

**FACT SHEET AND STATEMENT OF BASIS
MOAB CITY WASTEWATER TREATMENT FACILITY
RENEWAL PERMIT: DISCHARGE, & BIOSOLIDS
UPDES PERMIT NUMBER: UT0020419
UPDES BIOSOLIDS PERMIT NUMBER: UTL-020419
MAJOR MUNICIPAL**

FACILITY CONTACTS

Person Name: Obe Tejada
Position: Wastewater Director
Phone Number: 435-259-5577

Person Name: Carly Castle
Position: Acting City Manager
Phone Number: 435-259-5121

Facility Name: Moab Water Reclamation Facility
Mailing and Facility Address: 217 East Center St.
Moab, Utah 84532
Telephone: 435-259-5577
Actual Address: 1070 West 400 North, Moab in Grand County, Utah

DESCRIPTION OF FACILITY

The Moab Wastewater Treatment Facility (Moab) was originally built in the early 1950s, and after two upgrades in 1983 and in 1996 had a design capacity of 1.5 million gallons a day (MGD). The facility consisted of a dump station, an inlet pump station, a screen and flume structure, a grit remover, two primary clarifiers, a primary digester, a secondary digester, two trickling filters, two secondary clarifiers, and an emergency power station. Moab was at approximately one-half to two-thirds its organic and hydraulic loading capacity and was having trouble meeting permit requirements. During the life of the previous permit, Moab completely replaced the facility.

The new facility consists of a dump station, an inlet pump station, a screen and flume structure, a grit remover, two sequencing batch reactors, an equalization basin, ultraviolet disinfection system, and an emergency power station. Moab still discharges effluent to the Colorado River via the existing 2000-foot cement pipeline. The new Moab facility is located across the road, south of the existing facility near 1025 West 400 North in the city of Moab, Grand County. The outfall is located near latitude is 38° 34' 40", longitude 1090 34' 47" with STORET number 495655

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Moab City completely replaced the wastewater treatment plant and brought a new one on line in August of 2018. The permit (2016 – 2021) was renewed in 2016 with the same flow as the previous (2012-2016) permit. That flow was 1.5 MGD. After the new plant was brought online, the city requested the Permit be modified to increase the permitted flow from the facility to the design flow. After completing a Level II Antidegradation Review on the discharge, and full public comment period the permit was modified and issued with an increased flow of 1.75 MGD.

The Permit renewal also included a compliance schedule to cover the completion of the facility and startup of the new one. In 2019 the permit was also modified to remove the compliance schedule.

During the replacement of the facility the disinfection system was switched from chlorine to ultra violet. The facility has requested the TRC limit remain so they can investigate the use of chlorine to control string algae and moss growth (biological growth) in the effluent equalization basin during the summer month. The monitoring will remain in the permit on a daily basis. If the facility is not adding chlorine on any given day, they do not have to analysis the effluent for residual chlorine.

The facility does not need to treat for the biological growth in the same way they are required to disinfect the effluent at all times. As a result, the acute limit (Weekly Average) will be removed and the chronic limits (Monthly Average) will vary by season.

TRC Limit			
	Previous Permit		Renewal Permit
	Monthly Avg	Weekly Avg	Maximum Monthly Avg
Summer (Jul-Sep)	1.4	1.55	0.35
Fall (Oct-Dec)			0.59
Winter (Jan-Mar)			0.73
Spring (Apr-Jun)			0.63

Moab has started using the IDEXX system for inhouse *E. coli* monitoring.

On December 16, 2014, the Utah Water Quality Board adopted *Utah Administrative Code (UAC) R317-1-3.3, Technology-Based Limits for Controlling Phosphorous Pollution*. The Technology-Based Phosphorous Effluent Limits (TBPEL) establishes new regulations for the discharge of phosphorus to surface waters and is self-implementing. The TBPEL rule includes the following requirements for nonlagoon wastewater treatment plants:

The TBPEL requires that all non-lagoon wastewater treatment works discharging wastewater to surface waters of the state shall provide treatment processes which will produce effluent less than or equal to an annual mean of 1.0 mg/L for total phosphorus. TBPEL compliance must be achieved by January 1, 2020 unless a variance has been granted by DWQ.

On June 15, 2018, DWQ approved the Moab variance request not to extend beyond the current permit duration, and with a total phosphorous annual average limit of 2.5 mg/L beginning January 1, 2020. The Variance has been extended for the duration of the renewal permit. And incorporated into this renewal.

DISCHARGE

DESCRIPTION OF DISCHARGE

Moab has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. In late 2018 the discharge switched from the old plant to the new plant, and the effluent is much better quality. As a result, the prior data are no longer representative of the discharge from the current facility. A summary of the data from the switch over (October 2018) is included in Attachment 2 of this FSSOB.

There have only been a couple permit limit exceedances since 2018. One, an exceedance of the total suspended solids limit, is attributed to an extreme weather event where they received a short term high influent flow that was more dilute and contained a large volume of sand. This indicated that a large amount of storm runoff was entering the sewer during a storm event. Another exceedance was due to a higher than normal loading from hauled waste over a short period that month. Neither were serious enough to warrant enforcement.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 38°34'40" and longitude 109°34'47". The discharge is through a 2000-foot cement pipeline to the Colorado River.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge flows into the Colorado River which is classified as 1C, 2A, 3B and 4, according to *Utah Administrative Code (UAC) R317-2-13*.

- Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water
- Class 2A -- Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.
- Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.
- Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD5), *E. coli*, pH and percent removal for BOD5 and TSS are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. The oil and grease are based on best professional judgment (BPJ). Attached is a Wasteload Analysis for this discharge into the Colorado River. 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.

Total dissolved solids (TDS) limitations are based upon Utah Water Quality Standards for concentration values and the Colorado River Basin Salinity Control Forum (CRBSCF) for mass loading values when applicable as authorized in *UAC R317-2-4*. CRBSCF has established a policy for the reasonable increase of salinity for municipal discharges to any portion of the Colorado River stream system that has an impact on the lower main stem. The CRBSCF Policy titled "NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards" (Policy), with the most current version dated October 2020, states that the incremental increase in salinity shall be 400 mg/L or less, which is considered to be a reasonable

incremental increase above the flow weighted average salinity of the intake water supply.

Reasonable Potential Analysis

A reasonable potential analysis (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 quantitative RP analysis was performed on the effluent metals monitoring results reported in the DMR’s to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. Based on the RP analysis, no parameters exceeded the most stringent chronic water quality standard or were determined to have a reasonable potential to exceed the standard. In addition, the RP analysis indicates no increased monitoring is required. A copy of the RP analysis is included at the end of this Fact Sheet.

The permit limitations are:

Parameter	Effluent Limitations ¹				
	Maximum Monthly Avg	Maximum Weekly Avg	Yearly Average	Daily Minimum	Daily Maximum
Total Flow	1.75	-	-	-	-
BOD ₅ , mg/L	25	35	-	-	-
BOD ₅ Min. % Removal	85	-	-	-	-
TSS, mg/L	25	35	-	-	-
TSS Min. % Removal	85	-	-	-	-
TRC, mg/L					
Summer (Jul-Sep)	0.35	-	-	-	-
Fall (Oct-Dec)	0.59	-	-	-	-
Winter (Jan-Mar)	0.73	-	-	-	-
Spring (Apr-Jun)	0.63	-	-	-	-
<i>E. coli</i> , No./100mL	126	157	-	-	-
Oil & Grease, mg/L	-	-	-	-	10.0
pH, Standard Units	-	-	-	6.5	9
Phosphorus, mg/L	-	-	2.5	-	-
TDS, mg/L	<400 mg/L Increase	-	-	-	-
1. See Definitions, <i>Part VIII</i> , for definition of terms.					
2. The effluent shall not exceed the culinary source water intake by more than 400 mg/L of TDS					

SELF-MONITORING AND REPORTING REQUIREMENTS

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

Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow ^{2, 3}	Continuous	Recorder	MGD

Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
BOD ₅ , Influent ⁴	2 X Weekly	Composite	mg/L
Effluent	2 X Weekly	Composite	mg/L
TSS, Influent ⁴	2 X Weekly	Composite	mg/L
Effluent	2 X Weekly	Composite	mg/L
<i>E. coli</i>	2 X Weekly	Grab	No./100mL
pH	2 X Weekly	Grab	SU
Total Ammonia (as N)	Monthly	Composite	mg/L
WET – Biomonitoring ⁵	Quarterly	Composite	Pass/Fail
TRC, mg/L, ⁶	Daily ⁷	Grab	mg/L
Oil & Grease (When Sheen Observed) ⁸	Monthly	Grab	mg/L
Orthophosphate (as P), ⁹ Effluent	Monthly	Composite	mg/L
Total Phosphorus (as P), ⁹ Influent ⁴	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen (TKN) (as N), ⁹ Influent ⁴	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO ₃ ⁹	Monthly	Composite	mg/L
Nitrite, NO ₂ ⁹	Monthly	Composite	mg/L
TDS, mg/L Source Water ⁴	Monthly	Grab	mg/L
Effluent	Monthly	Grab	mg/L
Metals, Influent ⁴	Quarterly	Composite	mg/L
Effluent	Quarterly	Composite	mg/L
Organic Toxics	Odd Calendar Years	Grab	mg/L
1. See Definitions, <i>Part VIII</i> , for definition of terms.			
2. 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.			
3. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.			
4. 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.			
5. The acute Ceriodaphnia will be tested during the 1st and 3rd quarters and the acute fathead minnows will be tested during the 2nd and 4th quarters. The chronic Ceriodaphnia will be tested during the 2nd and 4th quarters, and the chronic fathead minnows will be tested during the 1st and 3rd quarters.			
6. Total residual chlorine monitoring frequency is Daily. The chlorine is used to control biological growth in the effluent equalization basin during certain times of the year. If the chlorine is not being used in a given month, the result may be reported as.			
7. Total residual chlorine monitoring frequency is Daily. The chlorine is used to control biological growth in the effluent equalization basin during certain times of the year. If the chlorine is not being used on a given day, they no analysis is required for that day.			
8. Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report NA.			

Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
9. These reflect changes and additions required with the adoption of UCA R317-l-3 .3, Technology-based Phosphorus Effluent Limits rule. The rule requires 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. This collection method is only for the monthly samples being collected in compliance with the rule.			

BIOSOLIDS

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

SUBSTANTIAL BIOSOLIDS TREATMENT CHANGES

Since the last renewal, the entire facility has been replaced with an SBR. The solids are removed from the SBR after the settling and drain stages of treatment and transferred to a holding basin. From there the solids are dewatered by screw press and loaded in a dumpster where they are then transferred to a landfill for disposal.

DESCRIPTION OF TREATMENT AND DISPOSAL

The Permittee submitted their 2020 annual biosolids report on February 26, 2021. The report states the Permittee produced 351 dry metric tons (DMT) of solids.

Biosolids were hauled to the Klondike Bluffs Landfill. Approximately 352 DMT were hauled off-site to the landfill for disposal.

SELF-MONITORING REQUIREMENTS

Under *40 CFR 503.16(a)(1)*, the self-monitoring requirements are based upon the amount of biosolids disposed per year and shall be monitored according to the chart below.

Minimum Frequency of Monitoring (40 CFR Part 503.16, 503.26. and 503.46)		
Amount of Biosolids Disposed Per Year		Monitoring Frequency
Dry US Tons	Dry Metric Tons	Per Year or Batch
> 0 to < 320	> 0 to < 290	Once Per Year or Batch
> 320 to < 1650	> 290 to < 1,500	Once a Quarter or Four Times
> 1,650 to < 16,500	> 1,500 to < 15,000	Bi-Monthly or Six Times
> 16,500	> 15,000	Monthly or Twelve Times

Moab has produced on aver 350 DMT of biosolids annually over the last 10 years., therefore they would be required to sample at least four times a year. Moab sends all biosolids to the landfill and thus not required to monitor the biosolids.

Landfill Monitoring

Under *40 CFR 258*, the landfill monitoring requirements include a paint filter test. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in the sanitary landfill (*40 CFR 258.28(c)(1)*).

BIOSOLIDS LIMITATIONS

Heavy Metals

Class A Biosolids for Home Lawn and Garden Use

The intent of the heavy metals regulations of Table 3, *40 CFR 503.13* is to ensure the heavy metals do not build up in the soil in home lawn and gardens to the point where the heavy metals become phytotoxic to plants. The permittee will be required to produce an information sheet (see *Part III. C.* of the permit) to be made available to all people who are receiving and land applying Class A biosolids to their lawns and gardens. If the instructions of the information sheet are followed to any reasonable degree, the Class A biosolids will be able to be land applied year after year, to the same lawns and garden plots without any deleterious effects to the environment. The information sheet must be provided to the public, because the permittee is not required, nor able to track the quantity of Class A biosolids that are land applied to home lawns and gardens.

Class A Requirements With Regards to Heavy Metals

If the biosolids are to be applied to a lawn or home garden, the biosolids shall not exceed the maximum heavy metals in Table 1 and the monthly average pollutant concentrations in Table 3 (see Table 1 and Table 3 below). If the biosolids do not meet these requirements, the biosolids cannot be sold or given away for applications to home lawns and gardens.

Class B Requirements for Agriculture and Reclamation Sites

The intent of the heavy metals regulations of Tables 1, 2, 3 and 4, of *40 CFR 503.13* is to ensure that heavy metals do not build up in the soil at farms, forest land, and land reclamation sites to the point where the heavy metals become phytotoxic to plants. The permittee will be required to produce an information sheet (see *Part III. C.* of the permit) to be handed out to all people who are receiving and land applying Class B biosolids to farms, ranches, and land reclamation sites (if biosolids are only applied to land owned by the permittee, the information sheet requirements are waived). If the biosolids are land applied according to the regulations of *40 CFR 503.13*, to any reasonable degree, the Class B biosolids will be able to be land applied year after year, to the same farms, ranches, and land reclamation sites without any deleterious effects to the environment.

Class B Requirements With Regards to Heavy Metals

If the biosolids are to be land applied to agricultural land, forest land, a public contact site or a reclamation site the biosolids shall not exceed the maximum heavy metals in Table 1 and shall not be land applied at an application rate to exceed either the Cumulative Pollutant Loading Rate (CPLR), Table 2, or the Annual Pollutant Loading Rate (APLR), Table 4 (see Table 2 and Table 4 in the heavy metals limits table below).

Heavy Metal Limitations (Pollutant Limits Tables 1, 2, 3, and 4)

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits ¹ , (mg/kg)	CPLR ² (mg/ha)	Pollutant Conc. Limits ³ , (mg/kg)	APLR ⁴ , (mg/ha-yr)
Total Arsenic	75	41	41	2.0
Total Cadmium	85	39	39	1.9
Total Copper	4300	1500	1500	75
Total Lead	840	300	300	15
Total Mercury	57	17	17	0.85

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits ¹ , (mg/kg)	CPLR ² (mg/ha)	Pollutant Conc. Limits ³ , (mg/kg)	APLR ⁴ , (mg/ha-yr)
Total Molybdenum	75	N/A	N/A	-
Total Nickel	420	420	420	21
Total Selenium	100	100	100	5
Total Zinc	7500	2800	2800	140
1 - The limitations represent the maximum allowable levels of heavy metals in any biosolids intended for land application.				
2 - CPLR - Cumulative Pollutant Loading Rate; the maximum pollutant load for any given piece of land.				
3 - These limitations represent the maximum allowable levels of heavy metals based on an average of all samples taken during a 30-day period.				
4 - APLR – Annual Pollutant Loading Rate; the maximum pollutant load for any given piece of land in any given year.				

Any violation of these limitations shall be reported in accordance with the requirements of Part III.F.1. of the permit. If the biosolids do not meet these requirements they cannot be land applied.

Pathogens

The Pathogen Control class listed in the table below must be met;

Pathogen Control Class	
503.32 (a)(1) - (5), (7), - (8), Class A	503.32 (b)(1) - (5), Class B
B Salmonella species –less than three (3) MPN ¹ per four (4) grams total solids (DWB) ² or Fecal Coliforms – less than 1,000 MPN per gram total solids (DWB).	Fecal Coliforms – less than 2,000,000 MPN or CFU ³ per gram total solids (DWB).
503.32 (a)(6) Class A—Alternative 4	
B Salmonella species –less than three (3) MPN per four (4) grams total solids (DWB) or less than 1,000 MPN Fecal Coliforms per gram total solids (DWB), And - Enteric viruses –less than one (1) plaque forming unit per four (4) grams total solids (DWB) And - Viable helminth ova –less than one (1) per four (4) grams total solids (DWB)	
1. MPN – Most Probable Number	
2. DWB – Dry Weight Basis.	
3. CFU – Colony Forming Units	

Class A Requirements for Home Lawn and Garden Use

If biosolids are land applied to home lawns and gardens, the biosolids need to be treated by a specific process to further reduce pathogens (PFRP), and meet a microbiological limit of less than less than 3 most probable number (MPN) of *Salmonella* per 4 grams of total solids (or less than 1,000 most probable number (MPN/g) of fecal coliform per gram of total solids) to be considered Class A biosolids. Moab does no

beneficially reuse the biosolids, and is thus not required to meet a PFRP.

The practice of sale or giveaway to the public is an acceptable use of biosolids of this quality as long as the biosolids continue to meet Class A standards with respect to pathogens. If the biosolids do not meet Class A pathogen standards the biosolids cannot be sold or given away to the public, and the permittee will need find another method of beneficial use or disposal.

Pathogens Class B

If biosolids are to be land applied for agriculture or land reclamation the solids need to be treated by a specific process to significantly reduce pathogens (PSRP). Moab does not beneficially reuse the biosolids, and is thus not required to meet a PSRP.

Vector Attraction Reduction (VAR)

If the biosolids are land applied Moab will be required to meet VAR through the use of a method of listed under *40 CFR 503.33*. Moab disposes of biosolids at a landfill and meets VAR through Daily Cover.

If the permittee intends to use another one of the listed alternatives in *40 CFR 503.33*, the Director and the EPA must be informed at least thirty (30) days prior to its use. This change may be made without additional public notice

Landfill Monitoring

Under *40 CFR 258*, the landfill monitoring requirements include a paint filter test to determine if the biosolids exhibit free liquid. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in the sanitary landfill (*40 CFR 258.28(c)(1)*).

Record Keeping

The record keeping requirements from *40 CFR 503.17* are included under *Part III.G.* of the permit. The amount of time the records must be maintained are dependent on the quality of the biosolids in regards to the metals concentrations. If the biosolids continue to meet the metals limits of *Table 3* of *40 CFR 503.13*, and are sold or given away the records must be retained for a minimum of five years. If the biosolids are disposed in a landfill the records must be retained for a minimum of five years.

Reporting

Moab must report annually as required in *40 CFR 503.18*. This report is to include the results of all monitoring performed in accordance with *Part III.B* of the permit, information on management practices, biosolids treatment, and certifications. This report is due no later than February 19 of each year. Each report is for the previous calendar year.

MONITORING DATA

METALS MONITORING DATA

The Moab was not required to sample the biosolids for metals because they dispose of all biosolids in a landfill.

PATHOGEN MONITORING

Moab disposes of all biosolids and is not required to monitor for pathogens.

STORM WATER

Separate storm water permits may be required based on the types of activities occurring on site.

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. Treatment Works facilities with a design flow of 1.0 MGD or more are required to maintain separate permit coverage, or an appropriate exclusion, under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). If the facility has not already done so, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP, or exclusion documentation.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction.

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

PRETREATMENT REQUIREMENTS

Information was provided regarding industrial users that discharge to the POTW as part of the UPDES Permit Application. An industrial waste survey (IWS) is required of the permittee as stated in Part II of the UPDES Permit. The IWS is to assess the needs of the permittee regarding pretreatment assistance. If an Industrial User (IU) begins to discharge or an existing IU 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 UPDES Permit.

Moab is not required to develop an Approved Pretreatment Program at the time. Moab has five dental offices, a distillery, a brewery, a county jail, a discharging categorical industrial user (CIU) and two zero discharging IUs. Synergy has been classified as a CIU regulated by 40 CFR 439. Currently, Synergy is permitted by DWQ.

Moab Distillery and Moab Brewery are not required to be permitted since Moab has adequate capacity for the wastewater from these facilities. These facilities have been inspected by DWQ and have been notified of the pretreatment standards and requirements. The facilities are able to pH adjust, to ensure wastewater is discharged within the requirements for pretreatment standards.

Mega Blue and Moab Bit and Tool could be classified as CIUs although the facilities do not discharge process wastewater to the POTW. DWQ has inspected these facilities and will continue to inspect the facilities to ensure that the facilities do not discharge process wastewater to the POTW. If notification is made by either of these industries that process wastewater will be discharged to the POTW, Moab must notify DWQ as soon as possible. These facilities must obtain a UPDES Permit if discharge occurs into the POTW. Discharge must not be allowed until a UPDES Permit has been issued.

Food service establishments (FSEs) have impacted the collection system with fats, oils and grease (FOG). A warning letter was sent to Moab due to the impact of the FSEs. Moab has commented to managing the Moab FOG Program better, which is required to be implemented per the Utah Sewer Management Program (USMP).

Hauled waste is accepted at the water reclamation facility (WRF) which is owned and operated by Moab.

The Moab WWTP Relocation Final Environmental Study from October 2016 states that about 1.2 million gallons a year of septage is discharge to the WRF. Controls are in place to prevent illegal haulers from discharging at the WRF. These controls include a key in system that will only allow permitted haulers to discharge to the WRF.

Although the permittee does not have to develop an 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. Based on industrial users in the Moab service area it is recommended that Moab begin to become knowledgeable regarding the implementation and requirements of establishing an Approved Pretreatment Program.

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 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 major municipal facility that discharges to the Colorado River. Because the effluent is substantially diluted by the Colorado River, Moab will be required to do acute WET testing. It is doubtful that Moab effluent will have any effect on the quality/toxicity in the Colorado River. However, there could be toxicity within the small mixing zone in the river which is prohibited by the water quality rules, UAC R317-2-5. As a result, WET limits will be included in the effluent limits for Moab. No acute toxicity is allowed in a mixing zone, which translates into no toxicity at the end of the pipe, or no toxicity in 100% effluent or $LC_{50} > 100\%$ effluent. 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
Lonnie Shull, Biomonitoring
Carl Adams, Storm Water
Christopher Shope, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: Month Day, 2021

Ended: Month Day, 2021

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

The Public Noticed of the draft permit was published in The Times Independent.

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.

During finalization of the Permit certain dates, spelling edits and minor language corrections may be completed. Due to the nature of these changes they might not be considered Major and the permit is would not require a second comment period prior to issuing.

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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, 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
PO 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
PO 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.

Monthly DMR Reported Results										
Param	Flow	pH		BOD		TSS		E. coli		O & G
Units	MGD	SU		mg/L		mg/L		#/100mL		mg/L
Limit	1.75	6.5	9	25	35	25	35	157	126	10
Month	Max	Min	Max	Chronic	Acute	Chronic	Acute	Acute	Chronic	Max
Oct-18	1.3	7	7.3	5	5	3	4	14	3	5
Nov-18	1.33	7.1	7.2	5	5	5	11	168	10	6.55
Dec-18	1.04	7	7.2	8	20	5	15	120	20	6.56
Jan-19	1	7	7.2	6	11	7	19	37	7	5
Feb-19	1.09	7	7.2	5	5	7	10	5	2	5
Mar-19	1.26	7	7.2	5	11	8	15	38	10	5
Apr-19	1.44	7	7.2	4	6	8	12	19	7	5
May-19	1.49	7.1	7.2	3	3	4	8			5
Jun-19	1.42	7.1	7.3	3	5	3	5	13	3	5
Jul-19	1.32	7.1	7.4	5	9	4	5	96	13	5.47
Aug-19	1.33	7.1	7.4	4	14	3	4	17	3	5
Sep-19	1.37	7.1	7.4	3	3	4	10			5.25
Oct-19	1.46	7.1	7.3	4	10	4	10	7	1	5
Nov-19	1.31	7.1	7.3	3	3	3	7	1		5
Dec-19	1.1	6.95	7.17	3	3	4.17	8	2	0	5
Jan-20	1.01	6.95	7.15	4.19	7.15	2.69	3.4	0	0	5
Feb-20	1.03	7.04	7.25	4.07	8.35	2.24	3.2	1	0.4	5
Mar-20	1.13	7.03	7.27	3.77	4.06	3.77	4.2	2	0.5	5
Apr-20	1.13	6.83	7.25	3	3	2.6	4.4	1	0.375	5
May-20	1.13	6.85	7.37	6.55	16.3	3.12	5.8	0.5	0.1	5
Jun-20	1.18	6.91	7.3	3	3	2.6	4	2	0.4	
Jul-20	0.95	7.1	7.43	5.6	3	11	3.6	11.5	5.7	5
Aug-20	1.03	6.97	7.43	5.7	38.25	3.8	6.2	6	2.3	5.1
Sep-20	1.1	7.03	7.37	10.9	5	7.75	16.4	13.5	4	5
Oct-20	1.15	7.05	7.32	6.8	8.6	11	13	7.5	4.375	5
Nov-20	1.03	6.88	7.47	3	3	2.89	4.2	5	2.11	5
Dec-20	0.89	7	7.33	3.99	14.94	2.96	4	6	1.89	5
Jan-21	0.85	6.87	7.41	4	4	2.25	3	0.5	0.25	5
Feb-21	0.88	6.81	7.48	4	4	3.8	7	3	1.5	5
Mar-21	1.11	6.51	7.27	4.68	6.825	6.24	12.2	5	1.9	5
Apr-21	1.2	6.89	7.37	9	23.4	7.5	13.6	571	9.6	5
May-21	1.24	6.85	7.47	4.4	5.5	6.1	8.2	3.16	0.32	5.85

TBPEL Monitoring

TBPEL Monitoring					
Param	Ammonia	NH3+NOx	Ortho P	TKN	Tot P
Units	mg/L	mg/L	mg/L	mg/L	mg/L
Limit					
Month	Chronic	Chronic	Chronic	Chronic	Chronic
Oct-18	1.57	3.61	3.4	1.57	3
Nov-18	0.49	1.2	1.3	2.5	1.4
Dec-18	0.49	0.5	1.4	1.7	1.4
Jan-19	0.53	0.6	1.3	1.8	1.3
Feb-19	0.47	0.7	2.9	2	2.5
Mar-19	0.66	0.5	2	3	2
Apr-19	0.27	1.5	2	2	2
May-19	0.18	1.4	1.1	3	1.3
Jun-19	1	0.5	5	2.5	5
Jul-19	0.253	1.84	0.167	1.91	0.217
Aug-19	0.214	1.33	0.209	1.08	0.298
Sep-19	0.308	1.26	3.9	1.22	3.63
Oct-19	0.698	0.604	1.22	1.96	1.21
Nov-19	0.266	1.07	1.38	1.45	1.39
Dec-19	0.119	0.398	1.06	1.26	1.02
Jan-20	0.102	0.471	2.37	1.58	2.23
Feb-20	0.225	0.652	0.802	1.5	0.818
Mar-20	0.211	0.424	0.437	1.83	0.608
Apr-20	0.15	0.615	2.24	1.58	2.39
May-20	0.05	0.573	2.87	1.25	2.97
Jun-20					
Jul-20	0.482	0.39	3.9	1.73	4.08
Aug-20	1.06	0.708	4.68	2.5	4.89
Sep-20	0.353	0.304	1.65	1.63	1.62
Oct-20	8.36	3.18	3.32	11.4	3.83
Nov-20	0.265	2.68	2.31	2.08	2.43
Dec-20	0.289	0.788	3.27	1.28	3.04
Jan-21	32.6	0.685	4.98	62.4	7.06
Feb-21	5.91	0.146	0.144	9.18	0.168
Mar-21	9.67	0.102	0.189	11.6	0.295
Apr-21	0.337	0.183	1.5	3.54	1.53
May-21	0.285	1.48	2.38	3.26	2.62

WET Results

Month	Parameter	Value
Sep-16	96Hr Acute Fat Head	Pass
Dec-16	48Hr Acute Cerio	Fail
Mar-17	96Hr Acute Fat Head	Pass
Jun-17	48Hr Acute Cerio	Pass
Sep-17	96Hr Acute Fat Head	Pass
Dec-17	48Hr Acute Cerio	Pass
Mar-18	96Hr Acute Fat Head	Pass
Jun-18	48Hr Acute Cerio	Pass
Sep-18	96Hr Acute Fat Head	Pass
Dec-18	48Hr Acute Cerio	Pass
Mar-19	96Hr Acute Fat Head	Pass
Jun-19	48Hr Acute Cerio	Pass
Sep-19	96Hr Acute Fat Head	Pass
Dec-19	96Hr Acute Fat Head	Pass
Mar-20	48Hr Acute Cerio	Pass
Jun-20	96Hr Acute Fat Head	Pass
Sep-20	48Hr Acute Cerio	Pass
Dec-20	96Hr Acute Fat Head	Pass
Mar-21	48Hr Acute Cerio	Pass
Jun-21	96Hr Acute Fat Head	Pass

Colorado Salinity Control Monitoring

Annual TDS Increase, mg/L			
Year	Source	Effluent	Increase
2018	142	346	204
2019	186	352	166
2020	160	366	206

Year		2018				2019				2020				2021		
Quarter		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Parameter		Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	
Effluent	As	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Cd	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
	Cr	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Cu	0.0232	0.0232	0.0407	0.012	0.0079	0.0107	0.009	0.003	0.0042	0.0038	0.0114	0.0165	0.0063	0.0133	
	Pb	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Hg	0.00406	0.406	0.0002	0.00015	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	0.00009	0.00009
	Mo	0.00267	0.0027	0.0037	0.00368	0.002	0.0022	0.002	0.0023	0.002	0.002	0.0022	0.0022	0.002	0.00318	
	Ni	0.00208	0.0021	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Se	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Ag	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Zn	0.0904	0.0904	0.0577	0.0679	0.0956	0.0732	0.0556	0.0656	0.0772	0.0766	0.0921	0.103	0.0887	0.118	
	CN	0.0119	0.0213	0.005	0.005	0.005		0.005		0.005	0.005	0.005	0.0232	0.00595	0.0203	
Influent	As	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Cd	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	
	Cr	0.00224	0.0022	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.002	0.0021	0.00231	0.002	
	Cu	0.0441	0.0441	0.0527	0.052	0.0403	0.0286	0.046	0.0901	0.0577	0.0383	0.0569	0.0507	0.0534	0.041	
	Pb	0.002	0.002	0.002	0.002	0.0027	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Hg	0.00484	0.0048	0.0002	0.00029	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	9E-05	0.00009	0.00009
	Mo	0.00299	0.003	0.0025	0.0143	0.0031	0.003	0.0027	0.0051	0.0035	0.0033	0.0037	0.0032	0.00404	0.00336	
	Ni	0.00272	0.0027	0.002	0.00269	0.0029	0.0023	0.0032	0.0068	0.0033	0.0022	0.003	0.003	0.0033	0.00273	
	Se	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Ag	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
	Zn	0.161	0.161	0.0734	0.101	0.145	0.0989	0.165	0.153	0.15	0.112	0.205	0.207	0.134	0.167	
	CN	0.005	0.005	0.0062	0.005	0.005		0.005		0.005	0.005	0.005	0.0055	0.005	0.005	

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.

(REASONABLE POTENTIAL LANGUAGE)

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at some of the metals is needed. A copy of the initial screening is included in the “Effluent Metals and RP Screening Results” table in this attachment. The initial screening check for metals showed that the full model needed to be run on mercury.

The RP model was run on mercury using the most recent data back through 2018. This resulted in 12 data points and that there is not a Reasonable Potential that Moab would violate the acute or chronic water quality based effluent limits. Reviewing the data showed that the lab used between the sampling in 2018 and 2019 could have changed or improved, resulting in a lower minimum reporting limit for mercury. When the 2018 data is excluded from screening check, and/or the RP model runs, the result is the same.

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:		001	Data Units		mg/L
Parameter	Mercury			Mercury		
Distribution	Normal			Normal		
Reporting Limit	0.00009			0.00009		
Significant Figures	2			2		
Maximum Reported Effluent Conc.	0.00015			0.00009		
Coefficient of Variation (CV)	1.2			-		
Acute Criterion	0.038199			0.038199		
Chronic Criterion	0.000275			0.000275		
Confidence Interval	95	99		95	99	
Projected Maximum Effluent Conc. (MEC)	0.00018	0.00021		0.00009	0.00009	
RP Multiplier	1.2	1.4		1.0	1.0	
RP for Acute?	No	No		No	No	
RP for Chronic?	No	No		No	No	
Outcome	D			D		
RP Procedure Output				Effluent Data		

¹ See Reasonable Potential Analysis Guidance for definitions of terms

Facility Name:	Moab		#		#		#
Permit Number:	UT0020419		1	0.00015	41		81
Outfall Number:	OO1		2	0.00015	42		82
Parameter	Mercury		3	0.00009	43		83
Distribution	Normal		4	0.00009	44		84
Data Units	mg/L		5	0.00009	45		85
Reporting Limit	0.00009		6	0.00009	46		86
Significant Figures	2		7	0.00009	47		87
Confidence Interval	95%		8	0.00009	48		88
			9	0.00009	49		89
Maximum Reported Effluent Conc.	0.00015	mg/L	10	0.00009	50		90
Coefficient of Variation (CV)	0.23		11	0.00009	51		91
RP Multiplier	1.2		12	0.00009	52		92
Projected Maximum Effluent Conc. (MEC)	0.00018	mg/L	13		53		93
			14		54		94
Acute Criterion	0.038199		15		55		95
Chronic Criterion	0.000275		16		56		96
Human Health Criterion	NA		17		57		97
			18		58		98
RP for Acute?	No		19		59		99
RP for Chronic?	No		20		60		100
RP for Human Health?	N/A		21		61		101
			22		62		102
Confidence Interval	99%		23		63		103
			24		64		104
Maximum Reported Effluent Conc.	0.00015		25		65		105
Coefficient of Variation (CV)	0.23		26		66		106
RP Multiplier	1.4		27		67		107
Projected Maximum Effluent Conc. (MEC)	0.00021		28		68		108
			29		69		109
Acute Criterion	0.038199		30		70		110
Chronic Criterion	0.000275		31		71		111
Human Health Criterion	NA		32		72		112
			33		73		113
RP for Acute?	No		34		74		114
RP for Chronic?	No		35		75		115
RP for Human Health?	N/A		36		76		116
			37		77		117
			38		78		118
			39		79		119
			40		80		120

Metals Monitoring and RP Check

Parameter	As	Cd	CN	Cr IV	Cu	Hg	Mo	Ni	Pb	Se	Ag	Zn
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
Acute WQBEL	13.3604	1.0021	3.0125	1.6506	7.0509	0.038199	1	166.4462	20.3184	2.1139	6.4988	54.1294
Chronic WQBEL	3.4201	0.0425	0.1194	0.1652	0.6508	0.000275	1	3.82	0.0846	0.0047	6.4988	9.0926
Quarter	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
2018 Q3	0.002	0.0005	0.005	0.002	0.0407	0.00015	0.00365	0.00204	0.002	0.002	0.002	0.0577
2018 Q4	0.002	0.0005	0.005	0.002	0.012	0.00015	0.00368	0.002	0.002	0.002	0.002	0.0679
2019 Q1	0.002	0.0005	0.005	0.002	0.00786	0.00009	0.00202	0.002	0.002	0.002	0.002	0.0956
2019 Q2	0.002	0.0005		0.002	0.0107	0.00009	0.00219	0.002	0.002	0.002	0.002	0.0732
2019 Q3	0.002	0.0005	0.005	0.002	0.00898	0.00009	0.002	0.002	0.002	0.002	0.002	0.0556
2019 Q4	0.002	0.0005		0.002	0.003	0.00009	0.00233	0.002	0.002	0.002	0.002	0.0656
2020 Q1	0.002	0.0005	0.005	0.002	0.00415	0.00009	0.002	0.002	0.002	0.002	0.002	0.0772
2020 Q2	0.002	0.0005	0.005	0.002	0.00384	0.00009	0.002	0.002	0.002	0.002	0.002	0.0766
2020 Q3	0.002	0.0005	0.005	0.002	0.0114	0.00009	0.00221	0.002	0.002	0.002	0.002	0.0921
2020 Q4	0.002	0.0005	0.0232	0.002	0.0165	0.00009	0.0022	0.002	0.002	0.002	0.002	0.103
2021 Q1	0.002	0.0005	0.00595	0.002	0.0063	0.00009	0.002	0.002	0.002	0.002	0.002	0.0887
2021 Q2	0.002	0.0005	0.0203	0.002	0.0133	0.00009	0.00318	0.002	0.002	0.002	0.002	0.118
MDL	0.002	0.005	0.005	0.002	0.002	0.00009	0.002	0.002	0.002	0.002	0.002	0.002
Max Val	0.002	0.005	0.0232	0.002	0.0407	0.00015	0.00368	0.00204	0.002	0.002	0.002	0.118
Acute RP Check	No	No	No	No	No	No	No	No	No	No	No	No
Chronic RP Check	No	No	No	No	No	Yes	No	No	No	No	No	No