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FACT SHEET AND STATEMENT OF BASIS
MOAB CITY WASTEWATER TREATMENT FACILITY
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS & STORM WATER
UPDES PERMIT NUMBER: UT0020419
UPDES BIOSOLIDS PERMIT NUMBER: UTL-020419
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT NUMBER: UTR000000
MAJOR MUNICIPAL

FACILITY CONTACTS

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Facility Name:	Moab City Wastewater Treatment Facility
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DESCRIPTION OF FACILITY

The Moab Wastewater Treatment Facility (**Moab**) was originally built in the early fifties, and currently has a design capacity of 1.5 million gallons a day (MGD) after two upgrades in 1983 and in 1996. Currently, **Moab** is at approximately one-half to two-thirds its organic and hydraulic loading capacity. **Moab**'s engineers and consultants have determined that the existing wastewater treatment facility will not exceed design capacity during the lifetime of this permit. However, Moab City is currently working to finalize design plans for a new wastewater treatment facility which may include relocating the treatment plant to adjacent property. When the new treatment facility is constructed and comes on-line, this UPDES permit will be modified accordingly.

Moab's current wastewater treatment facility consists 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. This facility chlorinates to disinfect the effluent prior to discharging to the Colorado River via a 2000 foot cement pipeline. **Moab** is located at 1100 West 400 North in the city of Moab, Grand County. The latitude is 38° 34' 40", longitude 1090 34' 47" with STORET number 495655.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

1. Monitoring Frequency and Effluent Flow Limit:

   The monitoring frequencies for many parameters have changed to be more consistent with Water Quality's "Monitoring, Recording, and Reporting Guidelines". The guideline indicates that for a facility with a daily flow rate of **Moab**, they should be monitoring twice a week (2 X Weekly) for the majority of parameters. Those changes are reflected in the Permit and FSSOB.

   Consistent with the Division of Water Quality (DWQ) process and EPA policy, an effluent flow limit is included in this renewal permit.

2. Salinity Control:

   In order to bring the facility into compliance with updated salinity controls for the Colorado River Basin Salinity Control Forum, the monitoring for total dissolved solids is increased in the renewal permit. Updated salinity controls indicate a requirement for monthly monitoring. Historic results do not indicate a salinity issue at **Moab**, and the current flow is below 2 MGD. Therefore, as a compromise, the sampling will be increased from yearly to quarterly rather than monthly.

3. Technology-Based Phosphorus Effluent Limit Rule (TBPEL)

   The Division of Water Quality adopted UAC R317-1-3.3, Technology-Based Phosphorus Effluent Limit (TBPEL) Rule in 2014. The TBPEL rule as it relates to "non-lagoon" wastewater treatment plants establishes new regulations for the discharge of phosphorus to surface waters and is self-implementing. The TBPEL rule includes the following requirements for non-lagoon 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. This TBPEL shall be achieved by January 1, 2020.
   - The TBPEL discharging treatment works are required to implement, at a minimum, monthly monitoring of the following beginning July 1, 2015:
     - *R317-1-3.3.D.1,* Influent for total phosphorus (as P) and total Kjeldahl nitrogen (as N) concentrations;
     - *R317-1-3.3.D.2*, Effluent for total phosphorus and orthophosphate (as P), ammonia, nitrate-nitrite and total Kjeldahl nitrogen (an N);
     - *R317-1-3.3.D.3*, states that all monitoring shall be based on 24-hour composite samples by use of an automatic sampler or a minimum of four grab samples collected a minimum of two hours apart.

4. Compliance History and Facility Upgrades

In late 2012 and early 2013 **Moab** repeatedly violated the BOD Effluent limits of their permit. Water

Quality followed this up with a Letter of Violation (LOV) regarding the violations requiring a report on

the cause of the violations and the steps **Moab** will take to eliminate them. In response to this **Moab** evaluated every process and the entire facility.

The initial determination was that the facility was recirculating a lot of supernatant from the sludge digesters through the plant, and that the sludge age in the digesters was increasing. The efficiency of the drying beds appeared to be backing up the solids process, and was unable to keep up with the facility's loading rate. To remedy this, **Moab** investigated and temporarily installed a mechanical drying system at the facility and was able to dramatically reduce the solids in the digester. This showed a marked improvement in the facility.

While working on the initial solids issue, **Moab** sought outside assistance in evaluating the facility. The ultimate determination was that the facility was in major need of upgrades/replacement and they started the process of developing a replacement for the entire facility.

The evaluation of the solids process resulted in a determination that the digesters were no longer truly processing solids and were just acting as holding tanks. Also it was determined that the floating lid on the larger primary digester was no longer structurally safe, and should no longer be used. This resulted in **Moab** changing their solids process by using the smaller digester as a holding tank and then dewatering and landfilling several times a week and a more permanent mechanical dewatering system being installed at the facility for processing. This has contributed to a more consistent solids process and helped balance the return loading on the treatment plant.

The changes in the solids process has resulted in **Moab** no longer being able to meet 40 CFR 503 regulations for class B solids. Previously solids would meet vector attraction reduction requirements by a minimum 38% reduction in volatile solids *(40 CFR 503.33(b)(1))* through anaerobic digestion and using drying beds. The elimination of the digester means the solids can no longer be used as daily cover, and need to be disposed of in the landfill and buried. The switch from drying beds to belt press resulted in the solids being ready for disposal much more frequently, and in much smaller batches. The belt press now operates three or four times a week and directly sends the solids to a dumpster. The solids are hauled off to the landfill for burial by a local waste hauler about two or three times a week.

The evaluation of the treatment process showed that the facility was receiving a much greater loading as compared to previous years, and that the loading was going to continue to increase. The loading changes are a result of the changes in the regional tourism. The tourism season has become longer, and the number of visitors has increased. This is a pattern that will continue into the future. It was also shown that the facility receives a greater amount of hauled waste (septage) than previously thought, which will also continue to grow as tourism increases. Along with the seasonal loading changes, the year round loading has increased as the number of people living in the area has gone up.

Combine the increase in loading trends with a review of options for upgrading and expansion of the facility, and the decision to replace the facility entirely from the ground up was made. This option will allow them to complete improvements in the shortest amount of time, and cause the fewest interruptions in the treatment process for the current plant. Plans for the replacement facility are to have a design flow of 1.75 MGD with the ability to be expanded in the future. This is 0.25 MGD greater than the current design flow.

The replacement facility is being designed to meet the current permit limits, will exceed the current facility's performance, and will comply with TBPEL through chemical addition. The initial plan for the replacement facility was to use the same outfall as the old one. Since the initial plan was developed they

have looked into the possibility of relocating the outfall upstream of the current one. This would be identified as outfall 002 in the future. At this time, there has been no decision made on the possibility of relocating the outfall.

An increase in loading to a receiving stream, or an increase in design flow requires a Level II Antidegradation Review (LIIADR) before the (increased) loading can be approved. When looked at together, the increased design flow (effluent loading), and the outfall relocation for **Moab**, an ADR is required. However, since the changes will not be completed until later in the permit cycle, a LIIADR will not be addressed during this renewal. The LIIADR will be completed and the permit reopened to address the changes at a later date. This approach is reasonable and protective since the new facility will be held to the current facility permitted loading limits for the receiving stream, and will not be able to utilize the total design flow of the upgraded plant until a LIIADR has been completed and approved, and the permit is modified to include the changes needed.

Along with BOD violations, **Moab** has violated the effluent limits for E. *Coli*. To come back into compliance, **Moab** has made operational changes. In the long term, **Moab** will address the violations by switching to UV disinfection system.

The effluent violations at the facility have resulted in Water Quality issuing a Letter of Violation. The quick response by Moab and the full dedication of resources toward a long term solution of a new treatment system has proven to Water Quality that a more formal enforcement action is not warranted at this time. Moab is working to complete the project in record time (24 Months) and to do everything possible to maintain compliance during construction. Water Quality believes this approach is producing the best possible result.

The upgrades at the facility will take time, but will result in a facility that is able to more effectively treat the wastewater, resulting more consistent effluent quality. In an attempt to keep the Division up to date on the progress, the renewal permit will contain a requirement for progress reports to be submitted. This schedule will also include a construction completion date of October 1, 2021.
The Construction Schedule for **Moab** is included below;

Moab City Wastewater Treatment Facility Replacement Construction Schedule.

(1) By January 1, 2017: **Moab** shall submit a plan and detailed schedule for facility upgrades to DWQ.

(2) Semi - Annually: Submit progress report to DWQ on the previous six months, outlining the status of facility upgrades, including actions taken to investigate and/or remedy any significant effluent violations, major milestones and construction schedule updates. This report shall cover six month periods from October 1st and April 1st and be due by the first day of the following month.

(3) By October 1, 2021: **Moab** shall complete construction of wastewater treatment upgrades.

DISCHARGE

DESCRIPTION OF DISCHARGE
Moab has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 3 years of data is included in Attachment 2 of this FSSOB.

During previous permit cycles, WET failures have resulted in commencement of accelerated testing to determine if a Pattern of Toxicity existed. The accelerated testing resulted in no confirmation of toxicity in the effluent. The same is true for the last permit cycle. The one failure in Winter Quarter of 2014 was followed up by accelerated testing which failed to indicate toxicity, after which **Moab** resumed regular WET testing as directed by the permit.

Outfall	Description of Discharge Point
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 1 -- Protected for use as a raw water source for domestic water systems.
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 (BOD_5), E. coli, pH and percent removal for BOD_5 and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2.* The oil and grease is based on best professional judgment (BPJ).

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 entitled "NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards" (Policy), with the most current version dated October 2014, 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
Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required

As a result of the initial screen for RP, no quantitative RP analysis was required for any metals to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. A copy of the initial RP screening analysis is included at the end of this Fact Sheet.

The permit limitations are

Parameter	Effluent Limitations *a				
	Monthly Avg	Weekly Avg	Yearly Average	Minimum	Maximum
Total Flow, MGD	1.5	--	--	--	--
BOD_5, mg/L BOD_5 Min. % Removal	25 85	35 --	-- --	-- --	-- --
TSS, mg/L TSS Min. % Removal	25 85	35 --	-- --	-- --	-- --
TRC, mg/L	1.4	1.55	--	--	--
E-Coli, No./100mL	126	157	--	--	--
WET, Acute Biomonitoring	--	--	--	--	LC_{50}>100 % effluent
Oil & Grease, mg/L	--	--	--	--	10.0
pH, Standard Units	--	--	--	6.5	9
TDS, mg/L *j	<400 Increase	--	--	--	--

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following are the self-monitoring requirements for the renewal permit. Monitoring for parameters associated with UCA R317-1-3.3(Technology-based Phosphorus Effluent Limits rule) have been added or modified. The permit will require reports to be submitted monthly and annually, as applicable, on Net DMR or 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 *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b, *c	Continuous	Recorder	MGD
BOD_5, Influent *d Effluent	2 X Weekly 2 X Weekly	Composite Composite	mg/L mg/L
TSS, Influent *d Effluent	2 X Weekly 2 X Weekly	Composite Composite	mg/L mg/L
E. Coli	2 X Weekly	Grab	No./100mL
pH	2 X Weekly	Grab	SU
WET Acute Biomonitoring *h	Quarterly	Composite	Pass/Fail
TRC, mg/L	Daily	Grab	mg/L
Oil & Grease *f (When Sheen Observed)	Monthly	Grab	mg/L
Total Ammonia (as N) *k	Monthly	Composite	mg/L
Orthophosphate, (as P) *k Effluent	Monthly	Composite	mg/L
Phosphorus, Total *k Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Total Kjeldahl Nitrogen, TKN (as N) *k Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Nitrate, NO3 *k	Monthly	Composite	mg/L
Nitrite, NO2 *k	Monthly	Composite	mg/L
TDS, mg/L *j Effluent Source Water	 Monthly Monthly	 Grab Grab	 mg/L mg/L
Metals, Influent Effluent	Quarterly Quarterly	Composite Composite	mg/L mg/L
Organic Toxics	Odd Calendar Years	Composite/Grab	mg/L

*a See Definitions, *Part VIII*, for definition of terms.

*b 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.

*c If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

*d 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.

*f Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report NA.

*h Ceriodaphnia will be tested during the 1st and 3rd quarters and fathead minnows will be tested during the 2nd and 4th quarters.

*j The effluent shall not exceed the culinary source water by more than 400 mg/L of TDS.

*k These reflect changes and additions required with the adoption of UCA R317-1-3.3, 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

A review of the solids process and facility in 2013 determined that the facility was recirculating a lot of supernatant from the sludge digesters through the plant, and that the sludge age in the digesters was increasing. The efficiency of the drying beds appeared to be backing up the solids process, and was unable to keep up with the facility loading rate.

The initial remedy to this was the temporarily installation of a mechanical dewatering system and to start dramatically reducing the solids in the digester, which showed a marked improvement in the facility.

Further investigation of the solids process resulted in a determination that the digesters were no longer truly processing solids and were just acting as holding tanks. Also it was determined that the floating lid on the larger primary digester was no longer structurally safe, and should not be used. This resulted in a complete overhaul of their solids process to using the smaller digester as a holding tank and then dewatering and landfilling solids several times a week. This has contributed to a more consistent solids process and helped balance the return loading on the treatment plant.

The changes in the solids process has resulted in **Moab** no longer being able to meet 40 CFR 503 regulations for class B solids. Previously solids would meet vector attraction reduction requirements by a minimum 38% reduction in volatile solids *(40 CFR 503.33(b)(1))* through anaerobic digestion and using drying beds. The elimination of the digester means the solids can no longer be used as daily cover, but need to be disposed of in the landfill and buried. The switch from drying beds to belt press resulted in the solids being ready for disposal much more frequently, and in much smaller batches. The belt press is now operated three or four times a week and directly sent the solids to a dumpster. The solids are hauled off to the landfill for burial by a local waste hauler about two or three times a week.

DESCRIPTION OF TREATMENT AND DISPOSAL

The biosolids at **Moab** were stabilized in the anaerobic digesters with a hydraulic average retention time of 30 days and an estimated average temperature of 95° F (35° C). Once a week the biosolids are drawn

off the bottom of the primary digester and sent to the secondary digester that serves as a holding tank. The biosolids from the secondary digester are wasted to the drying beds. The typical drying time is 3 to 4 months depending on the weather. In 2013 **Moab** added a mechanical dewatering system to the process, and in 2014 the primary digester was removed from service. Currently the solids from the primary clarifier are transferred to the smaller secondary digester which is used as a holding tank.

From the smaller digester the solids are sent to a belt press for dewatering and stored in a dumpster until it can be hauled off to the Klondike Bluffs Landfill by Bob's Sanitation for burial. The Permittee submitted their 2015 annual biosolids report on June 27, 2016. The report states the Permittee produced 807 dry metric tons (DMT) of solids.

The last inspection conducted at **Moab** was August 5, 2015. The inspection showed that **Moab** was in compliance with the biosolids management program.

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

In 2015, **Moab** disposed of 807 DMT of biosolids; therefore they need to sample at least four times a year. However, **Moab** is not required to monitor for heavy metals or pathogens if the biosolids are disposed of in a landfill.

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 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 and 3, 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 it must meet at all times:

> The maximum heavy metals listed in *40 CFR Part 503.13(b) Table 1* and the heavy metals loading rates in *40 CFR Part 503.13(b) Table 2*; or
>
> The maximum heavy metals in *40 CFR Part 503.13(b) Table 1* and the monthly heavy metals concentrations in *40 CFR Part 503.13(b) Table 3*.

Tables 1, 2, and 3 of Heavy Metal Limitations

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits, (mg/kg)	CPLR[1], (mg/ha)	Pollutant Conc. Limits, (mg/kg)	APLR[2], (mg/ha-yr)
Total Arsenic	75	41	41	41
Total Cadmium	85	39	39	39
Total Copper	4300	1500	1500	1500
Total Lead	840	300	300	300
Total Mercury	57	17	17	17
Total Molybdenum	75	N/A	N/A	N/A
Total Nickel	420	420	420	420
Total Selenium	100	100	100	100
Total Zinc	7500	2800	2800	2800

[1] CPLR -- Cumulative Pollutant Loading Rate
[2] APLR – Annual Pollutant Loading Rate

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	
Class A	Class B
B Salmonella species –less than three (3) MPN[3] per four (4) grams total solids (or less than 1,000 fecal coliforms per gram total solids)	Fecal Coliforms –less than 2,000,000 colony forming units (CFU) per gram total solids
Enteric viruses –less than one (1) MPN (or plaque forming unit) per four (4) grams total solids	
Viable helminth ova –less than one (1) MPN per four (4) grams total solids	

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 not intend to give away biosolids for land application on home lawns or gardens, and will therefore not be required to meet PFRP. If the permittee changes their intentions in the future, they will need to meet a specific PFRP, 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

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). In the past **Moab** has accomplished PSRP through the following methods:

1. Under *40 CFR 503.32 (b)(2)*, **Moab** may test the biosolids and must meet a microbiological limit of less than 2,000,000 MPN of fecal coliform per gram for the biosolids to be considered Class B biosolids with respect to pathogens.

[3] MPN –Most Probable Number

2. Under *40 CFR 503.32 (b)(3)* The PSRP may be accomplished through anaerobic digesters that have a minimum retention time of 15 days at 95° F (35° C) or 60 days at 68° F (20°C).

Moab does not intend to land apply the biosolids and will therefore not be required to meet PSRP. If the permittee intends to land apply in the future, they will need to meet a specific PSRP, 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.

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.* In the past **Moab** met the vector attraction reduction requirements through the methods listed below.

1. Under *40 CFR 503.33(b)(1),* the solids need to be treated through anaerobic digestion for at least 15 days at a temperature of a least 35° C (95° F) with a 38% reduction of volatile solids.

If the biosolids do not meet a method of VAR, the biosolids cannot be land applied.

Moab does not intend to land apply the biosolids and will therefore not be required to meet VAR. If the permittee intends to land apply in the future, they need to meet 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 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

Moab is not required to monitor for heavy metals or pathogens if the biosolids are disposed of in a landfill. Therefore, there is not any monitoring data for heavy metals or pathogens.

STORM WATER

STORMWATER REQUIREMENTS
Storm water provisions are included in this combined UPDES permit.

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). All sections of the MSGP

that pertain to discharges from wastewater treatment plants have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include:

1. The development of a pollution prevention team:
2. Development of drainage maps and materials stockpiles:
3. An inventory of exposed materials:
4. Spill reporting and response procedures:
5. A preventative maintenance program:
6. Employee training:
7. Certification that storm water discharges are not mixed with non-storm water discharges:
8. Compliance site evaluations and potential pollutant source identification, and:
9. Visual examinations of storm water discharges.

Moab is currently covered under the UPDES Multi Sector General Permit for Industrial Activities.

PRETREATMENT REQUIREMENTS

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

Although the permittee does not have to develop a State-approved pretreatment program, any wastewater discharges to the sanitary sewer are subject to Federal, State and local regulations. Pursuant to Section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in 40 CFR 403 and the State Pretreatment Requirements found in UAC R317-8-8.

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

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

BIOMONITORING REQUIREMENTS

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

The permittee is a 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. Moab has failed some initial WET tests, but no pattern of toxicity has been shown. 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
Jennifer Robinson, Pretreatment
Michael George, Storm Water
Mike Herkimer, Whole Effluent Toxicity
Ken Hoffman, Reasonable Potential Analysis
Nick von Stackelberg, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: Month Day, Year
Ended: Month Day, Year

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 (NEWSPAPER OF RECORD FOR AREA).

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.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes they were not considered Major and the permit is not required to be re Public Noticed.

Responsiveness Summary

(Explain any comments received and response sent. Actual letters can be referenced, but not required to be included).

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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
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. [ ] Domestic wastes (Restrooms, employee showers, etc.)
2. [ ] Cooling water, non-contact
3. [ ] Boiler/Tower blowdown
4. [ ] Cooling water, contact
5. [ ] Process
6. [ ] Equipment/Facility washdown
7. [ ] Air Pollution Control Unit
8. [ ] Storm water runoff to sewer
9. [ ] Other describe

Wastes are discharged to (check all that apply):

[ ] Sanitary sewer [ ] Storm sewer
[ ] Surface water [ ] Ground water
[ ] Waste haulers [ ] Evaporation
[ ] 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:

[ ] Adhesives
[ ] Aluminum Forming
[ ] Battery Manufacturing
[ ] Copper Forming
[ ] Electric & Electronic Components
[ ] Explosives Manufacturing
[ ] Foundries
[ ] Inorganic Chemicals Mfg. or Packaging
[ ] Industrial Porcelain Ceramic Manufacturing
[ ] Iron & Steel
[ ] Metal Finishing, Coating or Cleaning
[ ] Mining
[ ] Nonferrous Metals Manufacturing
[ ] Organic Chemicals Manufacturing or Packaging
[ ] Paint & Ink Manufacturing
[ ] Pesticides Formulating or Packaging
[ ] Petroleum Refining
[ ] Pharmaceuticals Manufacturing or Packaging
[ ] Plastics Manufacturing
[ ] Rubber Manufacturing
[ ] Soaps & Detergents Manufacturing
[ ] Steam Electric Generation
[ ] Tanning Animal Skins
[ ] Textile Mills

[ ] Car Wash
[ ] Carpet Cleaner
[ ] Dairy
[ ] Food Processor
[ ] Hospital
[ ] Laundries
[ ] Photo Lab
[ ] Restaurant & Food Service
[ ] Septage Hauler
[ ] Slaughter House

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.

Month	Flow, MGD		E. coli		TRC		pH		O&G	BOD5, mg/L		TSS, mg/L	
	Ave	Max	Ave	Max	mg/L	mg/L	Min	Max	mg/L	Ave	Max	Ave	Max
Limit	1.5		126	157	1.4	1.55	6.5	9	10	25	35	25	35
Jan-12	0.80		2	9	1.1	1.50	7.7	7.8	NA	26	30	19	21
Feb-12	0.82		1	2	1.1	1.50	7.6	7.8	NA	26	29	18	19
Mar-12	0.97		2	4	0.9	1.60	7.6	7.8	NA	29	52	15	18
Apr-12	1.07		1	3	0.8	1.50	7.5	7.8	NA	18	22	16	17
May-12	1.08		5	7	0.8	1.50	7.4	7.7	NA	17	20	18	21
Jun-12	1.06		43	2400	0.4	1.60	7.3	7.6	NA	25	30	20	24
Jul-12	1.03		427	2400	0.7	1.60	7.3	7.5	NA	26	29	16	16
Aug-12	1.03		466	3100	0.9	1.60	7.3	7.6	NA	18	20	15	16
Sep-12	1.01		257	2400	1.0	1.60	7.3	7.6	NA	26	29	17	20
Oct-12	1.02		6	16	1.1	1.60	7.5	7.7	NA	22	24	21	25
Nov-12	0.90		16	2400	1.1	1.60	7.5	7.7	NA	34	54	17	19
Dec-12	0.84		3	16	1.1	1.60	7.6	7.8	NA	30	43	15	19
Jan-13	0.90		19	2400	1.2	1.60	7.7	7.9	NA	28	45	9	10
Feb-13	0.83		1	2	1.3	1.60	7.7	7.9	NA	30	36	14	18
Mar-13	0.97		1	1	1.1	1.60	7.5	7.8	NA	36	39	21	26
Apr-13	1.03		58	2400	1.1	1.60	7.5	7.7	NA	28	40	21	30
May-13	1.09		2	6	1.1	1.60	7.3	7.7	NA	29	36	20	22
Jun-13	1.04		18	76	0.9	1.60	7.3	7.5	NA	26	34	18	20
Jul-13	1.04		18	76	0.9	1.60	7.3	7.5	NA	26	34	18	20
Aug-13	1.04		11	34	0.8	1.60	7.2	7.5	NA	27	34	17	20
Sep-13	1.02		10	2400	0.8	1.60	7.3	7.6	NA	22	24	18	20
Oct-13	0.97		2	6	0.9	1.60	7.4	7.7	NA	24	26	20	22
Nov-13	0.89		2	5	1.0	1.60	7.6	7.8	NA	26	32	20	22
Dec-13	0.82		1	1	1.3	1.60	7.6	7.8	NA	29	34	15	21
Jan-14	0.79		1	2	0.8	1.60	7.6	7.8	NA	31	48	16	18
Feb-14	0.80		1	2	1.1	1.60	7.5	7.8	NA	42	56	14	17
Mar-14	0.96		2	9	0.4	1.60	7.6	7.8	NA	35	45	17	22
Apr-14	1.05		2	3	1	1.60	7.4	7.8	NA	24	30	14	22
May-14	1.06		2	3	1	1.60	7	7.8	NA	31	42	14	16
Jun-14	1.10		8	11	0.7	1.60	7.3	7.7	0	25	33	15	16
Jul-14	1.12		84	2400	0.6	1.60	7.3	7.6	7	32	40	22	28
Aug-14	1.09		5	190	0.7	1.50	6.8	7.5	5	27	34	19	20
Sep-14	1.09		4	56	0.8	1.50	7.3	7.6	6	26	42	29	51
Oct-14	1.07		12	27	1	1.50	7.5	7.7	19	27	32	20	24
Nov-14	0.93		3	10	1	1.50	7.6	7.8	7	34	54	21	29
Dec-14	0.84		2	5	1.3	1.50	7.6	7.7	0	25	36	14	22
Jan-15	0.82		1	5	1.3	1.50	7.4	7.7	6	12	15	16	19
Feb-15	0.83		1	1	1.3	1.50	7.4	7.7	9	25	32	35	56
Mar-15	0.99		2	9	1.2	1.50	7.3	7.6	9	27	33	20	22
Apr-15	1.06		11	49	1.1	1.50	7.4	7.8	5	32	40	19	24
May-15	1.09		11	2400	1.2	1.50	7.2	7.8	5	22	26	12	16
Jul-15	1.11		13	580	1.4	1.50	7.3	7.7	5	38	43	28	33
Aug-15	1.05		165	2400	1.1	1.50	7.4	7.6	6	38	49	29	36
Sep-15	1.07		15	84	1.1	1.50	7.5	8.3	5	28	35	21	26
Oct-15	1.04		102	2400	0.6	1.50	7.2	7.9	5	19	20	24	28
Nov-15	0.92		36	330	1.3	1.50	7.2	7.7	5	26	30	26	31

WET Results

Quarter	WET TEST	Result
Spring 2011	48Hr Acute Ceriodaphnia	PASS
Summer 2011	96Hr Acute Pimephales Promelas	PASS
Fall 2011	48Hr Acute Ceriodaphnia	PASS
Winter 2012	96Hr Acute Pimephales Promelas	PASS
Spring 2012	48Hr Acute Ceriodaphnia	PASS
Summer 2012	96Hr Acute Pimephales Promelas	PASS
Fall 2012	48Hr Acute Ceriodaphnia	PASS
Winter 2013	96Hr Acute Pimephales Promelas	PASS
Spring 2013	48Hr Acute Ceriodaphnia	PASS
Summer 2013	96Hr Acute Pimephales Promelas	PASS
Fall 2013	48Hr Acute Ceriodaphnia	PASS
Winter 2014	96Hr Acute Pimephales Promelas	FAIL
Spring 2014	48Hr Acute Ceriodaphnia	PASS
Summer 2014	96Hr Acute Pimephales Promelas	PASS
Fall 2014	48Hr Acute Ceriodaphnia	PASS
Winter 2015	96Hr Acute Pimephales Promelas	NA
Spring 2015	48Hr Acute Ceriodaphnia	
Summer 2015	96Hr Acute Pimephales Promelas	PASS

Solids, total dissolved			
Month	Source	EFF	Increase
Dec-11	152	464	312
Dec-12	128	360	232
Dec-13	128	312	184
Dec-14	336	380	44
Dec-15	145	388	243

Metals, Effluent												
Month	Cyanide	Arsenic	Cadmium	Chromium	Copper	Lead	Molybdenum	Nickel	Silver	Zinc	Selenium	Mercury
Mar-11	0.0221	0.00079	ND	ND	0.0276	0.00065	ND	0.00614	0.000823	0.0733	ND	ND
Jun-11	0.0203	0.00083	ND	ND	0.304	0.00054	ND	0.00713	0.000463	0.0813	0.00111	ND
Sep-11	0.0229	0.00090	ND	ND	0.0216	0.00063	ND	0.00551	ND	0.0584	0.00107	ND
Dec-11	0.0127	0.00080	ND	ND	0.0243	0.00061	ND	0.00434	ND	0.0643	0.00082	ND
Mar-12	0.0217	0.00111	ND	ND	0.0215	0.00073	ND	0.00421	ND	0.0709	0.00090	ND
Jun-12	ND	0.00099	ND	ND	0.0344	0.00068	0.0332	0.00425	ND	0.0676	0.0011	ND
Sep-12	0.0189	ND	ND	ND	0.0163	ND	ND	ND	ND	0.0486	ND	ND
Dec-12	0.0191	ND	ND	ND	0.0186	ND	ND	ND	ND	0.0605	ND	ND
Mar-13	0.0185	ND	ND	ND	0.0306	ND	0.00277	0.00234	ND	0.092	ND	ND
Jun-13	0.0226	ND	ND	ND	0.0199	ND	ND	ND	ND	0.0566	ND	ND
Sep-13	0.0266	ND	ND	ND	0.0187	ND	0.00227	ND	ND	0.0525	ND	ND
Dec-13	0.0232	ND	ND	ND	0.0349	ND	0.00251	0.00226	ND	0.0637	ND	ND
Mar-14	0.0093	ND	ND	ND	0.0324	ND	0.00261	0.00471	ND	0.084	ND	ND
Jun-14	0.0086	ND	ND	ND	0.0235	ND	0.00264	ND	ND	0.0762	ND	ND
Sep-14	0.042	0.0008	ND	0.0007	0.0179	0.0005	0.0023	0.0041	ND	0.04	0.0014	ND
Dec-14	0.006	0.0008	ND	0.0011	0.0182	0.0005	0.0023	0.0037	ND	0.08	0.0014	ND
Mar-15	0.004	0.001	ND	0.0012	0.0193	0.0006	0.0026	0.0034	ND	0.07	0.0014	ND
Jun-15	0.0227	ND	ND	ND	0.0196	ND	0.00226	ND	ND	0.0791	ND	ND
Sep-15	ND	ND	ND	ND	0.0167	ND	0.00235	ND	ND	0.0461	ND	ND
Dec-15	0.0102	ND	ND	ND	0.0163	ND	ND	ND	ND	0.051	ND	ND
Mar-16	0.0145	ND	ND	ND	0.018	ND	0.00222	0.00227	ND	0.0529	ND	ND
ND Value	0.0221	0.00079	ND	ND	0.0276	0.00065	ND	0.00614	0.000823	0.0733	ND	ND

Metals, Influent												
Month	Cyanide	Arsenic	Cadmium	Chromium	Copper	Lead	Molybdenum	Nickel	Silver	Zinc	Selenium	Mercury
Jun-11	ND	0.00120	ND	ND	0.0569	0.02360	0.00726	0.00726	ND	0.198	0.00263	ND
Sep-11	ND	0.00090	0.00021	ND	0.0012	ND	0.00632	0.00632	ND	0.122	0.00188	ND
Dec-11	ND	0.00146	ND	ND	0.0469	0.00136	ND	0.00796	ND	0.108	0.00156	ND
Mar-12	ND	0.00115	ND	ND	0.0408	0.00216	ND	0.00446	ND	0.122	0.00171	ND
Jun-12	0.0227	0.00141	0.00019	ND	0.0608	0.00173	0.0399	0.00462	0.00066	0.144	0.00136	0.00016
Sep-12	ND	ND	ND	ND	0.0163	ND	0.00255	0.00209	ND	0.12	ND	ND
Dec-12	ND	ND	ND	ND	0.0261	ND	ND	ND	ND	0.103	ND	ND
Mar-13	ND	ND	ND	ND	0.0302	ND	0.00264	ND	ND	0.085	ND	ND
Jun-13	0.0055	ND	ND	ND	ND	ND	ND	ND	ND	0.0796	ND	NA
Sep-13	ND	ND	ND	ND	0.0363	ND	0.00278	0.00254	ND	0.151	ND	0.00015
Dec-13	ND	ND	ND	ND	ND	0.0027	0.00244	ND	0.0738	ND	ND	0.0289
Mar-14	0.0116	ND	ND	ND	0.0393	ND	0.00286	0.00424	ND	0.0877	ND	ND
Jun-14	ND	ND	ND	ND	0.0452	0.00514	0.00514	ND	ND	0.73	ND	ND
Sep-14	ND	0.0009	ND	0.0014	0.0263	0.0006	0.0028	0.0046	ND	0.07	0.0015	ND
Dec-14	ND	0.0009	ND	0.0018	0.0345	0.0012	0.0024	0.004	ND	0.22	0.0016	ND
Mar-15	ND	0.0012	0.0002	0.0025	0.0347	0.0012	0.0031	0.0043	ND	0.13	0.0016	ND
Jun-15	ND	ND	ND	ND	0.0405	ND	0.00293	ND	ND	0.148	ND	ND
Sep-15	ND	ND	ND	ND	0.0247	ND	0.0026	ND	ND	0.0754	ND	ND
Dec-15	ND	ND	ND	ND	0.0344	ND	0.0026	0.00252	ND	0.119	0.002	ND
Mar-16	ND	ND	ND	0.00253	0.0443	0.00276	0.00332	0.0039	ND	0.148	0.002	ND
ND Value	0.005	0.002	0.0005	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.00015

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 Analysis[4]. 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 any of the metals is not needed. A copy of the initial screening is included in the "Effluent Metals and RP Screening Results" table in this attachment.

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at some of the metals is not needed.

[4] See Reasonable Potential Analysis Guidance for definitions of terms

Metals Monitoring and RP Check

Effluent												
Metal	Cyanide	Arsenic	Cadnium	Chromium	Copper	Lead	Molybdenum	Nickel	Silver	Zinc	Selenium	Mercury
ARP	0.131	11.012	0.0348	0.668	1.666	0.66		10.344		23.123	0.0046	0.000301
CRP	0.525	9.535	0.181	0.369	1.108	3.579		36.517	0.711	8.726	0.0184	0.0673
Metals, mg/L	0.0145	ND	ND	ND	0.018	ND	0.00222	0.00227	ND	0.0529	ND	ND
	0.0102	ND	ND	ND	0.0163	ND	ND	ND	ND	0.051	ND	ND
	ND	ND	ND	ND	0.0167	ND	0.00235	ND	ND	0.0461	ND	ND
	0.0227	ND	ND	ND	0.0196	ND	0.00226	ND	ND	0.0791	ND	ND
	0.004	0.001	ND	0.0012	0.0193	0.0006	0.0026	0.0034	ND	0.07	0.0014	ND
	0.006	0.0008	ND	0.0011	0.0182	0.0005	0.0023	0.0037	ND	0.08	0.0014	ND
	0.042	0.0008	ND	0.0007	0.0179	0.0005	0.0023	0.0041	ND	0.04	0.0014	ND
	0.0086	ND	ND	ND	0.0235	ND	0.00264	ND	ND	0.0762	ND	ND
	0.0093	ND	ND	ND	0.0324	ND	0.00261	0.00471	ND	0.084	ND	ND
	0.0232	ND	ND	ND	0.0349	ND	0.00251	0.00226	ND	0.0637	ND	ND
	0.0266	ND	ND	ND	0.0187	ND	0.00227	ND	ND	0.0525	ND	ND
	0.0226	ND	ND	ND	0.0199	ND	ND	ND	ND	0.0566	ND	ND
	0.0185	ND	ND	ND	0.0306	ND	0.00277	0.00234	ND	0.092	ND	ND
	0.0191	ND	ND	ND	0.0186	ND	ND	ND	ND	0.0605	ND	ND
	0.0189	ND	ND	ND	0.0163	ND	ND	ND	ND	0.0486	ND	ND
	ND	0.00099	ND	ND	0.0344	0.00068	0.0332	0.00425	ND	0.0676	0.0011	ND
	0.0217	0.00111	ND	ND	0.0215	0.00073	ND	0.00421	ND	0.0709	0.00090	ND
	0.0127	0.00080	ND	ND	0.0243	0.00061	ND	0.00434	ND	0.0643	0.00082	ND
	0.0229	0.00090	ND	ND	0.0216	0.00063	ND	0.00551	ND	0.0584	0.00107	ND
	0.0203	0.00083	ND	ND	0.304	0.00054	ND	0.00713	0.00046	0.0813	0.00111	ND
ND	0.005	0.002	0.0005	0.002	0.002	0.002	0.002	0.002	0.005	0.002	0.002	0.00015
Max	0.643	0.002	0.0005	0.002	0.304	0.002	0.0332	0.00713	0.005	0.11	0.002	0.00015
A RP	No	No	No	No	No	No	No	No	No	No	No	No
C RP	No	No	No	No	No	No	No	No	No	No	No	No