State of Utah
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Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

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SEP 10 2015

CERTIFIED MAIL
(Return Receipt Requested)

Trent Schafer, City Manager
Monticello City Wastewater Treatment Plant
P.O. Box 457
Monticello, UT 84535

Dear Mr. Schafer:

Subject: Renewal of UPDES Permit No. UT0024503, Monticello City Wastewater Treatment Plant

Enclosed is the Utah Pollutant Discharge Elimination System (UPDES) Permit No. UT0020893 for your facility as referenced above. This permit was public noticed in the San Juan Record and also on the Division of Water Quality's website from July 29, 2015 – August 31, 2015. No public comments were received during the public comment period. Therefore, this permit has been re-issued as drafted and is effective today, subject to the right to challenge this decision in accordance with the provisions of *Utah Administrative Code*, Section R317-9. This permit along with the updated Fact Sheet Statement of Basis will also be made available on our website for future reference.

The Utah Division of Water Quality (DWQ) values your feedback, and as the State agency charged with the administration of issuing UPDES permits, we are continuously looking for ways to improve our quality of service to you and remain committed to continually assessing and improving the level and quality of services provided to you. In an effort to improve the State UPDES permitting process, we are asking for your input. Please take a few minutes to comment on the quality of service you received by completing the "Give Feedback to DWQ" form link on DWQ's webpage at www.waterquality.utah.gov. Thank you for assisting us in improving our service to you.

Also, please complete and submit your ***Annual Reports of Reuse Monitoring Results*** for the past three years as required in ***Part I.G*** of your permit. The reports are overdue and are causing your facility to be listed on the EPA Quarterly Non-Compliance Reports (QNCR). Therefore, please submit the reports as soon as possible, but no later than **October 1, 2015**. Once the reports are received, Monticello can be removed from the QNCR and no further action will be required. Thank you for your prompt attention to this matter.

If you have any questions, please contact Lonnie Shull of this office at (801) 536-4394 or e-mail at lshull@utah.gov.

Sincerely,

for Jeff Studenka
UPDES Section Manager

JS:LS:ph

Enclosures (3): Renewal Permit (DWQ-2015-007867)
Renewal FSSOB (DWQ-2015-007868)
Renewal Wasteload (DWQ-2015-007869)

cc: Amy Clark, EPA Region VIII (email w/ encl)
Brady Bradford, Southeast Health Department (w/o encl)
David Ariotti, DEQ District Engineer (w/o encl)
Nathan Langston, Public Works Director (w/o encl)
George Rice, Water Reclamation Operator (w/o encl)
Greg Sheehan, Utah Division of Wildlife Resources (w/o encl)
Chris Cline, Fish & Wildlife Services (w/o encl)
Jason Gipson, Chief, Utah Regulatory Office, U.S. Corps of Engineers (w/o encl)

DWQ-2015-010111

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

AUTHORIZATION TO DISCHARGE UNDER THE

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM
(UPDES)

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

Monticello City

is hereby authorized to discharge from its wastewater treatment facility located at Section 32, T33S, R25E, San Juan County, Utah, with the outfall(s) located at latitude 38°51'30" and longitude 109° 18'30", to receiving waters named

Montezuma Creek

in accordance with discharge point, effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on October 1, 2015.

This permit and the authorization to discharge shall expire at midnight, September 30, 2020.

Signed this 10th day of September, 2015.

Walter L. Baker, P.E.
Director

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

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

Outfall Number	Location of Discharge Point:
001	The discharge enters Montezuma Creek from a ten-inch concrete pipe approximately 1/4 mile south of the lagoons. With latitude 38° 51' 30" and longitude 109 °18' 30"
Outfall Number	Location of Effluent Reuse Discharge Outfall and Description of Area for Use
001R	Discharge to an agricultural area 3/4 a mile west of the facility, Latitude 37° 51' 31" and Longitude 109 °18' 15"

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 Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Effluent Limitations a/			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	NA	NA	NA	0.32
BOD_5, mg/L BOD_5 Min. % Removal	25 85	35 NA	NA NA	NA NA
TSS, mg/L TSS Min. % Removal	25 85	35 NA	NA NA	NA NA
TDS, mg/L b/	NA	NA	NA	NA
TDS, Culinary water mg/L	NA	NA	NA	NA
E. Coli, No./100mL	126	157	NA	NA
TRC, mg/L	NA	NA	NA	0.075
DO, mg/L	NA	NA	4.0	NA
pH, Standard Units	NA	NA	6.5	9.0
Total Phosphorus, mg/L b/	NA	NA	NA	NA
Total Kjeldahl Nitrogen, mg/L b/	NA	NA	NA	NA
Orthophosphate, mg/L	NA	NA	NA	NA
Ammonia, mg/L	NA	NA	NA	NA
Nitrate-Nitrite, mg/L	NA	NA	NA	NA

a/ See Definitions, *Part VI*, for definition of terms.

b/ The effluent shall not exceed the culinary intake water supply by more than 400 mg/L of TDS.

NA – Not Applicable

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Continuous	Recorder	MGD
BOD_5, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, mg/L	Monthly	Grab	mg/L
TDS, Culinary water mg/L	Monthly	Grab	mg/L
E. coli	Monthly	Grab	No./100mL
TRC	Daily	Grab	mg/L
DO	Monthly	Grab	mg/L
PH	Monthly	Grab	SU
Total Phosphorus, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Total Kjeldahl Nitrogen, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Orthophosphate	Monthly	Composite	mg/L
Ammonia	Monthly	Composite	mg/L
Nitrate-Nitrite	Monthly	Composite	mg/L

a/ See Definitions, *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.
d/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.

Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge effluent for reuse from Outfall 001R. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Type II Reuse Limitations a/ b/ c/				
	Maximum Monthly Avg	Max Weekly Avg	Daily Min	Daily Avg	Daily Max
BOD_5, mg/L	25	NA	NA	NA	NA
TSS, mg/L d/	25	35	NA	NA	NA
E. coli, e/ No./100mL	NA	126	NA	NA	500
pH, Standard Units	NA	NA	6.0	NA	9.0

NA – Not Applicable

Self-Monitoring and Reporting Requirements for Type II Reuse			
Parameter	Frequency	Sample Type	Units
Total Flow f/	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
TSS	Weekly	Grab	mg/L
E. coli	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU

a/ See Definitions, *Part VI*, for definition of terms.
b/ An alternative disposal option or diversion to storage must be available in case quality requirements are not met.
c/ The facility shall also have the ability to disinfect the effluent effective immediately and lasting the duration of this permit.
d/ Properly calibrated, continuous monitoring of turbidity may be substituted for the suspended solids testing.
e/ The facility is required to disinfect to destroy, inactivate or remove pathogenic microorganisms by chemical, physical or biological means. Disinfection may be accomplished by chlorination, ozonation, or other chemical disinfectants, UV radiation. Or other approved processes.
f/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

D. Management Practices for Land Application of Treated Effluent

1. The application of treated effluent to frozen, ice-covered, or snow covered land is prohibited.
2. No person shall apply treated effluent where the slope of the site exceeds 6 percent.
3. The use should not result in a surface water runoff.
4. The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
5. Any irrigation with treated effluent must be at least 300 feet from a potable well.
6. For Type II reuse, any irrigation must be at least 300 feet from any potable water well.
7. For Type II reuse, spray irrigation must be at least 100 feet from areas intended for public access. This distance may be reduced or increased by the Director.
8. Impoundments of treated effluent, if not sealed, must be at least 500 feet from any potable well.
9. Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

E. Reporting of Wastewater Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported via NetDMR, or on a Discharge Monitoring Report Form (EPA No. 3320-1) or entered into NetDMR, and post-marked or submitted to NetDMR no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part V.G)*, and submitted 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

F. Monthly Reporting of Reuse Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported on a Monthly Operational Report and post-marked no later than the 28th day of the month following the completed reporting period. If no reuse occurs during the reporting period, "no reuse" shall be reported for those applicable effluent parameters. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance

with the requirements of *Signatory Requirements (see Part V.G)*, and submitted 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

G. Annual Reporting of Reuse Monitoring Results. Monitoring results obtained during the previous year shall be summarized and included in the Municipal Wastewater Planning Program (MWPP) submitted annually by April 1st. If no reuse occurs during the reporting period, "no reuse" shall be reported for those applicable effluent parameters. Legible copies of these, and all other reports required herein, 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 (see Part V.G)*, and submitted 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

II. INDUSTRIAL PRETREATMENT PROGRAM

A. Industrial Pretreatment Program Definitions.

For this section the following definitions shall apply:

1. Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources both:

   a. Inhibits or disrupts the publicly-owned treatment works (POTW), its treatment processes or operations, or its sludge processes, use or disposal and

   b. Therefore is a cause of a violation or any requirement of the POTW's UPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge disposal in compliance with the following statutory provision and regulations or permits issued.

2. Local Limit is defined as a limit designed to prevent pass through and/or interference. And is developed in accordance with 40 CFR 403.5(c).

3. Pass through is a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of violation of any requirement of the POTW's UPDES permit (including an increase in the magnitude or duration of violation).

4. Significant industrial user (SIU) is defined as an industrial user discharging to a POTW that satisfies any of the following:

   a. Has a process wastewater flow of greater than 25,000 gallons;

   b. Contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;

   c. Is subject to Categorical Pretreatment Standards, or

   d. Has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

B. Pretreatment Reporting Requirements.

Because the design capacity of this municipal wastewater treatment facility is less than 5 MGD, the permittee will not be required to develop a State-approved industrial pretreatment program at this time. However, in order to determine if development of an industrial pretreatment program is warranted, the permittee shall conduct an

industrial waste survey, as described in *Part II.C.1*, and submit it to the Division of Water Quality within **sixty (60) calendar days** of the effective date of this permit.

C. Industrial Waste Survey (IWS).

1. As required by *Part II.B.1.* the industrial waste survey consists of;

   a. Identifying each industrial user (IU) and determining if the IU is a signification industrial user (SIU),

   b. Determination of the qualitative and quantitative characteristics of each discharge, and

   c. Appropriate production data.

2. The IWS must be maintained and updated with IU information as necessary, to ensure that all IUs are properly permitted and/or controlled at all times. Updates must be submitted to the Director sixty (60) days following a change to the IWS.

3. Evaluate all significant industrial users at least once every two years to determine if they need to develop a slug prevention plan. If a slug prevention plan is required, the permittee shall notify the Director.

4. Notify all significant industrial users of their obligation to comply with applicable requirements under *Subtitles C and D* of the *Resource* Conservation and Recovery Act (RCRA).

5. The permittee must notify the Director of any new introductions by new or existing SIUs or any substantial change in pollutants from any major industrial source. Such notice must contain the information described in 1. above, and be forwarded no later than sixty (60) days following the introduction or change.

D. General and Specific Prohibitions.

1. Developed pursuant to *Section 307* of *The Water Quality Act of 1987* require that under no circumstances shall the permittee allow introduction of the following pollutants into the waste treatment system from any source of non-domestic discharge:

   a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C);

   b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;

c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at such volume or strength as to cause interference in the POTW;

e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C);

f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g. Pollutants which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems; or,

h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

i. Any pollutant that causes pass through or interference at the POTW.

2. In addition to the general and specific limitations expressed above, more specific pretreatment limitations have been and will be promulgated for specific industrial categories under *Section 307* of *the Water Quality Act of 1987 as amended (WQA). (See 40 CFR, Subchapter N, Parts 400* through *500*, for specific information).

E. Signification Industrial Users Discharging to the POTW.

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

1. Any new introduction of pollutants into the treatment works from an indirect discharger (i.e., industrial user) which would be subject to *Sections 301* or *306* of the *WQA* if it were directly discharging those pollutants;

2. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit; and

3. For the purposes of this section, adequate notice shall include information on:

a. The quality and quantity of effluent to be introduced into such treatment works; and,

b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from such publicly owned treatment works.

4. Any SIU that must comply with applicable requirements under *Subtitles C and D* of the *Resource* Conservation and Recovery Act (RCRA).

F. Change of Conditions.

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

1. Amend the permittee's UPDES discharge permit to specify the additional pollutant(s) and corresponding effluent limitation(s) consistent with the applicable national pretreatment limitation;

2. Require the permittee to specify, by ordinance, contract, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's facility for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the *General Pretreatment Regulations* at *40 CFR 403;*

3. Require the permittee to monitor its discharge for any pollutant, which may likely be discharged from the permittee's facility, should the industrial user fail to properly pretreat its waste; and/or,

4. Require the permittee to develop an approved pretreatment program.

G. Legal Action.

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

2. The permittee must notify the Director if a Significant Industrial User is in significant noncompliance (or if any Industrial User violates Part II.G.(c), (d), or (h)). Significant noncompliance is when one or more of the following criteria is meet:

   a. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent or more of all of the measurements taken during a six

   b. month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement including instantaneous limits, for the same pollutant parameter;

   c. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent or more of all of the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the

numeric Pretreatment Standard or Requirement including instantaneous limit multiplied by the applicable TRC. TRC = 1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH;

d. Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Control Authority determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public);

e. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority under R317-8-8.8(6)(a)8. to halt or prevent such a discharge;

f. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;

g. Failure to provide within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

h. Failure to accurately report noncompliance; and

i. Any other violation or group of violations, which may include a violation of Best Management Practices, which the Control Authority determines will adversely affect the operation or implementation of the local pretreatment program.

H. Local Limits.

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

III. 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. 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.

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 maximum daily discharge limitation for any of the pollutants listed in the permit; or,

   e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected;

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,

   e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.

4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.

5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results*.

I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part 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;

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:

      (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 judgment 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.3.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 VI.G.3.a.(1) through (6)* to the extent practicable.

c. *Unanticipated bypass*. The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part III.H*, Twenty Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural 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,

3. 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*.

4. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

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 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;

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 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.

P. Biosolids – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the permittees biosolids use or land application practices do not comply with existing applicable state of federal regulations.

Q. Toxicity Limitation - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) testing, a WET limitation, a compliance schedule, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

R. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or 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. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

    a) Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

    b) Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the

c) first sample, the flow rate at the time the sample was collected may be used;

d) Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

e) Continuous sample volume, with sample collection rate proportional to flow rate.

6. "CWA," means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.

7. "Daily Maximum" (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

8. "EPA," means the United States Environmental Protection Agency.

9. "Director," means Director of the Utah Water Quality Board.

10. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

11. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

12. "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.

13. "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.

14. Reuse.
    1. "Type II reuse" means the use of treated domestic wastewater effluent where human exposure is unlikely.

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FACT SHEET STATEMENT OF BASIS
MONTICELLO CITY WASTEWATER TREATMENT PLANT
UPDES PERMIT NUMBER: UT0024503
RENEWAL PERMIT
MINOR MUNICIPAL

FACILITY CONTACTS

Trent Schafer, City Manager
Nathan Langston, Public Works Director
George Rice, Water Reclamation Operator
Monticello City Wastewater Treatment Plant
P.O. Box 457
Monticello, Utah 84535
Telephone (435) 587-2271

DESCRIPTION OF FACILITY

The Monticello Wastewater Treatment Facility (MWTF) was designed to store the effluent during the non-irrigation months and use the water for irrigation during the cultivating season. The MWTF is a 38.5 acre, 5 cell, non-aerated, lagoon system, with the first 4 cells having a water depth from 3 to 6 feet and the water being chlorinated before entering the final cell which has a maximum water depth of 12 feet and named the winter storage pond. The average design flow is 0.32 MGD, the BOD_5 wasteload is 760 pounds per day, and the design population equivalent is 3000. The city's population is estimated to be about 2300 people. The facility is located in the SE 1/4 of section 32, T335S, R24E, approximately two (2) miles southeast of downtown Monticello in San Juan County, Utah. The facility was constructed in 1980 and went on line in 1981 to replace the antiquated wastewater treatment plant. The facility has had to discharge to waters of the State in the past because in some years the precipitation was higher than normal and the irrigation demand was less than expected. MWTF does not anticipate discharging in the next five years. The MWTF has a latitude of 38□51'30" and a longitude of 109□18'30", with outfall STORET Number 495382.

DESCRIPTION OF DISCHARGE

The MWTF has not discharged to waters of the State since 1989. Therefore, there is not any recent monitoring data.

The facility has two outfalls.

Outfall Number	Location of Discharge Point:
001	The discharge enters Montezuma Creek from a ten-inch concrete pipe approximately 1/4 mile south of the lagoons. With latitude 38° 51' 30" and longitude 109 °18' 30"
Outfall Number	Location of Effluent Reuse Discharge Outfall and Description of Area for Use
001R	Discharge to an agricultural area 3/4 a mile west of the facility, Latitude 37° 51' 31" and Longitude 109 °18' 15"

RECEIVING WATERS AND STREAM CLASSIFICATION

MWTF would discharge into Montezuma Creek should a discharge become necessary. The waters of Montezuma Creek are classified as 1C, 2B, 3B and 4, and are part of the of the San Juan River system.

Class 1C - protected for domestic purposes (drinking water) with prior treatment.

Class 2B - protected for boating, water skiing, and similar uses, excluding recreational bathing (swimming).

Class 3B - protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 - protected for agricultural uses including irrigation of crops and stockwatering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD_5) fecal and total coliforms, and pH are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2.* Total residual chlorine (TRC), ammonia as (N) and dissolved oxygen (DO) limits are water quality limited and based on the WLA. The WLA (see ADDENDUM) also indicates that these limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. Since the MWTF is in the Colorado River drainage, the MWTF must also conform to the Colorado River Salinity Control Forum Policy that states that the effluent shall not exceed the culinary intake water supply by more than 400 mg/L total dissolved solids (TDS). The permittee is expected to be able to comply with the limitations.

The Wasteload Analysis indicates that seasonal ammonia limits in the range of 41.3 mg/L – 53.8 mg/L should be applied (see ADDENDUM), however, since these limits are substantially higher than what is reasonably expected in the discharge, there will be no effluent limitations or monitoring requirements for this parameter.

Montezuma Creek was listed as impaired on the 303(d) list for selenium in 2014. The data for the assessment though was collected from Cross Canyon Creek (tributary to Montezuma Cr) and may not directly applicable to Monticello's.

ANTIDEGRADATION LEVEL II REVIEW

Antidegradation Reviews are intended to ensure that waters that have better quality than required by the standards are not degraded unless the degradation is necessary for important social or economic reasons.

An Antidegradation Level II was required for this facility because it discharges into Montezuma Creek. Montezuma Creek is classified as Class 1C and protected for domestic purposes (drinking water) with prior treatment. An antidegradation Level II Reviews has been completed for the discharge to Montezuma Creek. This document is appended to this Fact Sheet and Statement of Basis.

The Level II Review for the discharge noted that discharge is required because the facility is a Publicly owned treatment works and is necessary for the economic and social growth in the community. It was determined that the overall impact to the environment will be lower with the POTW than without it. The facility utilizes alternative treatment options by land applying the discharge.

The DWQ agrees with the findings of the Level II Reviews and has determined that the discharges will not cause or contribute to a violation of water quality standards.

CHANGES SINCE THE LAST PERMIT

In September 2014, the Utah Water Quality Board adopted a new rule for control of phosphorus discharges into waters of the state that became effective January 1, 2015. The Technology-Based Phosphorus Effluent Limits or TBPEL Rule, R317-1-3.3 requires that discharges having reasonable potential to discharge phosphorus implement new water quality monitoring requirements by July 1, 2015 and requires that these dischargers meet specified effluent limits by January 1, 2020.The changes are reflected in the new permit. These samples are only required when the facility is discharging to Montezuma Creek.

Specific Limitations and Self-Monitoring Requirements

Parameter	Effluent Limitations a/			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	NA	NA	NA	0.32
BOD_5, mg/L BOD_5 Min. % Removal	25 85	35 NA	NA NA	NA NA
TSS, mg/L TSS Min. % Removal	25 85	35 NA	NA NA	NA NA
TDS, mg/L b/	NA	NA	NA	NA
TDS, Culinary water mg/L	NA	NA	NA	NA
E. Coli, No./100mL	126	157	NA	NA
TRC, mg/L	NA	NA	NA	0.075
DO, mg/L	NA	NA	4.0	NA
pH, Standard Units	NA	NA	6.5	9.0
Total Phosphorus, mg/L b/	NA	NA	NA	NA
Total Kjeldahl Nitrogen, mg/L b/	NA	NA	NA	NA
Orthophosphate, mg/L	NA	NA	NA	NA
Ammonia, mg/L	NA	NA	NA	NA
Nitrate-Nitrite, mg/L	NA	NA	NA	NA

a/ See Definitions, *Part VI*, for definition of terms.

b/ The effluent shall not exceed the culinary intake water supply by more than 400 mg/L of TDS.

NA – Not Applicable

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Continuous	Recorder	MGD
BOD_5, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, mg/L	Monthly	Grab	mg/L
TDS, Culinary water mg/L	Monthly	Grab	mg/L
E. coli	Monthly	Grab	No./100mL
TRC	Daily	Grab	mg/L
DO	Monthly	Grab	mg/L
PH	Monthly	Grab	SU
Total Phosphorus, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Total Kjeldahl Nitrogen, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Orthophosphate	Monthly	Composite	mg/L
Ammonia	Monthly	Composite	mg/L
Nitrate-Nitrite	Monthly	Composite	mg/L

a/ See Definitions, *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.

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

Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge effluent for reuse from Outfall 001R. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Type II Reuse Limitations a/ b/ c/				
	Maximum Monthly Avg	Max Weekly Avg	Daily Min	Daily Avg	Daily Max
BOD_5, mg/L	25	NA	NA	NA	NA
TSS, mg/L d/	25	35	NA	NA	NA
E. coli, e/ No./100mL	NA	126	NA	NA	500
pH, Standard Units	NA	NA	6.0	NA	9.0

NA – Not Applicable

Self-Monitoring and Reporting Requirements for Type II Reuse			
Parameter	Frequency	Sample Type	Units
Total Flow f/	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
TSS	Weekly	Grab	mg/L
E. coli	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU

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

b/ An alternative disposal option or diversion to storage must be available in case quality requirements are not met.

c/ The facility shall also have the ability to disinfect the effluent effective immediately and lasting the duration of this permit.

d/ Properly calibrated, continuous monitoring of turbidity may be substituted for the suspended solids testing.

e/ The facility is required to disinfect to destroy, inactivate or remove pathogenic microorganisms by chemical, physical or biological means. Disinfection may be accomplished by chlorination, ozonation, or other chemical disinfectants, UV radiation. Or other approved processes.

f/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

A. Management Practices for Land Application of Treated Effluent
   1. The application of treated effluent to frozen, ice-covered, or snow covered land is prohibited.
   2. No person shall apply treated effluent where the slope of the site exceeds 6 percent.
   3. The use should not result in a surface water runoff.
   4. The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
   5. Any irrigation with treated effluent must be at least 300 feet from a potable well.
   6. For Type I reuse, any irrigation must be at least 50 feet from any potable water well.
   7. For Type II reuse, any irrigation must be at least 300 feet from any potable water well.
   8. For Type II reuse, spray irrigation must be at least 100 feet from areas intended for public access. This distance may be reduced or increased by the Executive Secretary.
   9. Impoundments of treated effluent, if not sealed, must be at least 500 feet from any potable well.
   10. Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

BIOSOLIDS DISPOSAL REQUIREMENTS

The State of Utah became a fully delegated State for the biosolids program on June 14, 1996 and has adopted the *503 Code of Federal Regulations (CFR)* by reference. Because the permitted facility is a lagoon, there is no regular sludge production. Therefore it appears that *40 CFR 503* does not apply unless or until the sludge is removed from the bottom of the lagoon and is disposed in some way. At that time, the permittee must ensure the biosolids are managed according to applicable regulations.

PRETREATMENT REQUIREMENTS

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

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

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

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

STORM WATER REQUIREMENTS

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

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

The MWTF facility does not meet either of the criteria; therefore a storm water permit is not required at this time. A storm water re-opener provision is included in the permit should a storm water permit be needed in the future.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2*, *Permit Provisions, UAC R317-8-5.3* and *Water Quality Standards, UAC R317-2-5 and R317-2-7.2*.

The potential for toxicity is not deemed sufficient to require biomonitoring or whole effluent toxicity (WET) limits because there are no present or anticipated industrial dischargers on the system nor are there any

anticipated for the duration of this permit. The waste discharge is anticipated to be household waste only. Therefore, biomonitoring is not required in this permit, however the permit will contain a WET reopener provision.

PERMIT DURATION

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

PUBLIC NOTICE

The permit was public noticed in the San Juan Record and on the Division of Water Quality's website from July 29, 2015 – August 31, 2015. No public comments were received during the public comment period.

Drafted by Lonnie Shull
Environmental Scientist
Utah Division of Water Quality
Drafted 7/17/2015
Updated September 1, 2015

Utah Division of Water Quality
Salt Lake City, Utah

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WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY

Discharging Facility:	**Monticello**		
UPDES No:	UT-0024503		
Current Flow:	0.32	MGD	Design Flow
Design Flow	0.32	MGD	

Receiving Water:	**Montezuma Creek**		
Stream Classification:	1C, 2A, 3B, 4		
Stream Flows [cfs]:	2.0	Summer (July-Sept)	20th Percentile
	2.0	Fall (Oct-Dec)	20th Percentile
	2.0	Winter (Jan-Mar)	20th Percentile
	2.0	Spring (Apr-June)	20th Percentile
	10.0	Average	
Stream TDS Values:	500.0	Summer (July-Sept)	Average
	500.0	Fall (Oct-Dec)	Average
	500.0	Winter (Jan-Mar)	Average
	500.0	Spring (Apr-June)	Average

Effluent Limits:			**WQ Standard:**	
Flow, MGD:	0.32	MGD	Design Flow	
BOD, mg/l:	25.0	Summer	5.0	Indicator
Dissolved Oxygen, mg/l	5.5	Summer	5.5	30 Day Average
TNH3, Chronic, mg/l:	13.8	Summer	Varies	Function of pH and Temperature
TDS, mg/l:	4028.1	Summer	1200.0	

Modeling Parameters:

Acute River Width:	50.0%
Chronic River Width:	100.0%

Level 1 Antidegradation Level Completed: Level II Review is required. Receiving waterbody is a class 1C drinking w

Date: 7/6/2015

Permit Writer:	Lonnie M Sudweeks III	7/7/15
WLA by:	[signature]	7/7/15
WQM Sec. Approval:		
TMDL Sec. Approval:		

Utah Division of Water Quality
Salt Lake City, Utah

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis

6-Jul-15
4:00 PM

Facilities: **Monticello** **UPDES No: UT-0024503**
Discharging to: **Montezuma Creek**

THIS IS A DRAFT DOCUMENT

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 interms 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

Montezuma Creek:	1C, 2A, 3B, 4
Antidegradation Review:	Level I review completed. Level II review 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 Concentration	Load*	1 Hour Average (Acute) Standard Concentration	Load*
Aluminum	87.00 ug/l**	0.150 lbs/day	750.00 ug/l	1.294 lbs/day
Arsenic	190.00 ug/l	0.328 lbs/day	340.00 ug/l	0.586 lbs/day
Cadmium	0.61 ug/l	0.001 lbs/day	6.52 ug/l	0.011 lbs/day
Chromium III	211.92 ug/l	0.366 lbs/day	4433.71 ug/l	7.647 lbs/day
ChromiumVI	11.00 ug/l	0.019 lbs/day	16.00 ug/l	0.028 lbs/day
Copper	23.85 ug/l	0.041 lbs/day	39.41 ug/l	0.068 lbs/day
Iron			1000.00 ug/l	1.725 lbs/day
Lead	12.88 ug/l	0.022 lbs/day	330.60 ug/l	0.570 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40 ug/l	0.004 lbs/day
Nickel	132.13 ug/l	0.228 lbs/day	1188.44 ug/l	2.050 lbs/day
Selenium	4.60 ug/l	0.008 lbs/day	20.00 ug/l	0.034 lbs/day
Silver	N/A ug/l	N/A lbs/day	25.04 ug/l	0.043 lbs/day
Zinc	303.93 ug/l	0.524 lbs/day	303.93 ug/l	0.524 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 300 mg/l as CaCO3

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard Concentration	Load*	1 Hour Average (Acute) Standard Concentration	Load*
Aldrin			1.500 ug/l	0.003 lbs/day
Chlordane	0.004 ug/l	0.058 lbs/day	1.200 ug/l	0.002 lbs/day
DDT, DDE	0.001 ug/l	0.013 lbs/day	0.550 ug/l	0.001 lbs/day
Dieldrin	0.002 ug/l	0.026 lbs/day	1.250 ug/l	0.002 lbs/day
Endosulfan	0.056 ug/l	0.753 lbs/day	0.110 ug/l	0.000 lbs/day
Endrin	0.002 ug/l	0.031 lbs/day	0.090 ug/l	0.000 lbs/day
Guthion			0.010 ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.051 lbs/day	0.260 ug/l	0.000 lbs/day
Lindane	0.080 ug/l	1.076 lbs/day	1.000 ug/l	0.002 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	0.188 lbs/day	2.000 ug/l	0.003 lbs/day
Pentachlorophenol	13.00 ug/l	174.827 lbs/day	20.000 ug/l	0.034 lbs/day
Toxephene	0.0002 ug/l	0.003 lbs/day	0.7300 ug/l	0.001 lbs/day

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	0.65 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	1.03 tons/day

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

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
Metals	Concentration	Load*	Concentration	Load*
Arsenic			50.0 ug/l	0.672 lbs/day
Barium			1000.0 ug/l	13.448 lbs/day
Cadmium			10.0 ug/l	0.134 lbs/day
Chromium			50.0 ug/l	0.672 lbs/day
Lead			50.0 ug/l	0.672 lbs/day
Mercury			2.0 ug/l	0.027 lbs/day
Selenium			10.0 ug/l	0.134 lbs/day
Silver			50.0 ug/l	0.672 lbs/day
Fluoride (3)			1.4 ug/l	0.019 lbs/day
to			2.4 ug/l	0.032 lbs/day
Nitrates as N			10.0 ug/l	0.134 lbs/day
Chlorophenoxy Herbicides				
2,4-D			100.0 ug/l	1.345 lbs/day
2,4,5-TP			10.0 ug/l	0.134 lbs/day
Endrin			0.2 ug/l	0.003 lbs/day
ocyclohexane (Lindane)			4.0 ug/l	0.054 lbs/day
Methoxychlor			100.0 ug/l	1.345 lbs/day
Toxaphene			5.0 ug/l	0.067 lbs/day

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

	Maximum Conc., ug/l - Acute Standards			
	Class 1C		Class 3A, 3B	
Toxic Organics	[2 Liters/Day for 70 Kg Person over 70 Yr.]		[6.5 g for 70 Kg Person over 70 Yr.]	
Acenaphthene	1200.00 ug/l	16.14 lbs/day	2700.0 ug/l	36.31 lbs/day
Acrolein	320.00 ug/l	4.30 lbs/day	780.0 ug/l	10.49 lbs/day
Acrylonitrile	0.06 ug/l	0.00 lbs/day	0.7 ug/l	0.01 lbs/day
Benzene	1.20 ug/l	0.02 lbs/day	71.0 ug/l	0.95 lbs/day
Benzidine	0.00012 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
Carbon tetrachloride	0.25 ug/l	0.00 lbs/day	4.4 ug/l	0.06 lbs/day
Chlorobenzene	680.00 ug/l	9.14 lbs/day	21000.0 ug/l	282.41 lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	0.00075 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Dichloroethane	0.38 ug/l	0.01 lbs/day	99.0 ug/l	1.33 lbs/day

1,1,1-Trichloroethane				
Hexachloroethane	1.90 ug/l	0.03 lbs/day	8.9 ug/l	0.12 lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	0.61 ug/l	0.01 lbs/day	42.0 ug/l	0.56 lbs/day
1,1,2,2-Tetrachloroethai	0.17 ug/l	0.00 lbs/day	11.0 ug/l	0.15 lbs/day
Chloroethane			0.0 ug/l	0.00 lbs/day
Bis(2-chloroethyl) ether	0.03 ug/l	0.00 lbs/day	1.4 ug/l	0.02 lbs/day
2-Chloroethyl vinyl ether	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
2-Chloronaphthalene	1700.00 ug/l	22.86 lbs/day	4300.0 ug/l	57.83 lbs/day
2,4,6-Trichlorophenol	2.10 ug/l	0.03 lbs/day	6.5 ug/l	0.09 lbs/day
p-Chloro-m-cresol			0.0 ug/l	0.00 lbs/day
Chloroform (HM)	5.70 ug/l	0.08 lbs/day	470.0 ug/l	6.32 lbs/day
2-Chlorophenol	120.00 ug/l	1.61 lbs/day	400.0 ug/l	5.38 lbs/day
1,2-Dichlorobenzene	2700.00 ug/l	36.31 lbs/day	17000.0 ug/l	228.62 lbs/day
1,3-Dichlorobenzene	400.00 ug/l	5.38 lbs/day	2600.0 ug/l	34.97 lbs/day
1,4-Dichlorobenzene	400.00 ug/l	5.38 lbs/day	2600.0 ug/l	34.97 lbs/day
3,3'-Dichlorobenzidine	0.04 ug/l	0.00 lbs/day	0.1 ug/l	0.00 lbs/day
1,1-Dichloroethylene	0.06 ug/l	0.00 lbs/day	3.2 ug/l	0.04 lbs/day
1,2-trans-Dichloroethyle	700.00 ug/l	9.41 lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dichlorophenol	93.00 ug/l	1.25 lbs/day	790.0 ug/l	10.62 lbs/day
1,2-Dichloropropane	0.52 ug/l	0.01 lbs/day	39.0 ug/l	0.52 lbs/day
1,3-Dichloropropylene	10.00 ug/l	0.13 lbs/day	1700.0 ug/l	22.86 lbs/day
2,4-Dimethylphenol	540.00 ug/l	7.26 lbs/day	2300.0 ug/l	30.93 lbs/day
2,4-Dinitrotoluene	0.11 ug/l	0.00 lbs/day	9.1 ug/l	0.12 lbs/day
2,6-Dinitrotoluene	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Diphenylhydrazine	0.04 ug/l	0.00 lbs/day	0.5 ug/l	0.01 lbs/day
Ethylbenzene	3100.00 ug/l	41.69 lbs/day	29000.0 ug/l	390.00 lbs/day
Fluoranthene	300.00 ug/l	4.03 lbs/day	370.0 ug/l	4.98 lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) e	1400.00 ug/l	18.83 lbs/day	170000.0 ug/l	2286.21 lbs/day
Bis(2-chloroethoxy) met	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
Methylene chloride (HM	4.70 ug/l	0.06 lbs/day	1600.0 ug/l	21.52 lbs/day
Methyl chloride (HM)	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
Methyl bromide (HM)	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
Bromoform (HM)	4.30 ug/l	0.06 lbs/day	360.0 ug/l	4.84 lbs/day
Dichlorobromomethane	0.27 ug/l	0.00 lbs/day	22.0 ug/l	0.30 lbs/day
Chlorodibromomethane	0.41 ug/l	0.01 lbs/day	34.0 ug/l	0.46 lbs/day
Hexachlorobutadiene(c)	0.44 ug/l	0.01 lbs/day	50.0 ug/l	0.67 lbs/day
Hexachlorocyclopentadi	240.00 ug/l	3.23 lbs/day	17000.0 ug/l	228.62 lbs/day
Isophorone	8.40 ug/l	0.11 lbs/day	600.0 ug/l	8.07 lbs/day
Naphthalene				
Nitrobenzene	17.00 ug/l	0.23 lbs/day	1900.0 ug/l	25.55 lbs/day
2-Nitrophenol	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
4-Nitrophenol	0.00 ug/l	0.00 lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dinitrophenol	70.00 ug/l	0.94 lbs/day	14000.0 ug/l	188.28 lbs/day
4,6-Dinitro-o-cresol	13.00 ug/l	0.17 lbs/day	765.0 ug/l	10.29 lbs/day
N-Nitrosodimethylamine	0.00069 ug/l	0.00 lbs/day	8.1 ug/l	0.11 lbs/day
N-Nitrosodiphenylamine	5.00 ug/l	0.07 lbs/day	16.0 ug/l	0.22 lbs/day
N-Nitrosodi-n-propylami	0.01 ug/l	0.00 lbs/day	1.4 ug/l	0.02 lbs/day
Pentachlorophenol	0.28 ug/l	0.00 lbs/day	8.2 ug/l	0.11 lbs/day

Phenol	2.10E+04	ug/l	2.82E+02	lbs/day	4.6E+06	ug/l	6.19E+04 lbs/day
Bis(2-ethylhexyl)phthala	1.80	ug/l	0.02	lbs/day	5.9	ug/l	0.08 lbs/day
Butyl benzyl phthalate	3000.00	ug/l	40.34	lbs/day	5200.0	ug/l	69.93 lbs/day
Di-n-butyl phthalate	2700.00	ug/l	36.31	lbs/day	12000.0	ug/l	161.38 lbs/day
Di-n-octyl phthlate							
Diethyl phthalate	23000.00	ug/l	309.31	lbs/day	120000.0	ug/l	1613.79 lbs/day
Dimethyl phthlate	3.13E+05	ug/l	4.21E+03	lbs/day	2.9E+06	ug/l	3.90E+04 lbs/day
Benzo(a)anthracene (P/	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(a)pyrene (PAH)	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(b)fluoranthene (F	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(k)fluoranthene (F	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Chrysene (PAH)	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Acenaphthylene (PAH)							
Anthracene (PAH)	9600.00	ug/l	129.10	lbs/day	0.0	ug/l	0.00 lbs/day
Dibenzo(a,h)anthracene	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Indeno(1,2,3-cd)pyrene	0.0028	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Pyrene (PAH)	960.00	ug/l	12.91	lbs/day	11000.0	ug/l	147.93 lbs/day
Tetrachloroethylene	0.80	ug/l	0.01	lbs/day	8.9	ug/l	0.12 lbs/day
Toluene	6800.00	ug/l	91.45	lbs/day	200000	ug/l	2689.65 lbs/day
Trichloroethylene	2.70	ug/l	0.04	lbs/day	81.0	ug/l	1.09 lbs/day
Vinyl chloride	2.00	ug/l	0.03	lbs/day	525.0	ug/l	7.06 lbs/day
					0.0		0.00 lbs/day
Pesticides					0.0		0.00 lbs/day
Aldrin	0.0001	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Dieldrin	0.0001	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Chlordane	0.0006	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDT	0.0006	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDE	0.0006	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDD	0.0008	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
alpha-Endosulfan	0.9300	ug/l	0.01	lbs/day	2.0	ug/l	0.03 lbs/day
beta-Endosulfan	0.9300	ug/l	0.01	lbs/day	2.0	ug/l	0.03 lbs/day
Endosulfan sulfate	0.9300	ug/l	0.01	lbs/day	2.0	ug/l	0.03 lbs/day
Endrin	0.7600	ug/l	0.01	lbs/day	0.8	ug/l	0.01 lbs/day
Endrin aldehyde	0.7600	ug/l	0.01	lbs/day	0.8	ug/l	0.01 lbs/day
Heptachlor	0.0002	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Heptachlor epoxide							
PCB's							
PCB 1242 (Arochlor 12/	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1254 (Arochlor 12!	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1221 (Arochlor 12:	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1232 (Arochlor 12:	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1248 (Arochlor 12/	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1260 (Arochlor 12(	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1016 (Arochlor 10'	0.000044	ug/l	0.00	lbs/day	0.0	ug/l	0.00 lbs/day
Pesticide							
Toxaphene	0.000750	ug/l	0.00		0.0	ug/l	0.00 lbs/day
Dioxin							
Dioxin (2,3,7,8-TCDD)	1.30E-08	ug/l	0.00	lbs/day	1.40E-08		0.00

Metals				
Antimony	14.0 ug/l	0.19 lbs/day		
Arsenic	50.0 ug/l	0.67 lbs/day	4300.00 ug/l	57.83 lbs/day
Asbestos	7.00E+06 ug/l	9.41E+04 lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	1.30E+03 ug/l	17.48 lbs/day	2.2E+05 ug/l	2958.62 lbs/day
Lead	700.0 ug/l	9.41 lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	61.86 lbs/day
Selenium	0.1 ug/l	0.00 lbs/day		
Silver	610.0 ug/l	8.20 lbs/day		
Thallium			6.30 ug/l	0.08 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.

(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 cfs	Temp. Deg. C	pH	T-NH3 mg/l as N	BOD5 mg/l	DO mg/l	TRC mg/l	TDS mg/l
Summer (Irrig. Season)	2.0	20.0	8.2	0.01	0.50	6.24	0.00	500.0
Fall	2.0	12.0	8.1	0.01	0.50	---	0.00	500.0
Winter	2.0	4.0	8.0	0.01	0.50	---	0.00	500.0
Spring	2.0	12.0	8.1	0.01	0.50	---	0.00	500.0

	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb
Dissolved Metals	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
All Seasons	1.59*	0.53*	0.053*	0.53*	2.65*	0.53*	0.83*	0.53*

	Hg	Ni	Se	Ag	Zn	Boron	
Dissolved Metals	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
All Seasons	0.0000	0.53*	1.06*	0.1*	0.053*	10.0	* 1/2 MDL

Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	0.32000	17.0	500.00	0.66707
Fall	0.32000	15.0		
Winter	0.32000	12.0		
Spring	0.32000	15.0		

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	0.320 MGD	0.495 cfs
Fall	0.320 MGD	0.495 cfs
Winter	0.320 MGD	0.495 cfs
Spring	0.320 MGD	0.495 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.32 MGD. If the discharger is allowed to have a flow greater than 0.32 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occuring, the permit writers must include the discharge flow limititation 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 segements if the values below are met.

WET Requirements	LC50 >	EOP Effluent	[Acute]
	IC25 >	19.8% Effluent	[Chronic]

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	66.7 lbs/day
Fall	25.0 mg/l as BOD5	66.7 lbs/day
Winter	25.0 mg/l as BOD5	66.7 lbs/day
Spring	25.0 mg/l as BOD5	66.7 lbs/day

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

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

Season	**Concentration**
Summer	5.50
Fall	5.50
Winter	5.50
Spring	5.50

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	13.8 mg/l as N	36.9	lbs/day
	1 Hour Avg. - Acute	53.8 mg/l as N	143.4	lbs/day
Fall	4 Day Avg. - Chronic	19.1 mg/l as N	51.1	lbs/day
	1 Hour Avg. - Acute	53.4 mg/l as N	142.5	lbs/day
Winter	4 Day Avg. - Chronic	17.6 mg/l as N	46.9	lbs/day
	1 Hour Avg. - Acute	41.3 mg/l as N	110.1	lbs/day
Spring	4 Day Avg. - Chronic	19.1 mg/l as N	51.1	lbs/day
	1 Hour Avg. - Acute	53.4 mg/l as N	142.5	lbs/day

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

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	0.074	mg/l	0.20	lbs/day
	1 Hour Avg. - Acute	0.075	mg/l	0.20	lbs/day
Fall	4 Day Avg. - Chronic	0.074	mg/l	0.20	lbs/day
	1 Hour Avg. - Acute	0.075	mg/l	0.20	lbs/day
Winter	4 Day Avg. - Chronic	0.074	mg/l	0.20	lbs/day
	1 Hour Avg. - Acute	0.075	mg/l	0.20	lbs/day
Spring	4 Day Avg. - Chronic	0.074	mg/l	0.00	lbs/day
	1 Hour Avg. - Acute	0.075	mg/l	0.00	lbs/day

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season		Concentration		Load	
Summer	Maximum, Acute	4028.1	mg/l	5.37	tons/day
Fall	Maximum, Acute	4028.1	mg/l	5.37	tons/day
Winter	Maximum, Acute	4028.1	mg/l	5.37	tons/day
Spring	4 Day Avg. - Chronic	4028.1	mg/l	5.37	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 300 mg/l):

	4 Day Average Concentration		Load	1 Hour Average Concentration		Load
Aluminum	N/A		N/A	2,260.2	ug/l	3.9 lbs/day
Arsenic	954.40	ug/l	1.6 lbs/day	1,025.2	ug/l	1.8 lbs/day
Cadmium	2.76	ug/l	0.0 lbs/day	19.5	ug/l	0.0 lbs/day
Chromium III	1,064.87	ug/l	1.8 lbs/day	13,388.4	ug/l	23.1 lbs/day
Chromium VI	39.38	ug/l	0.1 lbs/day	40.3	ug/l	0.1 lbs/day
Copper	117.01	ug/l	0.2 lbs/day	117.4	ug/l	0.2 lbs/day
Iron	N/A		N/A	3,017.5	ug/l	5.2 lbs/day
Lead	61.72	ug/l	0.1 lbs/day	996.8	ug/l	1.7 lbs/day
Mercury	0.06	ug/l	0.0 lbs/day	7.2	ug/l	0.0 lbs/day
Nickel	662.74	ug/l	1.1 lbs/day	3,587.5	ug/l	6.2 lbs/day
Selenium	16.76	ug/l	0.0 lbs/day	57.2	ug/l	0.1 lbs/day
Silver	N/A	ug/l	N/A lbs/day	75.6	ug/l	0.1 lbs/day

Zinc	1,531.53 ug/l	2.6 lbs/day	917.7	ug/l	1.6 lbs/day
Cyanide	26.21 ug/l	0.0 lbs/day	66.4	ug/l	0.1 lbs/day

Effluent Limitations for Heat/Temperature based upon Water Quality Standards

Summer	26.0 Deg. C.	78.9 Deg. F
Fall	18.0 Deg. C.	64.5 Deg. F
Winter	10.0 Deg. C.	50.1 Deg. F
Spring	18.0 Deg. C.	64.5 Deg. F

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

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

	4 Day Average		1 Hour Average		
	Concentration	Load	Concentration		Load
Aldrin			1.5E+00	ug/l	4.00E-03 lbs/day
Chlordane	4.30E-03 ug/l	1.15E-02 lbs/day	1.2E+00	ug/l	3.20E-03 lbs/day
DDT, DDE	1.00E-03 ug/l	2.67E-03 lbs/day	5.5E-01	ug/l	1.47E-03 lbs/day
Dieldrin	1.90E-03 ug/l	5.07E-03 lbs/day	1.3E+00	ug/l	3.34E-03 lbs/day
Endosulfan	5.60E-02 ug/l	1.49E-01 lbs/day	1.1E-01	ug/l	2.94E-04 lbs/day
Endrin	2.30E-03 ug/l	6.14E-03 lbs/day	9.0E-02	ug/l	2.40E-04 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	2.67E-05 lbs/day
Heptachlor	3.80E-03 ug/l	1.01E-02 lbs/day	2.6E-01	ug/l	6.94E-04 lbs/day
Lindane	8.00E-02 ug/l	2.13E-01 lbs/day	1.0E+00	ug/l	2.67E-03 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	8.00E-05 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	2.67E-05 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	1.07E-04 lbs/day
PCB's	1.40E-02 ug/l	3.74E-02 lbs/day	2.0E+00	ug/l	5.34E-03 lbs/day
Pentachlorophenol	1.30E+01 ug/l	3.47E+01 lbs/day	2.0E+01	ug/l	5.34E-02 lbs/day
Toxephene	2.00E-04 ug/l	5.34E-04 lbs/day	7.3E-01	ug/l	1.95E-03 lbs/day

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:

	1 Hour Average	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	8.6 lbs/day
Nitrates as N	4.0 mg/l	6.9 lbs/day
Total Phosphorus as P	0.05 mg/l	0.1 lbs/day
Total Suspended Solids	90.0 mg/l	155.2 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:

	Maximum Concentration	
	Concentration	Load
Toxic Organics		
Acenaphthene	6.05E+03 ug/l	1.61E+01 lbs/day
Acrolein	1.61E+03 ug/l	4.30E+00 lbs/day
Acrylonitrile	2.97E-01 ug/l	7.93E-04 lbs/day
Benzene	6.05E+00 ug/l	1.61E-02 lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	1.26E+00 ug/l	3.36E-03 lbs/day
Chlorobenzene	3.43E+03 ug/l	9.14E+00 lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	3.78E-03 ug/l	1.01E-05 lbs/day
1,2-Dichloroethane	1.92E+00 ug/l	5.11E-03 lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	9.58E+00 ug/l	2.56E-02 lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	3.07E+00 ug/l	8.20E-03 lbs/day
1,1,2,2-Tetrachloroethane	8.57E-01 ug/l	2.29E-03 lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	1.56E-01 ug/l	4.17E-04 lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	8.57E+03 ug/l	2.29E+01 lbs/day
2,4,6-Trichlorophenol	1.06E+01 ug/l	2.82E-02 lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	2.87E+01 ug/l	7.67E-02 lbs/day
2-Chlorophenol	6.05E+02 ug/l	1.61E+00 lbs/day
1,2-Dichlorobenzene	1.36E+04 ug/l	3.63E+01 lbs/day
1,3-Dichlorobenzene	2.02E+03 ug/l	5.38E+00 lbs/day

1,4-Dichlorobenzene	2.02E+03 ug/l	5.38E+00 lbs/day
3,3'-Dichlorobenzidine	2.02E-01 ug/l	5.38E-04 lbs/day
1,1-Dichloroethylene	2.87E-01 ug/l	7.67E-04 lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	4.69E+02 ug/l	1.25E+00 lbs/day
1,2-Dichloropropane	2.62E+00 ug/l	6.99E-03 lbs/day
1,3-Dichloropropylene	5.04E+01 ug/l	1.34E-01 lbs/day
2,4-Dimethylphenol	2.72E+03 ug/l	7.26E+00 lbs/day
2,4-Dinitrotoluene	5.54E-01 ug/l	1.48E-03 lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	2.02E-01 ug/l	5.38E-04 lbs/day
Ethylbenzene	1.56E+04 ug/l	4.17E+01 lbs/day
Fluoranthene	1.51E+03 ug/l	4.03E+00 lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	7.06E+03 ug/l	1.88E+01 lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	2.37E+01 ug/l	6.32E-02 lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	2.17E+01 ug/l	5.78E-02 lbs/day
Dichlorobromomethane(HM)	1.36E+00 ug/l	3.63E-03 lbs/day
Chlorodibromomethane (HM)	2.07E+00 ug/l	5.51E-03 lbs/day
Hexachlorocyclopentadiene	1.21E+03 ug/l	3.23E+00 lbs/day
Isophorone	4.23E+01 ug/l	1.13E-01 lbs/day
Naphthalene		
Nitrobenzene	8.57E+01 ug/l	2.29E-01 lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	3.53E+02 ug/l	9.41E-01 lbs/day
4,6-Dinitro-o-cresol	6.55E+01 ug/l	1.75E-01 lbs/day
N-Nitrosodimethylamine	3.48E-03 ug/l	9.28E-06 lbs/day
N-Nitrosodiphenylamine	2.52E+01 ug/l	6.72E-02 lbs/day
N-Nitrosodi-n-propylamine	2.52E-02 ug/l	6.72E-05 lbs/day
Pentachlorophenol	1.41E+00 ug/l	3.77E-03 lbs/day
Phenol	1.06E+05 ug/l	2.82E+02 lbs/day
Bis(2-ethylhexyl)phthalate	9.07E+00 ug/l	2.42E-02 lbs/day
Butyl benzyl phthalate	1.51E+04 ug/l	4.03E+01 lbs/day
Di-n-butyl phthalate	1.36E+04 ug/l	3.63E+01 lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	1.16E+05 ug/l	3.09E+02 lbs/day
Dimethyl phthlate	1.58E+06 ug/l	4.21E+03 lbs/day
Benzo(a)anthracene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Benzo(a)pyrene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Benzo(b)fluoranthene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Benzo(k)fluoranthene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Chrysene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	1.41E-02 ug/l	3.77E-05 lbs/day

Pyrene (PAH)	4.84E+03 ug/l	1.29E+01 lbs/day
Tetrachloroethylene	4.03E+00 ug/l	1.08E-02 lbs/day
Toluene	3.43E+04 ug/l	9.14E+01 lbs/day
Trichloroethylene	1.36E+01 ug/l	3.63E-02 lbs/day
Vinyl chloride	1.01E+01 ug/l	2.69E-02 lbs/day
Pesticides		
Aldrin	6.55E-04 ug/l	1.75E-06 lbs/day
Dieldrin	7.06E-04 ug/l	1.88E-06 lbs/day
Chlordane	2.87E-03 ug/l	7.67E-06 lbs/day
4,4'-DDT	2.97E-03 ug/l	7.93E-06 lbs/day
4,4'-DDE	2.97E-03 ug/l	7.93E-06 lbs/day
4,4'-DDD	4.18E-03 ug/l	1.12E-05 lbs/day
alpha-Endosulfan	4.69E+00 ug/l	1.25E-02 lbs/day
beta-Endosulfan	4.69E+00 ug/l	1.25E-02 lbs/day
Endosulfan sulfate	4.69E+00 ug/l	1.25E-02 lbs/day
Endrin	3.83E+00 ug/l	1.02E-02 lbs/day
Endrin aldehyde	3.83E+00 ug/l	1.02E-02 lbs/day
Heptachlor	1.06E-03 ug/l	2.82E-06 lbs/day
Heptachlor epoxide		
PCB's		
PCB 1242 (Arochlor 1242)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1254 (Arochlor 1254)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1221 (Arochlor 1221)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1232 (Arochlor 1232)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1248 (Arochlor 1248)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1260 (Arochlor 1260)	2.22E-04 ug/l	5.92E-07 lbs/day
PCB-1016 (Arochlor 1016)	2.22E-04 ug/l	5.92E-07 lbs/day
Pesticide		
Toxaphene	3.68E-03 ug/l	9.82E-06 lbs/day
Metals		
Antimony	70.56 ug/l	0.19 lbs/day
Arsenic	248.79 ug/l	0.66 lbs/day
Asbestos	3.53E+07 ug/l	9.41E+04 lbs/day
Beryllium		
Cadmium		
Chromium (III)		
Chromium (VI)		
Copper	6552.10 ug/l	17.48 lbs/day
Cyanide	3528.05 ug/l	9.41 lbs/day
Lead	0.00	0.00
Mercury	0.71 ug/l	0.00 lbs/day
Nickel	3074.45 ug/l	8.20 lbs/day
Selenium	0.00	0.00
Silver	0.00	0.00
Thallium	8.57 ug/l	0.02 lbs/day
Zinc		

Dioxin

Dioxin (2,3,7,8-TCDD)	6.55E-08 ug/l	1.75E-10 lbs/day

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

	Class 4 Acute Agricultural ug/l	Class 3 Acute Aquatic Wildlife ug/l	Acute Toxics Drinking Water Source ug/l	Acute Toxics Wildlife ug/l	1C Acute Health Criteria ug/l	Acute Most Stringent ug/l	Class 3 Chronic Aquatic Wildlife ug/l
Aluminum		2260.2				2260.2	N/A
Antimony			70.6	21672.3		70.6	
Arsenic	504.0	1025.2	248.8		0.0	248.8	954.4
Barium					5040.1	5040.1	
Beryllium						0.0	
Cadmium	50.1	19.5			0.0	19.5	2.8
Chromium (III)		13388.4			0.0	13388.4	1064.9
Chromium (VI)	500.8	40.3			0.0	40.29	39.38
Copper	1004.8	117.4	6552.1			117.4	117.0
Cyanide		66.4	1108817.1			66.4	26.2
Iron		3017.5				3017.5	
Lead	500.8	996.8			0.0	500.8	61.7
Mercury		7.25	0.7	0.76	0.0	0.71	0.060
Nickel		3587.5	3074.4	23184.4		3074.4	662.7
Selenium	245.6	57.2			0.0	57.2	16.8
Silver		75.6			0.0	75.6	
Thallium			8.6	31.8		8.6	
Zinc		917.7				917.7	1531.5
Boron	3780.1					3780.1	

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]
[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l	
Aluminum	2260.2	N/A	
Antimony	70.56		
Arsenic	248.8	954.4	Acute Controls
Asbestos	3.53E+07		
Barium			
Beryllium			
Cadmium	19.5	2.8	
Chromium (III)	13388.4	1065	
Chromium (VI)	40.3	39.4	
Copper	117.4	117.0	

Cyanide	66.4	26.2	
Iron	3017.5		
Lead	500.8	61.7	
Mercury	0.706	0.060	
Nickel	3074.4	663	
Selenium	57.2	16.8	
Silver	75.6	N/A	
Thallium	8.6		
Zinc	917.7	1531.5	Acute Controls
Boron	3780.06		

Other Effluent Limitations are based upon R317-1.

E. coli 126.0 organisms per 100 ml

X. Antidegradation Considerations

The Utah Antidegradation Policy allows for degradation of existing quality where it is determined that such lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are protected [R317-2-3]. It has been determined that certain chemical parameters introduced by this discharge will cause an increase of the concentration of said parameters in the receiving waters. Under no conditions will the increase in concentration be allowed to interfere with existing instream water uses.

The antidegradation rules and procedures allow for modification of effluent limits less than those based strictly upon mass balance equations utilizing 100% of the assimilative capacity of the receiving water. Additional factors include considerations for "Blue-ribbon" fisheries, special recreational areas, threatened and endangered species, and drinking water sources.

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an Antidegradation Level II Review is required because the receiving water is a class 1C drinking water source.

XI. Colorado River Salinity Forum Considerations

Discharges in the Colorado River Basin are required to have their discharge at a TDS loading of less than 1.00 tons/day unless certain exemptions apply. Refer to the Forum's Guidelines for additional information allowing for an exceedence of this value.

XII. Summary Comments

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

XIII. Notice of UPDES Requirement

This Addendum to the Statement of Basis does not authorize any entity or party to discharge to the waters of the State of Utah. That authority is granted through a UPDES permit issued by the Utah Division of Water Quality. The numbers presented here may be changed as a function of other factors. Dischargers are strongly urged to contact the Permits Section for further information. Permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations provided that the values in this wasteload analysis [TMDL] are not compromised. See special provisions in Utah Water Quality Standards for adjustments in the Total Dissolved Solids values based upon background concentration.

THIS IS A DRAFT DOCUMENT

Utah Division of Water Quality
801-538-6052
File Name: Monticello_WLA_7-6-15

APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day	CBOD Coeff. FORCED (Kd)/day	CBOD Coeff. (Ka)T 1/day	REAER. Coeff. (Ka)20 (Ka)/day	REAER. Coeff. FORCED 1/day	REAER. Coeff. (Ka)T 1/day	NBOD Coeff. (Kn)20 1/day	NBOD Coeff. (Kn)T 1/day
2.000	0.000	2.000	59.157	0.000	59.157	0.400	0.400

Open Coeff. (K4)20 1/day	Open Coeff. (K4)T 1/day	NH3 LOSS (K5)20 1/day	NH3 (K5)T 1/day	NO2+NO3 LOSS (K6)20 1/day	NO2+NO3 (K6)T 1/day	TRC Decay K(Cl)20 1/day	TRC K(Cl)(T) 1/day
0.000	0.000	4.000	4.000	0.000	0.000	32.000	32.000

BENTHIC DEMAND (SOD)20 gm/m2/day	BENTHIC DEMAND (SOD)T gm/m2/day
1.000	1.000

K1 CBOD {theta}	K2 Reaer. {theta}	K3 NH3 {theta}	K4 Open {theta}	K5 NH3 Loss {theta}	K6 NO2+3 {theta}	K(Cl) TRC {theta}	S Benthic {theta}
1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.1

Antidegredation Review

An antidegradation review (ADR) was conducted to determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected. The Level I ADR evaluated the criteria of R317-2-3.5(b) and determined that a Level II antidegradation Review is required because the receiving waterbody is classsified as a 1C drinking water source.