

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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Industrial Permit No. **UT0024767**

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

**WEIR MINERALS NA SLC – RUBBER ENGINEERING**

is hereby authorized to discharge from its facility to receiving waters named **SOUTH SALT LAKE CITY STORM DRAIN THEN TO MILL CREEK (TRIBUTARY TO THE JORDAN RIVER),**

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

This permit shall become effective on August 1, 2019

This permit expires at midnight on July 31, 2024.

Signed this 8<sup>th</sup> day of July, 2019.



Erica Brown Gaddis, PhD  
Director

DWQ-2019-002395

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**I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS**

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

<u>Outfall Number</u>	<u>Location of Discharge Outfall</u>
001	Located at latitude 40°41'48" and longitude 111°54'40". Discharge point is to a storm water inlet structure located in the west parking lot.
002	Located at latitude 40°41'46" and longitude 111°54'36". Discharge point is to a floor drain located inside the facility near the autoclaves.

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

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from the permitted Outfalls. Such discharges shall be limited and monitored by the permittee as specified below:

**Outfall 001**

Parameter	Effluent Limitations a/			
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD <sub>5</sub> , mg/L	25	35	--	--
TSS, mg/L	25	35	--	--
TDS, mg/L	1200	--	--	--
Oil & Grease, mg/L	--	--	--	10
pH, Standard Units	--	--	6.5	9
Dissolved Oxygen, mg/L	--	--	4.5	--

**Outfall 002**

Parameter	Effluent Limitations a/	
	Daily Maximum	Monthly Average
Oil & Grease, lbs/day	5.75	2.05
TSS, lbs/day	10.96	5.48

**Outfall 001**

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Weekly	Instantaneous	gpd
Temperature	Weekly	Grab	° F
Dissolved Oxygen	Monthly	Grab	mg/L
BOD <sub>5</sub>	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
Oil & Grease	Monthly	Grab	mg/L
pH	Monthly	Grab	SU
Total Lead	2/year	Grab	mg/L
Total Zinc	2/year	Grab	mg/L
Total Copper	2/year	Grab	mg/L
Total Phosphorous	2/year	Grab	mg/L

**Outfall 002**

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Weekly	Recorder	gpd
TSS	Monthly	Grab	mg/L
Oil & Grease	Monthly	Grab	mg/L

\*a See Permit, *Part VI*, 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.

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

2. Samples taken in compliance with the monitoring requirements specified above shall be taken at Outfall 001 and Outfall 002 prior to mixing with the receiving waters.

**D. Reporting of Monitoring Results.**

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1)\* or by NetDMR, post-marked or entered into NetDMR no later than the 28<sup>th</sup> day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (Part V.G)*, and submitted by NetDMR, or to the Division of Water Quality at the following address:

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

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

**II. STORM WATER REQUIREMENTS.**

I. Coverage of This Section.

- a. Discharges Covered Under This Section. The requirements listed under this section shall apply to all storm water discharges associated with industrial activity from rubber and miscellaneous plastic products manufacturing facilities (SIC major group 30) and miscellaneous manufacturing industries, except jewelry, silverware, and plated ware (SIC major group 39, except 391).
- b. Co-Located Industrial Activity. When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Special Conditions.

- a. Prohibition of Non-storm Water Discharges. Other than as provided in *Part I.A.* of this permit, non-storm water discharges are not authorized by this section.

3. Storm Water Pollution Prevention Plan Requirements.

- a. Contents of Plan. The plan shall include, at a minimum, the following items:
  - 1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.
  - 2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials which may potentially be significant pollutant sources. All rubber manufacturers shall in particular review the use of zinc at their facilities and the possible pathways through which zinc may be discharged in storm water runoff. Each plan shall include, at a minimum:

a) Drainage.

- (1) A site map indicating an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are

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exposed to precipitation, locations where major spills or leaks identified under paragraph 3.a.(2)(c) (Spills and Leaks) of this section have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas and storage areas. The map must indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls.

- (2) For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants which are likely to be present in storm water discharges associated with industrial activity. Factors to consider include the toxicity of a chemical; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.
- b) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of the submission of a *Notice of Intent (NOI)* to be covered under this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of a *Notice of Intent (NOI)* to be covered under this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.
- c) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of the submission of a *Notice of Intent (NOI)* to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.
- d) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
- e) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, etc.) of concern shall be identified.

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- 3) Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:
- a) Good Housekeeping. Good housekeeping requires the maintenance of areas which may contribute pollutants to storm water discharges in a clean, orderly manner.
  - b) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.
  - c) Spill Prevention and Response Procedures. Areas where potential spills which can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean-up should be available to personnel.
  - d) Inspections. In addition to or as part of the comprehensive site evaluation required under paragraph 3.a.(4) of this section, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the plan. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.
  - e) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.
  - f) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.
  - g) Non-storm Water Discharges.
    - (1) Certification. The plan shall include a certification that the discharge

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has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part V.G.* of this permit. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution prevention plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the *Director* in accordance with paragraph *3.a.3)g)(3)* of this section (Failure to Certify, below).

- (2) Exceptions. Except for flows from firefighting activities, sources of non-storm water listed in *Part 2.a.* (Prohibition of Non-storm Water Discharges) of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
  - (3) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the *Director* within 180 days after submitting a notice of intent to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State which are not authorized by a *UPDES* permit are unlawful and must be terminated.
- h) Sediment and Erosion Control. The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.
  - i) Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph *3.a.(2)* of

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this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures or other equivalent measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.

- 4) Special Requirements for All Rubber Products Manufacturers. All rubber products manufacturing facilities shall include specific measures and controls to minimize the discharge of zinc in their storm water discharges. The following possible sources of zinc shall be reviewed and the accompanying *BMPs* shall be included as appropriate in the storm water pollution prevention plan:
  - a) Inadequate Housekeeping. All permittees shall review the handling and storage of zinc bags at their facilities and consider the following *BMPs* for the pollution prevention plan: employee training regarding the handling and storage of zinc bags, indoor storage of zinc bags, thorough cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.
  - b) Zinc in Dumpsters. The following *BMPs* or equivalent measures shall be considered to reduce discharges of zinc from dumpsters: providing a cover for the dumpster; move the dumpster to an indoors location; or provide a lining for the dumpster.
  - c) Malfunctioning Dust Collectors or Baghouses. Permittees shall review dust collectors and baghouses as possible sources in zinc in storm water runoff. Improperly operating dust collectors or baghouses shall be replaced or repaired as appropriate. The pollution prevention plan shall also provide for regular maintenance of these facilities.
  - d) Grinding Operations. Permittees shall review dust generation from rubber grinding operations at their facility and, as appropriate, install a dust collection system.
  - e) Zinc Stearate Coating Operations. Permittees shall include in the pollution prevention plan appropriate measures to prevent and/or clean up drips or spills of zinc stearate slurry which may be released to the storm drain. Alternate compounds to zinc stearate shall also be considered.
- b. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations once a year. Such evaluations shall provide:
  - 1) Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

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- 2) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph 3.a.(2) of this section (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the plan in accordance with paragraph 3.a.(3) of this section (Measures and Controls) shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.
  - 3) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph 3.a.(4)(b) (above) of this section shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part V.G.* (Signatory Requirements) of this permit.
  - 4) Where compliance evaluation schedules overlap with inspections required under 3.a.(3)(d), the compliance evaluation may be conducted in place of one such inspection.
4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part I.C.* of this permit.
  5. Monitoring and Reporting Requirements.
    - a. Analytical Monitoring Requirements. During the first and third year of the permit, permittees with rubber product manufacturing facilities must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 1 and 3 except as provided in paragraphs 5.a.(3) (Sampling Waiver), 5.a.(4) (Representative Discharge), and 5.a.(5) (Alternative Certification). Rubber product manufacturing facilities are required to monitor their storm water discharges for the pollutants of concern listed in Table Y-1 below. Facilities must report in accordance with 5.b. (Reporting). In addition to the parameters listed in Table Y-1 below, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

**Table Y-1**  
**Monitoring Requirements**

Pollutants of Concern	Benchmark Cut-Off Concentration
Total Recoverable Zinc	0.09 mg/L

- 1) Monitoring Periods. Rubber product manufacturing facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph a. (above).

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- 2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.
  
- 3) Sampling Water.
  - a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit the data along with data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).
  
  - b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the first year monitoring period is less than the corresponding value for that pollutant listed in Table Y-1 under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements in the third year monitoring period. The facility must submit to the *Director*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.
  
  - c) Inactive and Unstaffed Site. When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The facility must submit to the *Director*, in lieu of monitoring data, a certification statement on the *Storm Water Discharge Monitoring Report (SWDMR)* stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.
  
- 4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also

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applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the *SWDMR*.

- 5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall or on a pollutant-by-pollutant basis, in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part V.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.E.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.
- b. Reporting. Permittees with rubber product manufacturing facilities shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections (3), (4), or (5) above] obtained during the first year reporting period, on *SWDMR* form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections (3), (4), or (5) above] obtained during the third year reporting period shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Director* per storm event sampled. Signed copies of *SWDMRs*, or said certifications, shall be submitted to the *Director* at the address listed in *Part I.D.* of this permit.
  - 1) Additional Notification. In addition to filing copies of *SWDMRs* in accordance with paragraph *b.* (above), rubber product manufacturing facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).
- c. Quarterly Visual Examination of Storm Water Quality. Facilities shall perform and document a visual examination of a representative storm water discharge associated with industrial from each outfall, except discharges exempted below. The examination must be made at least once in each designated period [described in (1), below] during daylight

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hours unless there is insufficient rainfall or snow melt to produce a runoff event.

- 1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water quality associated with storm water runoff or snow melt: January through March; April through June; July through September; and October through December.
- 2) Sample and Data Collection. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Whenever practicable the same individual will carry out the collection and examination of discharges for the life of the permit.
- 3) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
- 4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the observation data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.
- 5) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examination. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).
- 6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility

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may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

**III. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS**

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

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

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3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

#### IV. COMPLIANCE RESPONSIBILITIES

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

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

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

H. Upset Conditions.

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

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

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

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

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2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - a. Five hundred micrograms per liter (500 ug/L);
  - b. One milligram per liter (1 mg/L) for antimony;
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
  - d. The level established by the Director in accordance with *UAC R317-8-4.2(6)*.
  
- K. Industrial Pretreatment. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters. In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

**V. GENERAL REQUIREMENTS**

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

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having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

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

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

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

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2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
  3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510 of the Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
  2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
  3. Revisions to the current CWA § 208 area wide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Toxicity Limitation - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include WET testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.
- Q. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".

## VI. DEFINITIONS

### A. Wastewater.

1. The "7-day (and weekly) average", other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. "Act," means the *Utah Water Quality Act*.
4. "Bypass," means the diversion of waste streams from any portion of a treatment facility.
5. "CWA," means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
6. "Daily Maximum" (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
7. "EPA," means the United States Environmental Protection Agency.
8. "Director," means Director of the Division of Water Quality.
9. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.
10. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
11. "Severe Property Damage," means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

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12. "Upset," means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**B. Storm Water.**

1. "Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. "NOI" means "notice of intent", it is an application form that is used to obtain coverage under the General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity.
3. "NOT" means "notice of termination", it is a form used to terminate coverage under the General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity.
4. "Point source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
5. "Section 313 water priority chemical" means a chemical or chemical categories that:
  - a. Are listed at *40 CFR 372.65* pursuant to *Section 313* of the *Emergency Planning and Community Right-to-Know Act (EPCRA)* (also known as *Title III of the Superfund Amendments and Reauthorization Act (SARA)* of 1986);
  - b. Are present at or above threshold levels at a facility subject to *EPCRA Section 313* reporting requirements; and
  - c. Meet at least one of the following criteria:
    - (1) Are listed in *Appendix D* of *40 CFR Part 122* on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);
    - (2) Are listed as a hazardous substance pursuant to *Section 311(b)(2)(A)* of the *CWA* at *40 CFR 116.4*; or
    - (3) Are pollutants for which EPA has published acute or chronic water quality criteria. See *Appendix III* of this permit. This appendix was revised based on final rulemaking EPA published in the *Federal Register* November 30, 1994.

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6. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *CERCLA*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.
7. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311 of the Clean Water Act* (see *40 CFR 110.10* and *CFR 117.21*) or *Section 102 of CERCLA* (see *40 CFR 302.4*).
8. "Storm water" means storm water runoff, snowmelt runoff, and surface runoff and drainage.
9. "SWDMR" means "storm water discharge monitoring report", a report of the results of storm water monitoring required by the permit. The Division of Water Quality provides the storm water discharge monitoring report form.
10. "Storm water associated with industrial activity" (*UAC R317-8-3.8(6)(c) & (d)*) means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the *UPDES* program. For the categories of industries identified in paragraphs *(a)* through *(j)* of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined in *40 CFR Part 401*); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph *(k)* of this definition, the term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs *(a)* to *(k)* of this definition) include those facilities designated under *UAC R317-8-3.8(1)(a)5*. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

**PART VI**  
**DISCHARGE PERMIT NO. UT0024767**

- a. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under *40 CFR Subchapter N* (except facilities with toxic pollutant effluent standards that are exempted under category (k) of this definition);
- b. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;
- c. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under *40 CFR 434.11(l)* because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations that have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but that have an identifiable owner/operator;
- d. Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;
- e. Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under *Subtitle D* of RCRA;
- f. Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;
- g. Steam electric power generating facilities, including coal handling sites;
- h. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45 and 5171 that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified under paragraphs (a) to (g) or (l) to (k) of this subsection are associated with industrial activity;
- i. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under *40 CFR Part 403*. Not included are farm lands, domestic gardens or lands used for sludge

**PART VI**  
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management where sludge is beneficially reused and that are not physically located in the confines of the facility, or areas that are in compliance with *40 CFR Part 503*;

- j. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than 5 acres of total land area that are not part of a larger common plan of development or sale;
  - k. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and that are not otherwise included within categories (a) to (j))
11. "Waste pile" means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

**FACT SHEET STATEMENT OF BASIS  
WEIR MINERALS NORTH AMERICA SLC - RUBBER ENGINEERING  
RENEWAL PERMIT: DISCHARGE & STORM WATER  
UPDES PERMIT NUMBER: UT0024767  
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT PROVISIONS  
MINOR INDUSTRIAL FACILITY**

**FACILITY CONTACTS**

Person Name:	Al Haley
Position:	EHS Manager
Facility Name:	Weir Minerals NA SLC - Rubber Engineering
Mailing Address:	3459 South 700 West Salt Lake City, Utah 84119
Telephone:	801-574-2189

**DESCRIPTION OF FACILITY**

Weir Minerals NA SLC-Rubber Engineering (WMRE) is a molded rubber products manufacturer located at 3459 South 700 West in Salt Lake City, Utah with Standard Industrial Classification Code 3069 for rubber manufacturing. The WMRE manufacturing plant is approximately 50 years old and processes 11,000 - 13,700 pounds of rubber products per day on average. The discharge from the WMRE facility consists of storm water and both contact and non-contact cooling water. Contact water and non-contact cooling water are used to control temperature in the manufacturing of rubber products.

**SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

Changes include the addition of zinc, copper, phosphorus, total dissolved solids, and dissolved oxygen as monitoring requirements for Outfall 001 to address additional parameters of concern (POCs) identified in the development of this renewal permit. The additional POCs included are listed as impairments in the Jordan River Total Maximum Daily Load Water Quality Study-Phase I, which was completed in July 2013 (TMDL). Upon successful monitoring for all POCs during this next permit cycle, WMRE may request a reduction to the monitoring frequency for consideration by the permitting authority. Another change from the previous permit is the inclusion of applicable storm water permit provisions as described further in the Storm Water section of this fact sheet.

**DISCHARGE INFORMATION**

**DESCRIPTION OF DISCHARGE**

The WMRE plant (plant) uses municipal water to maintain constant temperatures (usually

warmer than ambient to increase the malleable characteristics of rubber) while manufacturing rubber parts. Some rubber parts are heated with the intent to cure, in pressurized autoclaves with steam (contact water) during which some of the steam condenses and is discharged. After the curing process is completed, contact water is used to cool the rubber parts in the autoclave before it is opened. Non-contact water flows through the jackets enveloping processes (warming rubber) while shaping it in presses, extruders, and mills. About 8,000 gallons per day (gpd) of contact cooling water is used in the autoclaves, which then flows through a discharge point (Outfall 002). The non-contact process water portion of the flow is approximately 100,000 gpd and flows through a separate discharge point (outfall 001).

All discharges from the plant are to the on-site storm water collection system, which connects to the South Salt Lake City storm drain inlet on the west side of the plant building near the front street entrance off 700 West. There is a manhole at this discharge point labeled Outfall 001. This is considered the primary discharge point for the plant and is where Utah Secondary Treatment Standards are applied (Outfall 001). A second sampling point (Outfall 002) is an intermediate discharge point (upstream from Outfall 001) located in the interior of the plant and consists of water condensed from the autoclaves where steam is used under pressure to cure rubber parts. Categorical standards from section 40 *Code of Federal Regulations (CFR) 428.62* applies at this discharge. The applicable standards are discussed further in a subsequent section of this fact sheet.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40°41'48" and longitude 111°54'40". The discharge point is to a storm water inlet structure located in the west parking lot.
002	Located at latitude 40°41'46" and longitude 111°54'36". The discharge point is to a Floor drain located inside the facility near the autoclaves.

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

The final effluent discharges into a South Salt Lake City Storm Drain (Outfall 001), which flows into Mill Creek, which flows to the Jordan River. Mill Creek from the confluence of the Jordan River to Interstate 15 is classified as 2B, 3C, and 4 according to Utah Administrative Code (UAC) R317-2-13:

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

### **BASIS FOR EFFLUENT LIMITATIONS**

Limitations on total suspended solids (TSS), biological oxygen demand (BOD<sub>5</sub>), and pH at Outfall 001 are based on current Utah Secondary Treatment Standards, found in *Utah Administrative Code (UAC) R317-1-3.2*. The Oil and Grease limit is the same as in the previous

permit and is based on best professional judgment (BPJ) of the permitting authority to be consistent with other industrial facilities statewide. The total dissolved solids (TDS) limitation is based upon Utah Water Quality Standards found in *UAC R317-2-14*, as well as the aforementioned TMDL, to be protective of the agricultural beneficial uses of the receiving waters as designated. The limitation on dissolved oxygen is also based upon Utah Water Quality Standards, more specifically the Wasteload Analysis which is described further in a latter section of this fact sheet.

Limitations at Outfall 002 are based on applicable technology standards for the Rubber Manufacturing Point Source Category found in *40 CFR 428.62*. The categorical standards are mass loading limits based on the production rate. A medium sized rubber plant processes between 8,200 lbs/day (2.95 million lbs/yr, operating 360 days/yr) and 23,000 lbs/day (8.28 million lbs/year, operating 360 days/yr) of raw materials. WMRE currently operates at 11,000 – 13,700 lbs/day and is therefore, considered medium sized for calculating effluent loading limitations for both TSS and Oil & Grease as appropriate (see Outfall 002 Effluent Limitations table).

Effluent flow limitations were not included in this renewal permit once again because the parameters for Outfall 001 are based on secondary treatment standards or water quality based standards where the concentration is not dependent on flow, or in the case of Outfall 002, have mass loading limitations derived from production based categorical standards. Effluent Flow from each outfall will continue to be measured and reported for monitoring purposes.

In addition to the POCs included as identified in the development of this renewal permit, *E-coli* and O/E bioassessment are also listed in the aforementioned TMDL as impairments, but based upon BPJ of the permitting authority have not been included in this permit renewal as monitoring requirements. This is primarily because WMRE utilizes culinary water for the cooling processes, in which the presence of *E-coli* or bacteria colonies would be unlikely to exist.

### **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.

RP analysis was performed for the previous parameters of concern (Zinc & Lead) from discharge data over the past five years. Initial screening for these metals values that were submitted through both the discharge monitoring reports and the permit renewal application information showed that a closer look at of these metals is not needed since all of the Zinc and Lead results were significantly below the applicable water quality standards. Therefore, no RP currently exists at WMRE for these metals and a further RP analysis was not necessary at this time. Additional POCs were included in this permit renewal for monitoring and future RP analysis. The results of the RP analysis was; Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit. A copy of the RP analysis summary is included as an addendum to this Fact Sheet.

A priority pollutant scan that was previously completed by WMRE in 2013, as well as extensive chemical testing again in 2018, showed either very low concentrations or non-detectable concentrations for all priority pollutants. The discharge from WMRE has a greater than 20 to 1 dilution factor with the receiving water of Mill Creek and therefore, has a low potential of causing a violation of water quality standards downstream. WMRE should be able to continue complying with the applicable permit limitations as follows:

**Outfall 001**

Parameter	Effluent Limitations a/			
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD <sub>5</sub> , mg/L	25	35	--	--
TSS, mg/L	25	35	--	--
TDS, mg/L	1200	--	--	--
Oil & Grease, mg/L	--	--	--	10
pH, Standard Units	--	--	6.5	9
Dissolved Oxygen, mg/L	--	--	4.5	--

**Outfall 002**

Parameter	Effluent Limitations a/	
	Daily Maximum	Monthly Average
Oil & Grease, lbs/day	5.75	2.05
TSS, lbs/day	10.96	5.48

**SELF-MONITORING AND REPORTING REQUIREMENTS**

The following self-monitoring requirements are similar as in the previous permit with the inclusion of the additional POCs for monitoring from Outfall 001 as described previously. 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 electronically using NetDMR unless the permittee has successfully petitioned for an exception.

**Outfall 001**

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Weekly	Instantaneous	gpd
Temperature	Weekly	Grab	° F
Dissolved Oxygen	Monthly	Grab	mg/L
BOD <sub>5</sub>	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
Oil & Grease	Monthly	Grab	mg/L
pH	Monthly	Grab	SU
Total Lead	2/year	Grab	mg/L
Total Zinc	2/year	Grab	mg/L
Total Copper	2/year	Grab	mg/L
Total Phosphorous	2/year	Grab	mg/L

**Outfall 002**

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Weekly	Recorder	gpd
TSS	Monthly	Grab	mg/L
Oil & Grease	Monthly	Grab	mg/L

- \*a See Permit, *Part VI*, 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.

**WASTELOAD ANALYSIS AND ANTIDEGRADATION REVIEW**

Effluent limitations may also be derived using a Wasteload Analysis (WLA). The WLA incorporated Secondary Treatment Standards, Water Quality Standards, Antidegradation

Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During the UPDES renewal development, a WLA and ADR were performed. An ADR Level I review was performed and concluded that an ADR Level II review was not required. The WLA indicates that the effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters.

### **STORMWATER REQUIREMENTS**

WMRE has been previously covered under a separate UPDES Multi Sector General Permit (MSGP) for Industrial Activities, with UPDES permit coverage number UTR266797. However, WMRE has requested to include the MSGP requirements into this UPDES discharge permit renewal to obviate the need to separate permit coverage. Therefore the permitting authority has combined the applicable MSGP storm water provisions (Sector Y) with the UPDES waste water discharge provisions as requested. This is consistent with other similar type permitted facilities and helps to streamline the UPDES permit universe statewide.

Storm water provisions are hereby included in this combined UPDES permit and are based on the UPDES Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity, Sector Y, General Permit No. UTR000000. All sections of the MSGP that pertain to discharges from the industrial facility have been included (Sector Y) 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.

Once this renewal permit has been issued, WMRE will need to submit a Notice of Termination request form to DWQ for obviating their previous MSGP coverage number UTR266797 as appropriate.

### **PRETREATMENT REQUIREMENTS**

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as

a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste. In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if the permittee discharges any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

### **BIOMONITORING REQUIREMENTS**

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

The permittee is minor industrial facility that discharges storm water and cooling water from the manufacturing process, in which previous initial biomonitoring indicated the absence of toxicity. The WMRE facility has not changed their processes since the initial biomonitoring testing, therefore the potential for toxicity in their discharge remains minimal. Based on these considerations, there is no reasonable potential for toxicity in the permittee's discharge (per *UPDES Permitting and Enforcement Guidance Document for WET Control*). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

### **PERMIT DURATION**

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

Drafted and Reviewed by  
Jeff Studenka, Discharge  
Lonnie Shull, Biomonitoring  
Michael George, Storm Water  
Jennifer Robinson, Pretreatment  
Sandy Wingert, Watershed/TMDL  
Dave Wham, Wasteload Analysis & ADR  
Utah Division of Water Quality, (801) 536-4300

**PUBLIC NOTICE INFORMATION (Updated June 17, 2019)**

Began: May 9, 2019  
Ended: June 10, 2019

The Public Notice of the draft permit was published in the Salt Lake Tribune and Deseret News.

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

**ADDENDUM TO FSSOB**

ATTACHMENTS: 1. Wasteload Analysis  
2. Reasonable Potential Analysis

DWQ-2019-002396

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# **ATTACHMENT 1**

## *Wasteload Analysis*

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

**Date:** April 9, 2019  
**Prepared by:** Dave Wham   
Standards and Technical Services  
**Facility:** Weir Minerals, UPDES Permit No. UT0024767  
**Receiving water:** Mill Creek (2B, 3C, 4)

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

Discharge

001 Combined discharge to storm drain. .12 MGD

Receiving Water

Per UAC R317-2-13.5(a), the designated beneficial uses of Mill Creek (Salt Lake County) from confluence with Jordan River to Interstate 15 are 2B, 3C, 4.

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

The critical background flow for the wasteload analysis is considered the lowest stream flow for seven consecutive days with a ten year return frequency (7Q10). Daily flow records were obtained for Salt Lake County flow gage 490 Mill Creek at 460 West for the period 1979-2012. The 7Q10 critical flow was calculated using the EPA computer software DFLOW V3.1b (Table 1).

Utah Division of Water Quality  
Wasteload Analysis  
Weir Minerals  
UPDES Permit No. UT0024767

**Table 1: Mill Creek critical low flow (7Q10)**

Season	Flow (cfs)
Summer	9.5
Fall	6.4
Winter	7.6
Spring	14.0

Receiving water quality was characterized using data from DWQ Monitoring Station # 4992505, MILL CK. AB CENTRAL VALLEY WWTP OUTFALL, for the period 2006-2016.

TMDL

According to the Utah's 2016 303(d) Water Quality Assessment Report, the receiving water for the discharge, (AU UT16020204-004) is listed as impaired for E. coli, O/E bioassessment, and TDS. Additional impairments are present in downstream stream segments as outlined in Table 2.

**Table 2. Jordan River Segments and Impairments Downstream of Discharge.**

Segment (moving downstream)	Assessment Unit	Impairment Cause
Jordan River from North Temple to 2100 South	AU UT16020204-003	E. coli, O/E bioassessment, dissolved oxygen, and phosphorous
Jordan River from Davis County line upstream to North Temple Street	AU UT16020204-002	TDS, E. coli, O/E, dissolved oxygen
Jordan River from Farmington Bay upstream contiguous with the Davis County line	AU UT16020204-001	TDS, E. coli, O/E, copper, dissolved oxygen

The Jordan River Total Maximum Daily Load Water Quality Study - Phase I, which addressed the dissolved oxygen impairment in Jordan River segments assessments Units UT16020204-001 through 003, was completed in July 2013 (UDWQ, 2013). A TMDL has not been completed for the other impaired constituents.

Although the WLA may show higher allowed effluent limits for these impaired constituents in Table 1 should be evaluated in the effluent against the end of pipe Water Quality Standards in Table 2 to determine whether or not they have reasonable potential to cause or contribute to the existing impairments.

**Table 2. End of pipe Criteria**

Constituent	Criteria
TDS	1200 mg/l
Copper	28.35 ug/l (chronic)
E. coli	Secondary standards
O/E	N/A
Total phosphorous	N/A

#### Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and for chronic conditions, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone. The mixing zone model showed complete mixing within 2,500 feet for chronic conditions. Acute limits were calculated using 50% of the seasonal critical low flow.

#### Parameters of Concern

The potential parameters of concern identified for the discharge were TDS, E. coli, and copper as determined by the impairment status of the receiving water and review of the previous permit.

#### WET Limits

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

IC25 WET limits for Outfall 002 should be based on 1.9 % effluent.

#### Wasteload Allocation Methods

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

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

Models and supporting documentation are available for review upon request.

#### Antidegradation Level I Review

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

Utah Division of Water Quality  
Wasteload Analysis  
Weir Minerals  
UPDES Permit No. UT0024767

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

Documents:

WLA Document: *WeirMinerals\_WLADoc\_4-9-19.docx*

Wasteload Analysis and Addendums: *WeirMinerals\_WLA\_4-9-19.xlsm*

References:

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

Utah Division of Water Quality. 2013, *Jordan River Total Maximum Daily Load Water Quality Study - Phase I*

Utah Division of Water Quality  
Salt Lake City, Utah

WASTELOAD ANALYSIS [WLA]  
Addendum: Statement of Basis

9-Apr-19

Facilities: Weir Minerals  
Discharging to: Storm Drain =>Mill Creek  
Design Flow: 0.12 MGD

UPDES No: UT-0024767

I. Introduction

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

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

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

II. Receiving Water and Stream Classification

Storm Drain =>Mill Creek: 2B, 3C, 4  
Antidegradation Review: Level I review completed. Level II review not required.

III. Numeric Stream Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average) 0.019 mg/l (1 Hour Average)
Chronic Dissolved Oxygen (DO)	5.50 mg/l (30 Day Average) 4.00 mg/l (7Day Average) 3.00 mg/l (1 Day Average)
Maximum Total Dissolved Solids	1200.0 mg/l

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

**Acute and Chronic Heavy Metals (Dissolved)**

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration	ug/l	Load*
Aluminum	87.00 ug/l**	0.087 lbs/day	750.00	ug/l	0.752 lbs/day
Arsenic	190.00 ug/l	0.190 lbs/day	340.00	ug/l	0.341 lbs/day
Cadmium	2.48 ug/l	0.002 lbs/day	6.97	ug/l	0.007 lbs/day
Chromium III	267.17 ug/l	0.268 lbs/day	5589.64	ug/l	5.604 lbs/day
Chromium VI	11.00 ug/l	0.011 lbs/day	16.00	ug/l	0.016 lbs/day
Copper	30.37 ug/l	0.030 lbs/day	51.45	ug/l	0.052 lbs/day
Iron			1000.00	ug/l	1.003 lbs/day
Lead	18.47 ug/l	0.019 lbs/day	473.91	ug/l	0.475 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.002 lbs/day
Nickel	167.86 ug/l	0.168 lbs/day	1509.77	ug/l	1.514 lbs/day
Selenium	4.60 ug/l	0.005 lbs/day	20.00	ug/l	0.020 lbs/day
Silver	N/A ug/l	N/A lbs/day	40.73	ug/l	0.041 lbs/day
Zinc	386.25 ug/l	0.387 lbs/day	386.25	ug/l	0.387 lbs/day

\* Allowed below discharge

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

Metals Standards Based upon a Hardness of 398.08 mg/l as CaCO3

**Organics [Pesticides]**

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration	ug/l	Load*
Aldrin			1.500	ug/l	0.002 lbs/day
Chlordane	0.004 ug/l	0.224 lbs/day	1.200	ug/l	0.001 lbs/day
DDT, DDE	0.001 ug/l	0.052 lbs/day	0.550	ug/l	0.001 lbs/day
Dieldrin	0.002 ug/l	0.099 lbs/day	1.250	ug/l	0.001 lbs/day
Endosulfan	0.056 ug/l	2.924 lbs/day	0.110	ug/l	0.000 lbs/day
Endrin	0.002 ug/l	0.120 lbs/day	0.090	ug/l	0.000 lbs/day
Guthion			0.010	ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.198 lbs/day	0.260	ug/l	0.000 lbs/day
Lindane	0.080 ug/l	4.176 lbs/day	1.000	ug/l	0.001 lbs/day
Methoxychlor			0.030	ug/l	0.000 lbs/day
Mirex			0.010	ug/l	0.000 lbs/day
Parathion			0.040	ug/l	0.000 lbs/day
PCB's	0.014 ug/l	0.731 lbs/day	2.000	ug/l	0.002 lbs/day
Pentachlorophenol	13.00 ug/l	678.673 lbs/day	20.000	ug/l	0.020 lbs/day
Toxephene	0.0002 ug/l	0.010 lbs/day	0.7300	ug/l	0.001 lbs/day

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**IV. Numeric Stream Standards for Protection of Agriculture**

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	0.01 lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			1200.0 mg/l	0.60 tons/day

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

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

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

	Maximum Conc., ug/l - Acute Standards			
	Class 1C [2 Liters/Day for 70 Kg Person over 70 Yr.]		Class 3A, 3B [6.5 g for 70 Kg Person over 70 Yr.]	
<b>Toxic Organics</b>				
Acenaphthene	ug/l	lbs/day	2700.0 ug/l	140.96 lbs/day
Acrolein	ug/l	lbs/day	780.0 ug/l	40.72 lbs/day
Acrylonitrile	ug/l	lbs/day	0.7 ug/l	0.03 lbs/day
Benzene	ug/l	lbs/day	71.0 ug/l	3.71 lbs/day
Benzidine	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Carbon tetrachloride	ug/l	lbs/day	4.4 ug/l	0.23 lbs/day
Chlorobenzene	ug/l	lbs/day	21000.0 ug/l	1096.32 lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Dichloroethane	ug/l	lbs/day	99.0 ug/l	5.17 lbs/day

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1,1,1-Trichloroethane				
Hexachloroethane	ug/l	lbs/day	8.9 ug/l	0.46 lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	ug/l	lbs/day	42.0 ug/l	2.19 lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day	11.0 ug/l	0.57 lbs/day
Chloroethane			0.0 ug/l	0.00 lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	1.4 ug/l	0.07 lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2-Chloronaphthalene	ug/l	lbs/day	4300.0 ug/l	224.48 lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	6.5 ug/l	0.34 lbs/day
p-Chloro-m-cresol			0.0 ug/l	0.00 lbs/day
Chloroform (HM)	ug/l	lbs/day	470.0 ug/l	24.54 lbs/day
2-Chlorophenol	ug/l	lbs/day	400.0 ug/l	20.88 lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	17000.0 ug/l	887.50 lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	135.73 lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	135.73 lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	0.1 ug/l	0.00 lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	3.2 ug/l	0.17 lbs/day
1,2-trans-Dichloroethylene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	790.0 ug/l	41.24 lbs/day
1,2-Dichloropropane	ug/l	lbs/day	39.0 ug/l	2.04 lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	1700.0 ug/l	88.75 lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	2300.0 ug/l	120.07 lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	9.1 ug/l	0.48 lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	0.5 ug/l	0.03 lbs/day
Ethylbenzene	ug/l	lbs/day	29000.0 ug/l	1513.96 lbs/day
Fluoranthene	ug/l	lbs/day	370.0 ug/l	19.32 lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) ether	ug/l	lbs/day	170000.0 ug/l	8874.95 lbs/day
Bis(2-chloroethoxy) methane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methylene chloride (HM)	ug/l	lbs/day	1600.0 ug/l	83.53 lbs/day
Methyl chloride (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methyl bromide (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Bromoform (HM)	ug/l	lbs/day	360.0 ug/l	18.79 lbs/day
Dichlorobromomethane	ug/l	lbs/day	22.0 ug/l	1.15 lbs/day
Chlorodibromomethane	ug/l	lbs/day	34.0 ug/l	1.77 lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	50.0 ug/l	2.61 lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day	17000.0 ug/l	887.50 lbs/day
Isophorone	ug/l	lbs/day	600.0 ug/l	31.32 lbs/day
Naphthalene				
Nitrobenzene	ug/l	lbs/day	1900.0 ug/l	99.19 lbs/day
2-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	14000.0 ug/l	730.88 lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	765.0 ug/l	39.94 lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	8.1 ug/l	0.42 lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	16.0 ug/l	0.84 lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day	1.4 ug/l	0.07 lbs/day
Pentachlorophenol	ug/l	lbs/day	8.2 ug/l	0.43 lbs/day

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Phenol	ug/l	lbs/day	4.6E+06 ug/l	2.40E+05 lbs/day
Bis(2-ethylhexyl)phthala	ug/l	lbs/day	5.9 ug/l	0.31 lbs/day
Butyl benzyl phthalate	ug/l	lbs/day	5200.0 ug/l	271.47 lbs/day
Di-n-butyl phthalate	ug/l	lbs/day	12000.0 ug/l	626.47 lbs/day
Di-n-octyl phthlate				
Diethyl phthalate	ug/l	lbs/day	120000.0 ug/l	6264.67 lbs/day
Dimethyl phthlate	ug/l	lbs/day	2.9E+06 ug/l	1.51E+05 lbs/day
Benzo(a)anthracene (P)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(b)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Benzo(k)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Chrysene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dibenzo(a,h)anthracene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Indeno(1,2,3-cd)pyrene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Pyrene (PAH)	ug/l	lbs/day	11000.0 ug/l	574.26 lbs/day
Tetrachloroethylene	ug/l	lbs/day	8.9 ug/l	0.46 lbs/day
Toluene	ug/l	lbs/day	200000 ug/l	10441.12 lbs/day
Trichloroethylene	ug/l	lbs/day	81.0 ug/l	4.23 lbs/day
Vinyl chloride	ug/l	lbs/day	525.0 ug/l	27.41 lbs/day
				lbs/day
				lbs/day
<b>Pesticides</b>				
Aldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dieldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Chlordane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDT	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDE	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDD	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
alpha-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.10 lbs/day
beta-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.10 lbs/day
Endosulfan sulfate	ug/l	lbs/day	2.0 ug/l	0.10 lbs/day
Endrin	ug/l	lbs/day	0.8 ug/l	0.04 lbs/day
Endrin aldehyde	ug/l	lbs/day	0.8 ug/l	0.04 lbs/day
Heptachlor	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Heptachlor epoxide				
<b>PCB's</b>				
PCB 1242 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1254 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1221 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1232 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1248 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1260 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1016 (Arochlor 101	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
<b>Pesticide</b>				
Toxaphene	ug/l		0.0 ug/l	0.00 lbs/day
<b>Dioxin</b>				
Dioxin (2,3,7,8-TCDD)	ug/l	lbs/day		

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**Metals**

Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	224.48 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	11485.23 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.01 lbs/day
Nickel			4600.00 ug/l	240.15 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			6.30 ug/l	0.33 lbs/day
Zinc				

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

**VII. Mathematical Modeling of Stream Quality**

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

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

- (1) The Utah River Model, Utah Division of Water Quality, 1992. Based upon STREAMDO IV (Region VIII) and Supplemental Ammonia Toxicity Models; EPA Region VIII, Sept. 1990 and QUAL2E (EPA, Athens, GA).
- (2) Utah Ammonia/Chlorine Model, Utah Division of Water Quality, 1992.
- (3) AMMTOX Model, University of Colorado, Center of Limnology, and EPA Region 8
- (4) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al. Harper Collins Publisher, Inc. 1987, pp. 644.

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

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

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

**VIII. Modeling Information**

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

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

**Other Conditions**

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

**Model Inputs**

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

**Current Upstream Information**

	Stream								
	Critical Low								
	Flow	Temp.	pH	T-NH3	BOD5	DO	TRC	TDS	
	cfs	Deg. C		mg/l as N	mg/l	mg/l	mg/l	mg/l	
Summer (Irrig. Season)	9.50	18.5	7.9	0.01	1.00	7.20	0.00	0.0	
Fall	6.40	7.3	7.9	0.01	1.00	---	0.00	0.0	
Winter	7.60	8.2	7.8	0.01	1.00	---	0.00	0.0	
Spring	14.00	12.1	7.9	0.01	1.00	---	0.00	0.0	
Dissolved Metals	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb	
All Seasons	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
	0.43	3.50	0.14	2.24	3.975*	2.01	0.9	0.23	
Dissolved Metals	Hg	Ni	Se	Ag	Zn	Boron			
All Seasons	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			
	0.0000	0.22	1.71	0.02	14.60	123.0			

\* ~80% MDL

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**Projected Discharge Information**

Season	Flow, MGD	Temp.
Summer	0.12000	26.2
Fall	0.12000	18.3
Winter	0.12000	18.4
Spring	0.12000	20.1

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

**IX. Effluent Limitations**

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

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

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

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

Season	Daily Average	
Summer	0.120 MGD	0.186 cfs
Fall	0.120 MGD	0.186 cfs
Winter	0.120 MGD	0.186 cfs
Spring	0.120 MGD	0.186 cfs

**Flow Requirement or Loading Requirement**

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.12 MGD. If the discharger is allowed to have a flow greater than 0.12 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

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

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

WET Requirements	LC50 >	100.0% Effluent	[Acute]
	IC25 >	1.9% Effluent	[Chronic]

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

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

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

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

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

Season	Concentration
Summer	4.50
Fall	4.50
Winter	4.50
Spring	4.50

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

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

Season		Concentration	Load
Summer	4 Day Avg. - Chronic	115.51 mg/l as N	115.6 lbs/day
	1 Hour Avg. - Acute	190.5 mg/l as N	190.6 lbs/day
Fall	4 Day Avg. - Chronic	216.7 mg/l as N	216.8 lbs/day
	1 Hour Avg. - Acute	270.2 mg/l as N	270.4 lbs/day
Winter	4 Day Avg. - Chronic	135.2 mg/l as N	135.3 lbs/day
	1 Hour Avg. - Acute	181.3 mg/l as N	181.4 lbs/day
Spring	4 Day Avg. - Chronic	100.5 mg/l as N	100.6 lbs/day
	1 Hour Avg. - Acute	128.3 mg/l as N	128.4 lbs/day

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 50. %.

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**Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards**

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

Season		Concentration		Load	
Summer	4 Day Avg. - Chronic	0.522	mg/l	0.52	lbs/day
	1 Hour Avg. - Acute	0.479	mg/l	0.48	lbs/day
Fall	4 Day Avg. - Chronic	0.355	mg/l	0.36	lbs/day
	1 Hour Avg. - Acute	0.329	mg/l	0.33	lbs/day
Winter	4 Day Avg. - Chronic	0.420	mg/l	0.42	lbs/day
	1 Hour Avg. - Acute	0.387	mg/l	0.39	lbs/day
Spring	4 Day Avg. - Chronic	0.764	mg/l	0.76	lbs/day
	1 Hour Avg. - Acute	0.696	mg/l	0.70	lbs/day

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

Season		Concentration		Load	
Summer	Maximum, Acute	62609.2	mg/l	31.32	tons/day
Fall	Maximum, Acute	62609.2	mg/l	31.32	tons/day
Winter	Maximum, Acute	62609.2	mg/l	31.32	tons/day
Spring	Maximum, Acute	62609.2	mg/l	31.32	tons/day

Colorado Salinity Forum Limits                      Determined by Permitting Section

**Effluent Limitations for Total Recoverable Metals based upon Water Quality Standards**

In-stream criteria of downstream segments for Dissolved Metals will be met with an effluent limitation as follows (based upon a hardness of 398.08 mg/l):

	4 Day Average		1 Hour Average		Load
	Concentration	Load	Concentration	Load	
Aluminum*	N/A	N/A	19,929.4	ug/l	20.0 lbs/day
Arsenic*	9,734.01 ug/l	6.3 lbs/day	8,950.1	ug/l	9.0 lbs/day
Cadmium	122.40 ug/l	0.1 lbs/day	181.6	ug/l	0.2 lbs/day
Chromium III	13,824.60 ug/l	8.9 lbs/day	148,555.3	ug/l	148.9 lbs/day
Chromium VI*	370.50 ug/l	0.2 lbs/day	323.7	ug/l	0.3 lbs/day
Copper	1,481.90 ug/l	1.0 lbs/day	1,316.5	ug/l	1.3 lbs/day
Iron*	N/A	N/A	26,564.9	ug/l	26.6 lbs/day
Lead	951.76 ug/l	0.6 lbs/day	12,594.0	ug/l	12.6 lbs/day
Mercury*	0.63 ug/l	0.0 lbs/day	63.8	ug/l	0.1 lbs/day
Nickel	8,746.56 ug/l	5.7 lbs/day	40,134.8	ug/l	40.2 lbs/day
Selenium*	152.49 ug/l	0.1 lbs/day	488.0	ug/l	0.5 lbs/day
Silver	N/A ug/l	N/A lbs/day	1,082.5	ug/l	1.1 lbs/day

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Zinc	19,405.37 ug/l	12.6 lbs/day	9,895.8	ug/l	9.9 lbs/day
Cyanide*	271.31 ug/l	0.2 lbs/day	584.9	ug/l	0.6 lbs/day

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

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

Summer	227.2 Deg. C.	441.0 Deg. F
Fall	149.2 Deg. C.	300.6 Deg. F
Winter	176.0 Deg. C.	348.7 Deg. F
Spring	317.8 Deg. C.	604.0 Deg. F

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

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

	<b>4 Day Average</b>		<b>1 Hour Average</b>		
	<b>Concentration</b>	<b>Load</b>	<b>Concentration</b>		<b>Load</b>
Aldrin			1.5E+00	ug/l	2.33E-03 lbs/day
Chlordane	4.30E-03 ug/l	4.30E-03 lbs/day	1.2E+00	ug/l	1.86E-03 lbs/day
DDT, DDE	1.00E-03 ug/l	1.00E-03 lbs/day	5.5E-01	ug/l	8.53E-04 lbs/day
Dieldrin	1.90E-03 ug/l	1.90E-03 lbs/day	1.3E+00	ug/l	1.94E-03 lbs/day
Endosulfan	5.60E-02 ug/l	5.60E-02 lbs/day	1.1E-01	ug/l	1.71E-04 lbs/day
Endrin	2.30E-03 ug/l	2.30E-03 lbs/day	9.0E-02	ug/l	1.40E-04 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.55E-05 lbs/day
Heptachlor	3.80E-03 ug/l	3.80E-03 lbs/day	2.6E-01	ug/l	4.03E-04 lbs/day
Lindane	8.00E-02 ug/l	8.00E-02 lbs/day	1.0E+00	ug/l	1.55E-03 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	4.65E-05 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	1.55E-05 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	6.20E-05 lbs/day
PCB's	1.40E-02 ug/l	1.40E-02 lbs/day	2.0E+00	ug/l	3.10E-03 lbs/day
Pentachlorophenol	1.30E+01 ug/l	1.30E+01 lbs/day	2.0E+01	ug/l	3.10E-02 lbs/day
Toxephene	2.00E-04 ug/l	2.00E-04 lbs/day	7.3E-01	ug/l	1.13E-03 lbs/day

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

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

	<b>1 Hour Average</b>	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	5.0 lbs/day
Nitrates as N	4.0 mg/l	4.0 lbs/day
Total Phosphorus as P	0.05 mg/l	0.1 lbs/day
Total Suspended Solids	90.0 mg/l	90.2 lbs/day

Note: Pollution indicator targets are for information purposes only

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

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

	<b>Maximum Concentration</b>	
	Concentration	Load
<b>Toxic Organics</b>		
Acenaphthene	1.41E+05 ug/l	1.41E+02 lbs/day
Acrolein	4.07E+04 ug/l	4.07E+01 lbs/day
Acrylonitrile	3.44E+01 ug/l	3.45E-02 lbs/day
Benzene	3.70E+03 ug/l	3.71E+00 lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	2.30E+02 ug/l	2.30E-01 lbs/day
Chlorobenzene	1.10E+06 ug/l	1.10E+03 lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	4.02E-02 ug/l	4.02E-05 lbs/day
1,2-Dichloroethane	5.17E+03 ug/l	5.17E+00 lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	4.64E+02 ug/l	4.65E-01 lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	2.19E+03 ug/l	2.19E+00 lbs/day
1,1,2,2-Tetrachloroethane	5.74E+02 ug/l	5.74E-01 lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	7.30E+01 ug/l	7.31E-02 lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	2.24E+05 ug/l	2.24E+02 lbs/day
2,4,6-Trichlorophenol	3.39E+02 ug/l	3.39E-01 lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	2.45E+04 ug/l	2.45E+01 lbs/day
2-Chlorophenol	2.09E+04 ug/l	2.09E+01 lbs/day
1,2-Dichlorobenzene	8.87E+05 ug/l	8.87E+02 lbs/day
1,3-Dichlorobenzene	1.36E+05 ug/l	1.36E+02 lbs/day

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1,4-Dichlorobenzene	1.36E+05 ug/l	1.36E+02 lbs/day
3,3'-Dichlorobenzidine	4.02E+00 ug/l	4.02E-03 lbs/day
1,1-Dichloroethylene	1.67E+02 ug/l	1.67E-01 lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	4.12E+04 ug/l	4.12E+01 lbs/day
1,2-Dichloropropane	2.03E+03 ug/l	2.04E+00 lbs/day
1,3-Dichloropropylene	8.87E+04 ug/l	8.87E+01 lbs/day
2,4-Dimethylphenol	1.20E+05 ug/l	1.20E+02 lbs/day
2,4-Dinitrotoluene	4.75E+02 ug/l	4.75E-01 lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	2.82E+01 ug/l	2.82E-02 lbs/day
Ethylbenzene	1.51E+06 ug/l	1.51E+03 lbs/day
Fluoranthene	1.93E+04 ug/l	1.93E+01 lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	8.87E+06 ug/l	8.87E+03 lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	8.35E+04 ug/l	8.35E+01 lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	1.88E+04 ug/l	1.88E+01 lbs/day
Dichlorobromomethane(HM)	1.15E+03 ug/l	1.15E+00 lbs/day
Chlorodibromomethane (HM)	1.77E+03 ug/l	1.77E+00 lbs/day
Hexachlorocyclopentadiene	8.87E+05 ug/l	8.87E+02 lbs/day
Isophorone	3.13E+04 ug/l	3.13E+01 lbs/day
Naphthalene		
Nitrobenzene	9.91E+04 ug/l	9.92E+01 lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	7.30E+05 ug/l	7.31E+02 lbs/day
4,6-Dinitro-o-cresol	3.99E+04 ug/l	3.99E+01 lbs/day
N-Nitrosodimethylamine	4.23E+02 ug/l	4.23E-01 lbs/day
N-Nitrosodiphenylamine	8.35E+02 ug/l	8.35E-01 lbs/day
N-Nitrosodi-n-propylamine	7.30E+01 ug/l	7.31E-02 lbs/day
Pentachlorophenol	4.28E+02 ug/l	4.28E-01 lbs/day
Phenol	2.40E+08 ug/l	2.40E+05 lbs/day
Bis(2-ethylhexyl)phthalate	3.08E+02 ug/l	3.08E-01 lbs/day
Butyl benzyl phthalate	2.71E+05 ug/l	2.71E+02 lbs/day
Di-n-butyl phthalate	6.26E+05 ug/l	6.26E+02 lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	6.26E+06 ug/l	6.26E+03 lbs/day
Dimethyl phthlate	1.51E+08 ug/l	1.51E+05 lbs/day
Benzo(a)anthracene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Benzo(a)pyrene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Benzo(b)fluoranthene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Benzo(k)fluoranthene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Chrysene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	1.62E+00 ug/l	1.62E-03 lbs/day

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Pyrene (PAH)	5.74E+05 ug/l	5.74E+02 lbs/day
Tetrachloroethylene	4.64E+02 ug/l	4.65E-01 lbs/day
Toluene	1.04E+07 ug/l	1.04E+04 lbs/day
Trichloroethylene	4.23E+03 ug/l	4.23E+00 lbs/day
Vinyl chloride	2.74E+04 ug/l	2.74E+01 lbs/day

**Pesticides**

Aldrin	7.30E-03 ug/l	7.31E-06 lbs/day
Dieldrin	7.30E-03 ug/l	7.31E-06 lbs/day
Chlordane	3.08E-02 ug/l	3.08E-05 lbs/day
4,4'-DDT	3.08E-02 ug/l	3.08E-05 lbs/day
4,4'-DDE	3.08E-02 ug/l	3.08E-05 lbs/day
4,4'-DDD	4.38E-02 ug/l	4.39E-05 lbs/day
alpha-Endosulfan	1.04E+02 ug/l	1.04E-01 lbs/day
beta-Endosulfan	1.04E+02 ug/l	1.04E-01 lbs/day
Endosulfan sulfate	1.04E+02 ug/l	1.04E-01 lbs/day
Endrin	4.23E+01 ug/l	4.23E-02 lbs/day
Endrin aldehyde	4.23E+01 ug/l	4.23E-02 lbs/day
Heptachlor	1.10E-02 ug/l	1.10E-05 lbs/day
Heptachlor epoxide		

**PCB's**

PCB 1242 (Arochlor 1242)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1254 (Arochlor 1254)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1221 (Arochlor 1221)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1232 (Arochlor 1232)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1248 (Arochlor 1248)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1260 (Arochlor 1260)	2.35E-03 ug/l	2.35E-06 lbs/day
PCB-1016 (Arochlor 1016)	2.35E-03 ug/l	2.35E-06 lbs/day

**Pesticide**

Toxaphene	3.91E-02 ug/l	3.92E-05 lbs/day
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**Metals**

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

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**Dioxin**  
Dioxin (2,3,7,8-TCDD)                      7.30E-07 ug/l                      7.31E-10 lbs/day

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

	<b>Class 4 Acute Agricultural ug/l</b>	<b>Class 3 Acute Aquatic Wildlife ug/l</b>	<b>Acute Toxics Drinking Water Source ug/l</b>	<b>Acute Toxics Wildlife ug/l</b>	<b>1C Acute Health Criteria ug/l</b>	<b>Acute Most Stringent ug/l</b>	<b>Class 3 Chronic Aquatic Wildlife ug/l</b>
Aluminum		19929.4				19929.4	N/A
Antimony				224349.6		224349.6	
Arsenic	5217.4	8950.1				5217.4	9734.0
Barium							
Beryllium						0.0	
Cadmium	514.6	181.6				181.6	122.4
Chromium (III)		148555.3				148555.3	13824.6
Chromium (VI)	5102.8	323.7				323.69	370.50
Copper	10332.0	1316.5				1316.5	1481.9
Cyanide		584.9	11478349.5			584.9	271.3
Iron		26564.9				26564.9	
Lead	5205.7	12594.0				5205.7	951.8
Mercury		63.81		7.83		7.83	0.626
Nickel		40134.8		240001.9		40134.8	8746.6
Selenium	2521.2	488.0				488.0	152.5
Silver		1082.5				1082.5	
Thallium				328.7		328.7	
Zinc		9895.8				9895.8	19405.4
Boron	32836.3					32836.3	
Sulfate	104348.6					104348.6	

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

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

	<b>WLA Acute ug/l</b>	<b>WLA Chronic ug/l</b>	
Aluminum	19929.4	N/A	
Antimony	224349.56		
Arsenic	5217.4	9734.0	Acute Controls
Asbestos			
Barium			
Beryllium			
Cadmium	181.6	122.4	
Chromium (III)	148555.3	13825	
Chromium (VI)	323.7	370.5	Acute Controls
Copper	1316.5	1481.9	Acute Controls



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## **ATTACHMENT 2**

### *Reasonable Potential Analysis*

**2019 Summary Results of Reasonable Potential (RP) Analysis for Weir Minerals (UT0024767)**

Parameters of Concern	Outfall	No. of Samples	MEC* mg/L	Water Quality Standard MAC**		Outcome/Result
				Acute mg/L	Chronic mg/L	
Total Lead	001	6	0.0582	3.846	0.621	MEC < MAC***
Total Zinc	001	6	0.0454	6.787	6.787	MEC < MAC***

\*MEC – Maximum expected effluent concentration as determined from existing data set and initial metals screening.

\*\*MAC – Maximum allowable concentration, applicable effluent limits derived from WQS and/or the Wasteload Allocation (WLA) analysis.

\*\*\*MEC less than MAC. No Acute or Chronic limits required. Based upon the policy “Reasonable Potential Analysis Guidance”, developed by the Utah Division of Water Quality on September 10, 2015 and subsequently implemented beginning January 1, 2016 for all new and renewal permits, it was determined by the permitting authority not to include effluent limits for these parameters of concern (POCs) in this 2019 renewal permit primarily because none of the data points exceeded the applicable Water Quality Standards or the effluent limits derived from the WLA. Therefore, no RP currently exists at the facility for these POCs and a more quantitative RP analysis was not necessary at this time.

The results of the RP analysis was; Outcome C: No new effluent limitations. Routine monitoring requirements maintained as they are in the permit.

Additional POCs were included in this permit renewal, however for future monitoring and RP analysis.