Official Draft Public Notice Version May 24, 2013
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FACT SHEET STATEMENT OF BASIS
COALVILLE CITY CORPORATION WASTEWATER TREATMENT FACILITY
NEW PERMIT: DISCHARGE AND BIOSOLIDS
UPDES PERMIT NUMBER: UT0025976
UPDES BIOSOLIDS PERMIT NUMBER: UTL-0025976
MINOR MUNICIPAL

FACILITY CONTACTS

Person Name:	Dennis Gunn
Position:	Superintendent
Facility Name:	Coalville City Corporation Wastewater Treatment Facility
Mailing Address:	P.O. Box 188 Coalville, Utah 84017
Telephone:	(435) 901-2257, Plant (435) 336-5981, City Offices
Actual Address:	50 West 100 North, Coalville, Summit County

DESCRIPTION OF FACILITY

The Coalville City Wastewater Treatment Plant (CWWTP) was originally constructed in 1964 to serve the city of Coalville. It was upgraded in 1985, 1992 and 1995 and discharges to Chalk Creek from Outfall 001 located at 75 West 200 North, Coalville.

Coalville leases the land that the CWWTP was constructed on from the United States Bureau of Reclamation (USBOR). The 50 year lease expires in 2014 and the USBOR has elected to not renew the lease. Therefore, Coalville City purchased land to construct a new wastewater treatment facility to serve the community. This new facility is named the Coalville City Wastewater Treatment Facility (CWWTF) and will be constructed approximately ½ mile to the south of the existing treatment plant. It is anticipated that the plant will be operational October 2014. This permit is issued for the new treatment facility, the existing treatment facility is covered under UPDES Permit No. UT0021288.

The CWWTF treatment process consists of screening and grit removal, two parallel Modified Luzack-Ettinger (MLE) process trains, two secondary clarifiers and UV disinfection prior to discharge to an unnamed tributary to Chalk Creek. The facility has a maximum monthly design flow of 0.58 MGD with an average daily flow rate of 0.32 MGD. The outfall location will be located at latitude 40° 55' 13" and longitude of 111° 24'09".

DISCHARGE

DESCRIPTION OF DISCHARGE

Outfall	Description of Discharge Point
001	Located at latitude 40° 55' 13" and longitude of 111° 24' 09". The 15" PVC pipe discharges to an unnamed tributary of Chalk Creek, immediately above its junction with the Weber River and Echo Reservoir.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge is to an unnamed tributary of Chalk Creek, which flows into the Weber River just above Echo Reservoir. Chalk Creek and the Weber River are classified as 1C, 2B, 3A and 4 (UAC R317-2-13).

Class1C -Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.

Class 2B -Protected for secondary contact recreation such as boating, wading, or similar uses.

Class 3A -Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 -Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD_5), E. Coli, pH and percent removal for BOD_5 and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The dissolved oxygen and total ammonia limits are based upon the Wasteload Analysis. The oil and grease limitation is based on best professional judgment (BPJ). The Wasteload Analysis indicates that these limits will be protective of water quality standards. The permit limitations are:

Parameter	Effluent Limitations			
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	0.58	NA	NA	NA
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
E. Coli, No./100mL	126	158	NA	NA
Dissolved Oxygen, mg/L	NA	NA	5.0	NA
Total Ammonia, mg/L, Summer (July-Sept) Fall (Oct-Dec) Winter (Jan-Mar) Spring (Apr-June)	 6.1 7.1 5.9 6.7	 NA NA NA NA	 NA NA NA NA	 13.1 12.7 12.4 12.7
Oil & Grease, mg/L	NA	NA	NA	10
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The permit will require reports to be submitted monthly on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period.

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/c/	Continuous	Recorder	MGD
BOD_5, Influent d/ Effluent	2 x Monthly 2 x Monthly	Composite/Grab Composite/Grab	mg/L mg/L
TSS, Influent d/ Effluent	2 x Monthly 2 x Monthly	Composite/Grab Composite/Grab	mg/L mg/L
Dissolved Oxygen, mg/L	2 x Monthly	Grab	mg/L
E. Coli	2 x Monthly	Grab	No./100mL
Oil & Grease	When Sheen Observed	Grab	mg/L
pH	2 x Monthly	Grab	SU
Total Phosphorus	Monthly	Grab	mg/L
Total Nitrogen	Monthly	Grab	mg/L

a/ See Definitions, *Part VII*, 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.

FUTURE TMDL CONSIDERATIONS

This facility will discharge wastewater into an unnamed drainage which flows to Chalk Creek then to Echo Reservoir. Echo Reservoir is listed on Utah's 303(d) list of impaired waterbodies as defined by the Clean Water Act. Specifically, Echo Reservoir has been identified as impaired for total phosphorus (TP) and dissolved oxygen (DO). As required under federal regulations, a total maximum daily load (TMDL) will be developed for all 303(d) listed waters.

Based on the draft TMDL completed in 2006, the future load allocation for TP for this facility is 823 kg/yr. The former treatment plant, an extended aeration/activated sludge plant, discharged an average of 304 kg/yr of TP per year from 2010 to 2012. However, a new TMDL evaluation is underway for the reservoir and may require nutrient load reductions. This is likely to include a new load allocation for TP and may include a load allocation for nitrogen. To support the TMDL process, the facility will monitor monthly for TP and nitrogen.

BIOSOLIDS

BACKGROUND INFORMATION

This biosolids permit has presented challenges because we are dealing with the old (existing) water reclamation facility, and the new water reclamation facility at the same time. At the old plant, composting is done to meet Class A requirements for pathogens. It is DWQ's understanding that Coalville City wants to pursue a new direction once the new plant is up and running. At the new plant, when the solids (untreated sewage sludge) are dewatered, the solids will be hauled off site for further processing to produce biosolids (treated sewage sludge), or hauled to a landfill, due to odor concerns. It is also DWQ's understanding that the City of Coalville has public noticed a 'request for qualifications' to solicit interest in processing the solids to meet Class B biosolids standards for land application at low public contact sites (farms, rangeland or reclamation sites). Therefore, it is not known how the solids are going to be processed or beneficially used or disposed in the future. Therefore, the CWWTF will need to produce and submit a biosolids management plan to the Division of Water Quality to produce a Class A biosolid product*. Until the CWWTF submits a biosolids management plan, the CWWTF will not be permitted to produce a Class A biosolids product or produce material derived from solids or biosolids for sale or giveaway for land application. However, the CWWTF will be allowed to produce Class B biosolids for low public contact sites. And according to the *Code of Federal Regulations, Part 503-Standards for the use or disposal of sewage sludge* ; Class B biosolids can be met through one of two ways:

1. Testing for fecal coliform which must be less than 2,000,000 most probable number per gram of solids;
2. Or meeting a 'process to significantly reduce pathogens' (PSRP).

Since the Modified Ludzak-Ettinger (MLE) extended aeration process is not an approved PSRP at the new plant, nor is there any consistent data of fecal coliform testing, to prove this is a safe product to be sold or given away to the public, best professional judgment (BPJ) was used to determine that this permit will not allow any solids to be land applied without meeting a PSRP (please see fact sheet/statement of basis below for further information). However, under *40 CFR 503.13*, Exceptional Quality Biosolids Table 3 is listed in this permit should anyone want to know what requirements need to be met (with respect to heavy metals) for a product that can be distributed to the general public for home lawn and garden use. *

*If the solids or Class B biosolids are hauled to another facility to produce a Class A biosolids product, the facility must have a valid UPDES biosolids permit.

*The CWWTP has met Table 3, Exceptional Quality Heavy Metals requirements in every annual report submitted since 1994. Please see below to see the monitoring results for the 2011 annual report. It is anticipated that the CWWTF will continue to meet the heavy metals exceptional quality requirements in the years to come.

DESCRIPTION OF TREATMENT AND DISPOSAL

In 2011, (the current plant), the Coalville Wastewater Treatment Plant (CWWTP) produced 48 dry metric tons (DMT) of solids (sewage sludge) and sold or gave away (with the addition of green waste) 12 DMT of compost to the public as a Class A product. Another 40 DMT was disposed at the Summit County Landfill. At this time, the CWWTF does not plan to produce any Class A biosolids, but may land apply Class B solids at agronomic rates according to their current permit.

At the new plant, the solids will be stabilized with the Modified Ludzak-Ettinger (MLE) extended aeration process in an oxidation ditch with a mean cell residence time of about 15 days. After stabilization, the solids are pumped from the oxidation ditch to an aerated covered solids holding tank which has the capacity to hold the solids for an additional 20 days which gives the operator more flexibility with solids management. From the holding tank, the solids will be de-watered with a screw press to about 25% solids and will then be hauled off site, either to a landfill or another site for further processing due to odor concerns.

This permit will allow the CWWTF to land apply Class B biosolids with respect to pathogens from the new plant, if they can meet a 'process to significantly reduce pathogens' off site, prior to land application.

FUTURE BENEFICIAL USE AND DISPOSAL METHODS AT THE CWWTF

If the CWWTF plans to meet Class A standards (with respect to pathogens) for sale or give away to the public for home lawn and garden use (or other high public contact sites, i.e., parks, athletic

fields, golf courses, etc.,) or change the PSRP for low public contact sites, the CWWTF will be required to notify the Director of the Division of Water Quality (Division Director), and the Biosolids Coordinator of Region VIII of the EPA, at least 180 days prior to any changes regarding the beneficial use or disposal of the solids.

BIOSOLIDS LIMITATIONS AND SELF-MONITORING REQUIREMENTS

The self-monitoring requirements are based upon the amount of biosolids disposed per year and shall be monitored according to the chart below. At a minimum, all metals, pathogens and applicable vector attraction reduction requirements shall be monitored according to *40 CFR 503.16,(a)(1).*

Minimum Frequency of Monitoring	
Dry Metric Tons (DMT) of Biosolids Disposed Per Year	Monitoring Frequency
> 0 to < 290, DMT	Once per year
> 290 to < 1,500, DMT	Four times per year

Since the CWWTF disposed 62 DMT of biosolids and solids in 2011, the CWWTF will only need to monitor the biosolids once a year for the parameters listed below.

Landfill Monitoring

Prior to disposal in a landfill all biosolids must pass a paint filter test (to determine if the biosolids exhibit free liquid). If the solids do not pass a paint filter test, the biosolids cannot be disposed of in the landfill.

Heavy Metals Monitoring

The CWWTF is required to sample for heavy metals prior to the time the biosolids are sold or given away, or land applied for land reclamation purposes.

Pathogen Monitoring for Class B Biosolids

The biosolids must meet a PSRP, or pass the *fecal* coliform testing requirements. If the biosolids have not met a PSRP, or pass the testing requirements, the biosolids cannot be used for daily cover at a landfill, or final cover for landfill reclamation, and must be disposed of, in the landfill.

Vector Attraction Reduction Monitoring

The biosolids must be monitored to meet vector attraction reduction (VAR) requirements for time and temperature. If the biosolids do not meet the VAR requirements, the biosolids cannot be used for daily cover, or final cover for landfill reclamation, and must be disposed in the landfill.

MONITORING DATA (PATHOGENS)

The CWWTP had the choice to sample for fecal coliform or *Salmonella*. The CWWTP chose to

sample for *Salmonella*. Of the eight samples, all eight must be below three most probable number per four grams of solids. The monitoring data is below.

CWWTP *Salmonella* Monitoring Data, 2011	
Geo-mean of the eight samples.	Maximum of six samples, Most Probable Number Per Gram
<1.38	<2.40
All samples must be less than three most probable number per four grams of total solids	

MONITORING DATA (HEAVY METALS)

The CWWTP was required to sample once for heavy metals. The monitoring data is below.

Heavy Metals	CWWTP 2011, Yearly Average mg/kg	CWWTP 2011, Yearly Maximum mg/kg	*40 CFR 503.13*,Table 3, Exceptional Quality Biosolids Table mg/kg
Total Arsenic	4.5	4.5	41.0
Total Cadmium	1.07	1.07	39.0
Total Copper	226.0	226.0	1500.0
Total Lead	<27.0	<27.0	300.0
Total Mercury	0.385	0.385	17.0
Total Molybdenum	<10.8	<10.8	N/A (daily max, 75.0 mg/kg)
Total Nickel	12.1	12.1	420.0
Total Selenium	<3.54	3.0	100.0
Total Zinc	360.0	360.0	2800.0

LIMITATIONS

HEAVY METALS

Class A Biosolids for Low Public Contact Sites (with respect to heavy metals)
The intent of the heavy metals regulations of Table 3, *40 CFR 503.13* is to ensure the heavy metals do not build up in the soil in to the point where the heavy metals become phytotoxic to plants. The permittee will be required to produce an information sheet (see Part III.D of the permit) to be handed out to all people who are receiving and land applying Class A biosolids with respect to heavy metals. If the instructions of the information sheet are followed to any reasonable degree, the Class A biosolids will be able to be land applied year after year, to the same high public contact sites without any deleterious effects to the environment. The information sheet must be provided to the public, because the permittee is not required, nor able to track the quantity of Class A biosolids that are land applied to low public contact sites.

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

Class B Requirements With Regards to Heavy Metals
If the biosolids are to be land applied to agricultural land, forest land, a public contact site or a reclamation site it must meet at all times:

> The maximum heavy metals listed in Table 1 and the heavy metals loading rates in Table 2; or
>
> The maximum heavy metals in Table 1 and the monthly heavy metals concentrations in Table 3.
>
> If the biosolids do not meet these requirements they cannot be land applied.

40 CFR 503.13, Tables 1, 2, and 3 of Heavy Metal Limitations

Heavy Metals	Table 1	Table 2	Table 3
All heavy metals concentrations shall be measured and reported	Daily Maximum mg/Kg a/b/c/	Cumulative Loading Rate Kg/Ha a/	Monthly Average Concentration mg/Kg a/b/c/d/
Total Arsenic	75	41	41
Total Cadmium	85	39	39
Total Copper	4300	1500	1500
Total Lead	840	300	300
Total Mercury	57	17	17
Total Molybdenum	75	N/A	N/A
Total Nickel	420	420	420
Total Selenium	100	100	100
Total Zinc	7500	2800	2800

a/ See Part V. of the permit for definition of terms.

b/ The limitations represent the maximum allowable levels of heavy metals in any biosolids intended for land application.

c/ Any violation of these limitations shall be reported in accordance with the requirements of Part III.G.1, 2, 3 and 4 of the permit.

d/ These limitations represent the maximum allowable levels of heavy metals based on an average of all samples taken during a 30-day period.

PATHOGENS

Class B Requirements for Agriculture and Land Reclamation Use

Under *40 CFR 503.32 (b)(3), Appendix B.2.* CWWTF must meet a process to significantly reduce pathogens to meet Class B standards. CWWTF intends to meet a process to significantly reduce

pathogens by using the air drying method of pathogen reduction. The biosolids are applied to an impervious surface and dried at a depth of no more than 9 inches (23 cm) deep. The biosolids are allowed to dry for a minimum of 3 months. During 2 of the 3 months, the ambient average daily temperature is above 32° F (0° C).

Vector Attraction Reduction
To meet vector attraction reduction requirements the solids need to be equal to or greater than 75% total solids when primary solids are not present prior to land application *503.33(b)(7)*.

Record Keeping
The record keeping requirements from *40 CFR 503.17* are included under Part III.F. of the permit. The amount of time the records need to be retained is dependent upon the quality of the biosolids with regard to the metals concentrations. If the biosolids exceed Table 3 values for any parameter that are land applied to a site, that site thereafter is subject to the heavy metals loading rates in Table 2. Records for those sites are to be retained in perpetuity.

Reporting
CWWTF will be required to report annually as required in *40 CFR 503.18.* This report is to include the results of all monitoring performed in accordance with Part III.D. of the permit, information on management practices, land application sites, and certifications will be due no later than February 19 of each year. Each report is for the previous calendar year.

STORM WATER

The *Utah Administrative Code (UAC) R-317-8-3* requires storm water permit provisions to include the development of a storm water pollution prevention plan for waste water treatment facilities if the facility meets one or both of the following criteria:

1. waste water treatment facilities with a design flow of 1.0 MGD or greater, and/or,
2. waste water treatment facilities with an approved pretreatment program as described in *40CFR Part 403,*

Coalville City does not meet the above criteria; therefore this permit does not include storm water provisions. However, the permit does include a storm water re-opener provision.

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 III 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 III 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. It is required, as per *UAC R317-8-8.8(4)(c)*, that the permittee submit for review and public notice any local limits that are developed to the Division of Water Quality for review.

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 permittee is a minor municipal facility that discharges treated effluent, in which toxicity is neither an existing concern, nor likely to be present in the discharge. The potential for toxicity is not deemed sufficient to require biomonitoring or to include whole effluent toxicity (WET) limits because there are no present or anticipated industrial dischargers on the system. The permittee anticipates the waste stream to continue to be from household or domestic origin only. Based on these considerations and the permitting authority's best professional judgment, there is no reasonable potential for toxicity in the permittee's discharge *(per State of Utah Permitting and Enforcement Guidance Document for WET Control)*. As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit at any time in the future should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

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

Drafted by:
Kim Shelley, Discharge
Mark Schmitz, Biosolids
Utah Division of Water Quality

PUBLIC NOTICE

Began:
Ended:
Public Noticed in The Summit County Bee

VICINITY MAP
N.T.S

New Coalville WWTF Location

J-U-B ENGINEERS, INC.

J-U-B COMPANIES | THE LANGDON GROUP | GATEWAY MAPPING INC.

August 29, 2012

Mr. William Damery
Water Quality Management Manager
Division of Water Quality
Utah Department of Environmental Quality
PO Box 144870
Salt Lake City, UT 84114-4870

Re: Coalville City Wastewater Treatment Facility
Revision to Antidegradation Review Flow

Dear Bill,

Earlier this year the City of Coalville conducted a Level II Antidegradation Review, ADR, as part of the permitting process and NEPA document for a new wastewater treatment facility, WWTF. The ADR considered an effluent flow of 0.50 MGD for the proposed facility. The basis of this flow was an average daily flow estimate for preliminary facility layout.

Since this time, the design criteria for the proposed facility have been modified according to recent operating data. Through recent discussions with you and your staff, we have also learned that it would be preferable to conduct the ADR based on a maximum daily flow rather than annual average daily flow. The following table shows the design flow conditions for the new facility:

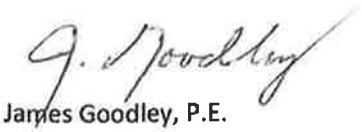
Design Condition	R317-3 Reference	Units	Design Condition (2030)
Minimum Day	1.1.G.5	mgd	0.19
Annual Average Day	1.1.G.1	mgd	0.29
Maximum Month	1.1.G.2	mgd	0.58
Peak Day	1.1.G.3	mgd	0.77
Peak Hour	1.1.G.4	mgd	1.46

We are therefore requesting that the ADR for the proposed Coalville WWTF be corrected to show a maximum daily flow of 0.77 MGD. It is understood that, should this request be granted, this flow will now serve as the flow basis for the ADR, Wasteload Analysis and UPDES Permit for the proposed WWTF.

We appreciate your assistance in this matter. Should you have any further questions, please contact me at 801-547-0393.

a 466 North 900 West, Kaysville UT 84037 p 801 547 0393 f 801 547 0397 w www.jub.com

Sincerely,
J-U-B ENGINEERS, Inc.



James Goodley, P.E.
Project Engineer

Cc: Lisa Nelson, DWQ
Kim Shelley, DWQ
Trevor Lindley, J-U-B