ND
ND Value	0.002	0.05	0.005	0.005	0.005	0.02	0.0002	0.01	0.005	0.02	0.005	0.01
Max	0.002	0.05	0.005	0.005	0.0059	0.02	0.0002	0.0206	0.0109	0.21	0.005	0.03
A RP?	No	No	Yes	No	No	Yes	Yes	No	No	No	No	No
C RP?	No	No	Yes	No	No	Yes	Yes	No	No	No	No	No
Improved Laboratory MDL												
	Cyanide	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
Acute	0.022	0.1	0.0087	0.011	0.0305	0.0186	0.00015	1	1.516	4.6	0.0411	0.387
Chronic	0.0052	0.1	0.0008	0.011	0.0305	0.0186	0.000012	1	0.169	4.6	0.0411	0.387
Dec-13	0	0	0	0	0	0	0.0002	0.02	0		0	0
Jun-14	ND	ND	ND	ND	ND	ND	ND	0.01	ND	0.21	ND	ND
Dec-14	0	0	0	0	0	0	0	0	0		0	0.01
Jun-15	0.002	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	0.01
Dec-15	ND	ND	ND	ND	ND	ND	ND	0.02	ND	0.05	ND	ND
Jun-16	0.0002	0.0064	0	0.0014	0.0059	0.0008	0	0.0078	0.0079		0	0.03
Dec-16	0.002	0.0084	ND	0.0014	0.0042	0.0007	ND	0.0173	0.0079	0.0042	ND	0.01
Jun-17		0.009	ND	0.0006	0.0025	0.0006	ND	0.0206	0.0094		ND	ND
Dec-17		0.0061	ND	0.0008	0.0027	ND	ND	0.0122	0.0109		ND	ND
ND Value	0.002	0.0005	0.0002	0.0005	0.001	0.0005	0.0002	0.0005	0.0005	0.0005	0.005	0.01
Max	0.002	0.009	0.0002	0.0014	0.0059	0.0008	0.0002	0.0206	0.0109	0.21	0.005	0.03
A RP?	No	No	No	No	No	No	Yes	No	No	No	No	No
C RP?	No	No	No	No	No	No	Yes	No	No	No	No	No