

Official Draft Public Notice Version February 23, 2024

The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

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

FACILITY CONTACTS

Operator Name: Stansbury Park Improvement District
Person Name: Brett Palmer
Position: General Manager
Phone Number: (435) 882-7922

Facility Name: Stansbury Park Improvement District Lagoons
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 Community 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 were 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 total suspended solids (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. The Division of Water Quality (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 UAC R317-1-3.2, thus, the limits were incorporated into their renewal permit.

Metals and organic toxics monitoring were 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 reasonable potential for the pollutants. During the 2018 renewal, it was determined that the monitoring for metals and organic toxics could be reduced. Monitoring for metals, other than mercury, were reduced to once a year. And monitoring for organic toxics was reduced to once during the second year of the permit cycle. It was also determined that monitoring for mercury using a more sensitive method (1631) would remain at the current frequency of twice a year, or once every six months.

During the 2018 Renewal, the total residual chlorine (TRC) in the receiving water was studied 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 (2013) permit. The previous WLA indicated TRC limits of 0.73 mg/l for acute and 0.43 mg/l for chronic; the new WLA indicated 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, and will be carried forward to future renewals.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Ammonia:

Monitoring for ammonia during the previous permit cycle has shown that the facility discharges ammonia above the water quality based effluent limits (WQBEL) developed in the wasteload analysis (WLA) for the renewal. As a result, ammonia limits will be included in this renewal permit. The new effluent limits and monitoring requirements are in the table below.

	Effluent Limitations		Self-Monitoring and Reporting Requirements		
	Maximum Monthly Avg (Chronic)	Daily Maximum (Acute)	Frequency	Sample Type	Units
Total Ammonia (as N), mg/L					
Summer (Jul-Sep)	1.0	4.7	Weekly	Grab	mg/L
Fall (Oct-Dec)	2.7	8.2			
Winter (Jan-Mar)	3.4	9.8			
Spring (Apr-Jun)	2.7	8.2			

This renewal permit is the first Stansbury Park permit that contains ammonia limits. Stansbury Park has requested a Compliance Schedule to allow time to evaluate ammonia presence and breakdown as it flows from the current discharge locations, through the ditch and meadow wetlands, to the playa. DWQ has granted this request; the Compliance Schedule with Milestones can be found below. The potential outcomes are: an alternative compliance point for ammonia; an alternative outfall location; an extension of the Compliance Schedule which includes plant upgrades to come into compliance with ammonia limits; or the ammonia limits go into effect.

Ammonia Compliance Schedule	
Date	Milestone
May 1, 2024	Submit a Sampling and Analysis Plan (Plan) that includes the specific purpose and goals (Study) of monitoring and a description of the sampling to be conducted (including methods and frequency). If no Plan is submitted, the ammonia limits will go into effect September 1, 2025 and this Compliance Schedule ends.
June 1, 2025	Submit a Report detailing the findings of the Study outlined in the Plan. This report should include all data collected, analysis of the results, and the proposed administrative path forward.
June 1, 2025	If Stansbury Park wants to modify their permit, they must request DWQ to modify UPDES Permit No. UT0025241. This modification request can be for a compliance schedule extension, an alternative compliance point for ammonia, or an alternative outfall location as long as the Study results and analysis support the request. If the request is for a compliance schedule extension, the request should include a detailed approach, including a list of facility upgrades, an associated timeline, and a detailed description of how Stansbury Park plans to comply with the final ammonia limits listed in the permit. If no request for permit modification is received by DWQ, ammonia limits will go into effect September 1, 2025 and this compliance schedule ends.
September 1, 2025	If the permit has yet to be modified as described above, the final limits will go into effect.

Percent Removal Requirements:

During the review of the drafted documents it was noted that the EPA Regulations require the inclusion of a minimum % removal limit for both BOD and TSS, and that the lowest this limit may be is 65%.

In 2001, Stansbury Park applied for the lagoon alternative secondary treatment limits (Alternative Limits) as allowed per *Utah Administrative Code, R317-1-3.2 E, and G*. Stansbury Park also applied for a variance that would remove the *UAC, R317-3.2.B*, TSS 85% Removal Efficiency Requirement from the permit. The requests were approved by the Water Quality Board and Director of Water Quality in August of 2001, and the changes were added to the permit that was being renewed at that time.

The Utah rule, (UAC, R317-3.2.B), allows for an exception to the rule, but does not indicate any constraints on that exception. This EPA regulations (40 CFR § 133.105(a)(3) and (b)(3)) allow for a similar exception but does constrain it to being reduced to 65%. As a result, the TSS requirement is being reintroduced to the permit, at the minimum level of 65%. Facility monitoring data indicate that they will be able to meet this requirement immediately, so no compliance schedule will be included for this parameter.

New TSS Effluent Limitations					
	Maximum Monthly Avg (Chronic)	Maximum Weekly Avg (Acute)	Annual Average	Daily Minimum	Daily Maximum
TSS, mg/L	45	65	-	-	-
TSS Min. % Removal	65	-	-	-	-

Monitoring:

Total dissolved solids (TDS) monitoring, dissolved oxygen (DO) monitoring, and monitoring associated with UAC R317-1-3.3, Technology-based Phosphorus Effluent Limits rule adoption, is now included in the permit. See Self-Monitoring and Reporting Requirements Table for details.

Metals Monitoring

As a result of the RP Analysis Process, the monitoring frequency for cyanide and selenium will increase from Annually to twice annually.

	Monitoring Frequency		
	Previous Permit	RP Result	Renewal Permit
Cyanide	Annually	Increased Frequency	Twice Annually
Selenium	Annually	Increased Frequency	Twice Annually
Mercury	Twice Annually	No Change	Twice Annually

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 three years of data is attached.

Outfall

Description of Discharge Point

001

Located at latitude 40°39'30" and longitude 112°18'00". The discharge is through a gate to a flume to an 8-inch diameter gravity flow pipe, which leads to an unnamed ditch. This ditch 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.

Outfall

Description of Discharge Point

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. This ditch 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 reviewed the submitted Level I ADR and concluded 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.

TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

According to the Utah's 2022 303(d) Water Quality Assessment Report dated February 8, 2022, the receiving water for the discharge; Un-named Ditch, Wetland, and Playa isolated from the Great Salt Lake by a railroad causeway, was not listed as and showed no sign of being impaired.

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 and ammonia is from the WLA. The total phosphorus limit is the phosphorus loading cap calculated in accordance with UAC R317-3.3.B. 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.

Reasonable Potential Analysis

Since January 1, 2016, DWQ has conducted reasonable potential (RP) analysis 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 conducted 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. The RP analysis also indicated that more frequent monitoring of selenium, cyanide and mercury was warranted. 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 for both Outfall 001 and 002 are:

Parameter	Outfall 001 and 002 Effluent Limitations ¹				
	Maximum Monthly Avg	Maximum Weekly Avg	Annual Average	Daily Minimum	Daily Maximum
Total Flow ²	1.5	-	-	-	-
BOD ₅ , mg/L	45	65	-	-	-
BOD ₅ Min. % Removal	85	-	-	-	-
TSS, mg/L	45	65	-	-	-
TSS Min. % Removal	65	-	-	-	-
TRC, mg/L	0.43	-	-	-	0.73
<i>E. coli</i> , No./100mL	126	158	-	-	-
pH, Standard Units	-	-	-	6.5	9
Total Phosphorus, lbs/year	-	-	8,966	-	-
Total Ammonia (as N), mg/L ¹³					
Summer (Jul-Sep)	1.0	-	-	-	4.7
Fall (Oct-Dec)	2.7	-	-	-	8.2
Winter (Jan-Mar)	3.4	-	-	-	9.8
Spring (Apr-Jun)	2.7	-	-	-	8.2
1. See Definitions, Part VIII, for definition of terms.					
2. The total combined flow from all outfalls may not exceed the flow limit of 1.5 MGD.					
13. Total ammonia limits will go into effect in accordance with the Compliance Schedule found in Part I.C.4 of the permit. There will be no limits at time of permit issuance.					

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements have been modified since the previous permit, as described above. 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.

Outfall 001 and 002 Self-Monitoring and Reporting Requirements ^{1, 3}			
Parameter	Frequency	Sample Type	Units
Total Flow ^{2, 4, 5}	Continuous	Recorder	MGD
BOD ₅ , Influent ⁶	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
TSS, Influent ⁶	Weekly	Composite	mg/L
Effluent	Weekly	Composite	mg/L
<i>E. coli</i>	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU
TRC	Weekly	Grab	mg/L
Total Ammonia (as N)	Weekly	Grab	mg/L
DO	Weekly	Grab	mg/L
Orthophosphate (as P), ⁷ Effluent	Monthly	Composite	mg/L
Total Phosphorus (as P), ⁷ Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Total Phosphorus, (Reporting)	Yearly	Reporting	lbs/year

Outfall 001 and 002 Self-Monitoring and Reporting Requirements ^{1, 3}			
Parameter	Frequency	Sample Type	Units
Total Kjeldahl Nitrogen TKN (as N), ⁷			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO ₃ ⁷	Monthly	Composite	mg/L
Nitrite, NO ₂ ⁷	Monthly	Composite	mg/L
Total Cyanide, Effluent ¹⁰	2 X Yearly	Grab/ Composite	mg/L
Total Mercury, Effluent ^{8, 10}	2 X Yearly	Grab	mg/L
Total Selenium, Effluent, ¹⁰	2 X Yearly	Grab/ Composite	mg/L
Metals, Influent, ^{6, 8, 9}	Yearly ¹¹	Grab/ Composite	mg/L
Effluent ⁸	Yearly ⁹	Grab/ Composite	mg/L
Organic Toxics ^{6, 12}	2 nd Year of the Permit Cycle	Grab/ Composite	mg/L
TDS	Monthly	Grab	mg/L
1. See Definitions, Part VIII, for definition of terms.			
2. The total combined flow from all outfalls may not exceed the flow limit of 1.5 MGD.			
3. 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.			
4. 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.			
5. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.			
6. 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.			
7. These reflect changes required with the adoption of UAC R317-1-3.3, Technology-based Phosphorus Effluent Limits rule.			
8. 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 1631.			
9. 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.			
10. See Part II of the permit for additional requirements regarding sampling for metals and organic toxics.			
11. This is the monitoring frequency for the metals listed in the table below (Metals to be monitored for RP) with the exception cyanide, mercury, and selenium which must be monitored as indicated above.			
12. A list of the organics to be tested can be found in 40CFR122 appendix D table II.			

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

Metals to be Monitored for RP
Total Selenium
Total Silver
Total Zinc

BIOSOLIDS

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

STORM WATER

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

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

PRETREATMENT REQUIREMENTS

Stansbury Park Improvement District does not have an Approved POTW Pretreatment Program (Program). This is due to the flow through the plant being less than five (5) MGD and no known Significant Industrial Users. Although a Program does not need to be developed, information regarding Industrial Users discharging to the Publicly Owned Treatment Works (POTW) must be submitted as stated in Part II of the permit. This information will assist in determining the needs of the Division of Water Quality (DWQ) to assist Stansbury Park Improvement District with implementing the Pretreatment Standards and Requirements. If an Industrial User begins to discharge or an existing Industrial User changes its discharge, Stansbury Park Improvement District must resubmit the information stated in Part II within sixty days of the introduction or change.

Sampling will be required in Part II of the UPDES Permit. This is due to the design flow of the POTW being greater than 1 MGD. If the discharge changes or an Industrial User discharges to the POTW, monitoring of parameters in Part II of the UPDES Permit may change.

Any wastewater discharged to the POTW from an Industrial User is subject to Federal, State and local regulations. Pursuant to Section 307 of the Clean Water Act, Stansbury Park Improvement District and the Industrial Users discharging to the POTW 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.

It is required that any Local Limits be submitted to DWQ for review. If Local Limits are developed, it is required that Stansbury Park Improvement District 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.

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

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

PERMIT DURATION

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

Drafted and Reviewed by
Daniel Griffin, Discharge Permit, Reasonable Potential Analysis
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Jordan Bryant, Storm Water
Suzan Tahir, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: Month Day, 2024
Ended: Month Day, 2024

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

The Public Noticed of the draft permit was published on the Division of Water Quality Public Notice Webpage.

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.

DWQ-2023-119691

ATTACHMENT 1

Industrial Waste Survey

PVNDraft

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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, blueing 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, nonbiodegradable 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
288 North 1460 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301
E-mail: 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 washdown | 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

Waste Treatment Facility

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

Jennifer Robinson
Division of Water Quality
P. O. Box 144870
Salt Lake City, Utah 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301

E-Mail: jenrobinson@utah.gov

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

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ATTACHMENT 2

Effluent Monitoring Data

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Effluent Monitoring Data.

Outfall 001 Effluent Monitoring Data

	Flow	BOD5		TSS		pH		TRC	E. coli		Tot P	Ammonia
	Chronic	Chronic	Acute	Chronic	Acute	Min	Max	Max	Chronic	Acute	Acute	Max
	1.5	45	65	45	65	6.5	9	0.73	126	158		
	MGD	mg/L	mg/L	mg/L	mg/L	SU	SU	mg/L	#/100mL	#/100mL	mg/L	mg/L
May-20	0											
Jun-20	0											
Jul-20	0											
Aug-20	0											
Sep-20	0											
Oct-20	0											
Nov-20	0											
Dec-20	0											
Jan-21	0											
Feb-21	0											
Mar-21	0											
Apr-21	0											
May-21	0											
Jun-21	0											
Jul-21	0											
Aug-21	0											
Sep-21	0											
Oct-21	0											
Nov-21	0											
Dec-21	0											
Jan-22	0											
Feb-22	0											
Mar-22	0											
Apr-22	0											
May-22	0											
Jun-22	0											
Jul-22	0											
Aug-22	0											
Sep-22	0											
Oct-22	0											
Nov-22	0											
Dec-22	0											
Jan-23	0.2728	20	20	13	13	7	7	0			1.2	
Feb-23	0.2732	10.75	24	13.75	24	6	7	0	2	2	1.4	0.27
Mar-23	0.2732	23	34	46	52	7	9	0	1	2	1.6	
Apr-23	1.39	25.25	50	36.25	54	7	8	0	22	54	1.9	0.24

Outfall 002 Effluent Monitoring Data

	Flow	BOD5		TSS		pH		TRC	E. coli		Tot P	Ammonia
	Chronic	Chronic	Acute	Chronic	Acute	Min	Max	Max	Chronic	Acute	Acute	Max
	1.5	45	65	45	65	6.5	9	0.73	126	158		
	MGD	mg/L		mg/L		SU		mg/L	#/100mL		mg/L	mg/L
May-20	1	10	16	13	24	7	7	0.3	548	548		26.3
Jun-20	1	13	15	9	12	7	7	0.45	0	0		18
Jul-20	1	17	24	17	37	7	7	0.4	1	1		5.2
Aug-20	0.984	21	27	30	43	7	7	0.4	1	1		1.4
Sep-20	0											
Oct-20	0											
Nov-20	0											
Dec-20	0											
Jan-21	0.925	15	16	21	24	7	7	0.3	34	96	4.2	21.9
Feb-21	0.701	13	17	7.5	10	7	7	0.3			3	26.2
Mar-21	1	13	15	11	12	7	7	0.4			4.3	25
Apr-21	1.08	18	26	30	31	7	7	0.3	3	3	4.3	22.3
May-21	1.08	16	19	22	38	7	7	0.4			4.9	20.7
Jun-21	0.991	25	35	20.25	33	7	7	0.45			4.3	6.8
Jul-21	0.991	17.8	22	25.6	34	7	9	0.45			4.3	6.8
Aug-21	1.04	17.25	22	45	66	9	9	0.4	2.5	4	3	0.4
Sep-21	1	11.5	14	34	54	9	9	0.3			1.8	1.1
Oct-21	1.02	13	20	26.25	47	8	9	0.25	1	1	2.9	7.5
Nov-21	1.03	5	5			6	7	0.35	1	1	4.4	17.4
Dec-21	1.03	7	8			6	6	0.3			3.5	20.9
Jan-22	0											
Feb-22	0											
Mar-22	1.445	23.25	27	30.75	50	6	7	0.6	14	16	2.7	22.5
Apr-22	1.065	33	77	14	17	7	7	0.45			3.7	30.1
May-22	1.052	14	16	11	15	7	7	0.45			4.6	24.2
Jun-22	0.742	12.4	19	10.2	15	7	7	0.2			5	19.1
Jul-22	0											
Aug-22	0											
Sep-22	0											
Oct-22	0											
Nov-22	0											
Dec-22	0											
Jan-23	1.32	12.67	18	18.33	22	6	7	0.3	33	70	3.3	13.3
Feb-23	1.28	18	24	19.25	34	6	8	0.25	747	1550	3.9	16.2
Mar-23	1.26	11	18	22	25	6	7	0.4	1	4	4	19.4
Apr-23	0.99	18.75	20	31	35	7	7	0.4	9.5	30	3.7	11.7

Outfall 002 Metals Effluent Monitoring Data

Month	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
	Ag	As	Cd	CN	Cr	Cu	Hg	Hg	Mo	Ni	Pb	Se	Zn
	Max	Max	Max	Max	Max	Max	Ave	Max	Max	Max	Max	Max	Max
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Jun-18	0	0.0066	0	0.002	0.0013	0.0028		0	0.0106	0.0114	0.0007		0.02
Nov-20	0	0.0106	0	0.002	0.0011	0.0035	3.2	0	0	0.0069	0.0007		0
May-21							2.9						
Nov-21	0.0004	0.0077	0.0001	0.003	0.0012	0.0035	42.7	2.1	0.0083	0.0025	0.0007	0.0037	0.01
May-22							2.6	2.1					
Nov-22		0.0114		0.006	0.0008	0.0032	1.1		0.0112	0.0021		0.0048	0.02
May-23		0.0114		0.006	0.0008	0.0032	4.3		0.0112	0.0021		0.0048	0.02

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ATTACHMENT 3

Wasteload Analysis

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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 Analysis¹. 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.

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at some of the metals and ammonia were needed. Copies of the lab reports for the monitoring events were obtained and the data was confirmed/corrected as needed. A copy of the screening is included in the “Effluent Metals and RP Screening Results” table in this attachment. The screening check showed that the full model needed to be run the following metals; cyanide, mercury, selenium, and also on ammonia.

When running the RP model on the cyanide data, all the data back to July of 2018 was used, resulting in 4 data points. The model is not intended for use on such small data sets, so we will have to wait until the next renewal to check the RP for cyanide. This result indicates that the effluent monitoring requirements for cyanide be increased in the renewal, and the RP Run again during the next renewal.

(Outcome B from Reasonable Potential Guide)

The RP model was run on mercury using the most recent data back through 2018. This resulted in 10 data points. This is the minimum number of data points to be used when working with the model. The data is from sampling events where mercury was analyzed for using Method 245.1 and Method 1631. This resulted in 2 completely different Minimum Reporting Limit (MRL)’s for the data. One (254.1) at 0.0002 mg/l and the other (1631) at 0.0000005 mg/L. The discrepancy in the MRL’s is too great to be confident in the results using a Modified Delta-Lognormal data distribution. Removing the non-detect data from the set and running the model using the Default data distribution setting indicates that there is RP for Chronic at the 99% Confidence Interval. Leaving in or removing the non-detect data and running the model with a Lognormal Distribution indicated no RP for mercury. To note, in all runs the result was no RP for Acute limit for mercury.

These mixed results would indicate that more sampling for mercury should be conducted using the 1631 Analysis Method during the next permit cycle, and the RP be conducted again during that renewal.

(Outcome B from Reasonable Potential Guide)

When running the RP model on the selenium data, all the data back to July of 2018 was used, resulting in 4 data points. The model is not intended for use on such small data sets, so we will have to wait until the next renewal to check the RP for selenium. This result indicates that the effluent monitoring requirements for cyanide should remain as they are or be increased in the renewal permit.

With this small data set, and the results, it is recommended that the monitoring for selenium be increased in the renewal, and the RP run again during the next renewal.

(Outcome B from Reasonable Potential Guide)

¹ See Reasonable Potential Analysis Guidance for definitions of terms

The ammonia data was sorted by season and screened against the seasonal WQBEL from the WLA. This resulted in between 3 and 13 datapoints for each season and a total of 36 data points. There are not enough data points to run RP for each season, but the screening did reveal that all but 2 data points exceeded the chronic WQBEL and all but 6 exceeded the chronic WQ BEL. For this reason, it was felt the full RP did not need to be run, but the limits should be included in the permit.

(Similar to Outcome A from Reasonable Potential Guide)

To summarize the results of the RP analysis.

	Monitoring Frequency	
	Previous Permit	Renewal Permit
Cyanide	Annually	Twice Annually
Selenium	Annually	Twice Annually
Mercury	Twice Annually	Twice Annually

Season	Ammonia Limits	
	Max Monthly Average	Daily Maximum
Summer	1.0 mg/l	4.7 mg/l
Fall	2.7 mg/l	8.2 mg/l
Winter	3.4 mg/l	9.8 mg/l
Spring	2.7 mg/l	8.2 mg/l

A Summary of the RP Model inputs and outputs are included in the table below.

The Metals Initial Screening Table and RP Outputs Table are included in this attachment.

RP input/output summary

RP Procedure Output	Outfall Number:		Data Units	
Parameter	Mercury Run #1, #2		Mercury Run #3, #4	
Distribution	Modified Delta-Lognormal, With ND Data		Default, Without ND Data	
Reporting Limit	0.0000005 and 0.0002		0.0000005	
Significant Figures	2			
Maximum Reported Effluent Conc.	0.0000043		0.0000043	
Coefficient of Variation (CV)	2.1		0.6	
Acute Criterion	0.00015		0.00015	
Chronic Criterion	0.000012		0.000012	
Confidence Interval	95	99	95	99
Projected Maximum Effluent Conc. (MEC)	0.00001	0.000034	0.0000086	0.000015
RP Multiplier	2.3	8.0	2.0	3.5
RP for Acute?	NO	NO	NO	NO
RP for Chronic?	NO	YES	NO	YES
Outcome	B		B	

RP Procedure Output	Outfall Number:		Data Units	
Parameter	Mercury Run #5, #6		Mercury Run #7, #8	
Distribution	Lognormal, With ND Data		Lognormal, Without ND Data	
Reporting Limit	0.0000005		0.0000005	
Significant Figures	2		2	
Maximum Reported Effluent Conc.	0.0000043		0.0000043	
Coefficient of Variation (CV)	0.45		0.45	
Acute Criterion	0.00015		0.00015	
Chronic Criterion	0.000012		0.000012	
Confidence Interval	95	99	95	99
Projected Maximum Effluent Conc. (MEC)	0.0000074	0.000011	0.0000074	0.000011
RP Multiplier	1.7	2.7	1.7	2.7
RP for Acute?	NO	NO	NO	NO
RP for Chronic?	NO	NO	NO	NO
Outcome	C		C	

Ammonia Effluent Compared to 2023 WLA WQBEL									
X indicates violation					O indicates no violation				
There was no discharge during the months not listed.									
		Winter		Spring		Summer		Fall	
WQBEL		Chronic	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Month	Value	3.4	9.8	2.7	8.2	1	4.7	2.7	8.2
Jan-19	16.9	X	X						
Feb-19	14	X	X						
Mar-19	14.7	X	X						
Apr-19	19.5			X	X				
May-19	20.2			X	X				
Jun-19	8.8			X	X				
Jul-19	5.5					X	X		
Aug-19	0.2					O	O		
Jan-20	11.4	X	X						
Feb-20	12.4	X	X						
Mar-20	15	X	X						
Apr-20	21.5			X	X				
May-20	26.3			X	X				
Jun-20	18			X	X				
Jul-20	5.2					X	X		
Aug-20	1.4					X	O		
Jan-21	21.9	X	X						
Feb-21	26.2	X	X						
Mar-21	25	X	X						
Apr-21	22.3			X	X				
May-21	20.7			X	X				
Jun-21	6.8			X	O				
Jul-21	6.8					X	X		
Aug-21	0.4					O	O		
Sep-21	1.1					X	O		
Oct-21	7.5							X	O
Nov-21	17.4							X	X
Dec-21	20.9							X	X
Mar-22	22.5	X	X						
Apr-22	30.1			X	X				
May-22	24.2			X	X				
Jun-22	19.1			X	X				
Jan-23	13.3	X	X						
Feb-23	16.2	X	X						
Mar-23	19.4	X	X						
Apr-23	11.7			X	X				

Metals Monitoring and RP Check

Metals Monitoring Results and RP Screening														
Parameter	CN	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn	Cr	Hg
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L
	0.002	0.0005	0.0002	0.0005	0.0001	0.0005	0.0002	0.0005	0.0005		0.0005	0.01		0.5
Sample Date							Method 245.2							Method 1631
5/31/2018	0.002	0.0066	ND	0.0013	0.0028	0.0007	ND	0.0106	0.0114		ND	0.02		
11/29/2018	0.002	0.0106	ND	0.0011	0.0035	0.0007	ND	0.0246	0.0069	0.0034	ND	ND		
6/7/2019														2.6
10/22/2020														3.2
4/8/2021														2.9
7/8/2021	0.006	0.0114	ND	0.0008	0.0032	ND	ND	0.0112	0.0021	0.0048	ND	0.02		
11/3/2021														2
6/30/2022														2.6
11/18/2022	0.007	0.0136	ND	0.0007	0.0034	0.001		0.0138	0.0023	0.0022	ND	ND		1.1
5/11/2023														4.3
Max	0.007	0.0136	0.0002	0.0013	0.0035	0.001	0.0002	0.0246	0.0114	0.0048	0.0005	0.02	0	4.3
Water Quality Based Effluent Limits														
	CN	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Zn	Cr	Hg
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L
Acute	0.022	0.34	0.0087	5.6118	0.0517	0.4768	0.00015	1	1.516	0.02	0.0411	0.3878	0.016	150
Chronic	0.0052	0.19	0.0008	0.268	0.0305	0.0186	0.000012	1	0.169	0.0046	0.0411	0.3878	0.011	12
ARP Chk	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No
CRP CHK	Yes	No	No	No	No	No	Yes	No	No	Yes	No	No	No	No

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