

Utah Division of Water Quality
Salt Lake City, Utah

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY

Discharging Facility: Pacificorp Gatsby
UPDES No: UT-UT0000116
Current Flow: 3.70 MGD Design Flow

Receiving Water: Ditch=>City Drain=>Sewage Canal=>Farmington Bay
Stream Classification: 2B, 3C, 3D
Stream Flows [cfs]:
36.0 Summer (July-Sept) 20th Percentile
36.0 Fall (Oct-Dec) 20th Percentile
36.0 Winter (Jan-Mar) 20th Percentile
36.0 Spring (Apr-June) 20th Percentile
56.0 Average
Stream TDS Values:
2205.0 Summer (July-Sept) Average
2205.0 Fall (Oct-Dec) Average
2205.0 Winter (Jan-Mar) Average
2205.0 Spring (Apr-June) Average

Effluent Limits:		WQ Standard:
Flow, MGD:	3.70 MGD Design Flow	
BOD, mg/l:	25.0 Summer	5.0 Indicator
Dissolved Oxygen, mg/l	None Summer	Discharge to 3E Ditch
TNH3, Chronic, mg/l:	3.0 Summer	Set at Sewage Canal Background
TDS, mg/l:	None Summer	No Irrigation Standard

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

Level 1 Antidegradation Level Completed: Level II Review is not required. Simple renewal - no increase in concentration or load.

The Gatsby Plant discharge to a 3E ditch (no numeric standards), which then flows through a series of ditches and drainage canals for approximately 10 miles before entering Farmington Bay (2B, 3C, 3D). Normally, a discharge to a 3E water would not require a WLA, as no numeric standards exist. In this case, a wasteload was completed to assess the potential impacts to the downstream water uses. The approach used was to use background data from Station # 4991050 (Sewage Canal @ Cudahy Lane) the only station for which data were available (Cudahe Lane) and calculate effluent limits for the Gatsby discharge as if the Sewage Canal were classed 2B, 3C, 3D. The reasoning being that if instream standards were met here, they would be protective of downstream uses.

Date: 11/8/2012

Permit Writer:

WLA by:

WQM Sec. Approval:

TMDL Sec. Approval:

Neil M. Wharton 11/8/12

Utah Division of Water Quality
Salt Lake City, Utah

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis

8-Nov-12
4:00 PM

Facilities: Pacificorp Gatsby
Discharging to: Ditch=>City Drain=>Sewage Canal=>Farmington Bay

UPDES No: UT-UT0000116

I. Introduction

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

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

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

II. Receiving Water and Stream Classification

Ditch=>City Drain=>Sewage Canal= 2B, 3C, 3D
Antidegradation Review: Level I review completed. Level II review not required.

III. Numeric Stream Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average) 0.019 mg/l (1 Hour Average)
Chronic Dissolved Oxygen (DO)	5.00 mg/l (30 Day Average) N/A mg/l (7Day Average) 3.00 mg/l (1 Day Average)
Maximum Total Dissolved Solids	N/A mg/l 3ackground

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Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aluminum	87.00 ug/l**	2.684 lbs/day	750.00	ug/l	23.139 lbs/day
Arsenic	190.00 ug/l	5.862 lbs/day	340.00	ug/l	10.490 lbs/day
Cadmium	0.93 ug/l	0.029 lbs/day	11.67	ug/l	0.360 lbs/day
Chromium III	338.75 ug/l	10.451 lbs/day	7087.22	ug/l	218.654 lbs/day
ChromiumVI	11.00 ug/l	0.339 lbs/day	16.00	ug/l	0.494 lbs/day
Copper	38.91 ug/l	1.200 lbs/day	67.61	ug/l	2.086 lbs/day
Iron			1000.00	ug/l	30.852 lbs/day
Lead	26.71 ug/l	0.824 lbs/day	685.39	ug/l	21.145 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.074 lbs/day
Nickel	214.50 ug/l	6.618 lbs/day	1929.30	ug/l	59.523 lbs/day
Selenium	4.60 ug/l	0.142 lbs/day	20.00	ug/l	0.617 lbs/day
Silver	N/A ug/l	N/A lbs/day	67.06	ug/l	2.069 lbs/day
Zinc	493.77 ug/l	15.234 lbs/day	493.77	ug/l	15.234 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 531.92 mg/l as CaCO₃

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aldrin			1.500	ug/l	0.046 lbs/day
Chlordane	0.004 ug/l	0.967 lbs/day	1.200	ug/l	0.037 lbs/day
DDT, DDE	0.001 ug/l	0.225 lbs/day	0.550	ug/l	0.017 lbs/day
Dieldrin	0.002 ug/l	0.427 lbs/day	1.250	ug/l	0.039 lbs/day
Endosulfan	0.056 ug/l	12.594 lbs/day	0.110	ug/l	0.003 lbs/day
Endrin	0.002 ug/l	0.517 lbs/day	0.090	ug/l	0.003 lbs/day
Guthion			0.010	ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.855 lbs/day	0.260	ug/l	0.008 lbs/day
Lindane	0.080 ug/l	17.991 lbs/day	1.000	ug/l	0.031 lbs/day
Methoxychlor			0.030	ug/l	0.001 lbs/day
Mirex			0.010	ug/l	0.000 lbs/day
Parathion			0.040	ug/l	0.001 lbs/day
PCB's	0.014 ug/l	3.148 lbs/day	2.000	ug/l	0.062 lbs/day
Pentachlorophenol	13.00 ug/l	2923.594 lbs/day	20.000	ug/l	0.617 lbs/day
Toxephene	0.0002 ug/l	0.045 lbs/day	0.7300	ug/l	0.023 lbs/day

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IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			ug/l	lbs/day
Boron			ug/l	lbs/day
Cadmium			ug/l	#VALUE!
Chromium			ug/l	lbs/day
Copper			ug/l	lbs/day
Lead			ug/l	lbs/day
Selenium			ug/l	lbs/day
TDS, Summer			mg/l	tons/day

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

Metals	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3) to Nitrates as N			ug/l	lbs/day

Chlorophenoxy Herbicides

2,4-D	ug/l	lbs/day
2,4,5-TP	ug/l	lbs/day
Endrin	ug/l	lbs/day
ocyclohexane (Lindane)	ug/l	lbs/day
Methoxychlor	ug/l	lbs/day
Toxaphene	ug/l	lbs/day

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

Toxic Organics	Maximum Conc., ug/l - Acute Standards			
	Class 1C		Class 3A, 3B	
	[2 Liters/Day for 70 Kg Person over 70 Yr.]		[6.5 g for 70 Kg Person over 70 Yr.]	
Acenaphthene	ug/l	lbs/day	2700.0 ug/l	607.21 lbs/day
Acrolein	ug/l	lbs/day	780.0 ug/l	175.42 lbs/day
Acrylonitrile	ug/l	lbs/day	0.7 ug/l	0.15 lbs/day
Benzene	ug/l	lbs/day	71.0 ug/l	15.97 lbs/day
Benzidine	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Carbon tetrachloride	ug/l	lbs/day	4.4 ug/l	0.99 lbs/day
Chlorobenzene	ug/l	lbs/day	21000.0 ug/l	4722.73 lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Dichloroethane	ug/l	lbs/day	99.0 ug/l	22.26 lbs/day

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1,1,1-Trichloroethane				
Hexachloroethane	ug/l	lbs/day	8.9 ug/l	2.00 lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	ug/l	lbs/day	42.0 ug/l	9.45 lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day	11.0 ug/l	2.47 lbs/day
Chloroethane			0.0 ug/l	0.00 lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	1.4 ug/l	0.31 lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2-Chloronaphthalene	ug/l	lbs/day	4300.0 ug/l	967.03 lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	6.5 ug/l	1.46 lbs/day
p-Chloro-m-cresol			0.0 ug/l	0.00 lbs/day
Chloroform (HM)	ug/l	lbs/day	470.0 ug/l	105.70 lbs/day
2-Chlorophenol	ug/l	lbs/day	400.0 ug/l	89.96 lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	17000.0 ug/l	3823.16 lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	584.72 lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	2600.0 ug/l	584.72 lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	0.1 ug/l	0.02 lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	3.2 ug/l	0.72 lbs/day
1,2-trans-Dichloroethylene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	790.0 ug/l	177.66 lbs/day
1,2-Dichloropropane	ug/l	lbs/day	39.0 ug/l	8.77 lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	1700.0 ug/l	382.32 lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	2300.0 ug/l	517.25 lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	9.1 ug/l	2.05 lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	0.5 ug/l	0.12 lbs/day
Ethylbenzene	ug/l	lbs/day	29000.0 ug/l	6521.86 lbs/day
Fluoranthene	ug/l	lbs/day	370.0 ug/l	83.21 lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) ether	ug/l	lbs/day	170000.0 ug/l	38231.61 lbs/day
Bis(2-chloroethoxy) methane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methylene chloride (HM)	ug/l	lbs/day	1600.0 ug/l	359.83 lbs/day
Methyl chloride (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Methyl bromide (HM)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Bromoform (HM)	ug/l	lbs/day	360.0 ug/l	80.96 lbs/day
Dichlorobromomethane	ug/l	lbs/day	22.0 ug/l	4.95 lbs/day
Chlorodibromomethane	ug/l	lbs/day	34.0 ug/l	7.65 lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	50.0 ug/l	11.24 lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day	17000.0 ug/l	3823.16 lbs/day
Isophorone	ug/l	lbs/day	600.0 ug/l	134.94 lbs/day
Naphthalene				
Nitrobenzene	ug/l	lbs/day	1900.0 ug/l	427.29 lbs/day
2-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4-Nitrophenol	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	14000.0 ug/l	3148.49 lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	765.0 ug/l	172.04 lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	8.1 ug/l	1.82 lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	16.0 ug/l	3.60 lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day	1.4 ug/l	0.31 lbs/day
Pentachlorophenol	ug/l	lbs/day	8.2 ug/l	1.84 lbs/day

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Phenol	ug/l	lbs/day	4.6E+06 ug/l	1.03E+06 lbs/day
Bis(2-ethylhexyl)phthala	ug/l	lbs/day	5.9 ug/l	1.33 lbs/day
Butyl benzyl phthalate	ug/l	lbs/day	5200.0 ug/l	1169.44 lbs/day
Di-n-butyl phthalate	ug/l	lbs/day	12000.0 ug/l	2698.70 lbs/day
Di-n-octyl phthlate				
Diethyl phthalate	ug/l	lbs/day	120000.0 ug/l	26987.02 lbs/day
Dimethyl phthlate	ug/l	lbs/day	2.9E+06 ug/l	6.52E+05 lbs/day
Benzo(a)anthracene (P/	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Benzo(b)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Benzo(k)fluoranthene (F	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Chrysene (PAH)	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dibenzo(a,h)anthracene	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Indeno(1,2,3-cd)pyrene	ug/l	lbs/day	0.0 ug/l	0.01 lbs/day
Pyrene (PAH)	ug/l	lbs/day	11000.0 ug/l	2473.81 lbs/day
Tetrachloroethylene	ug/l	lbs/day	8.9 ug/l	2.00 lbs/day
Toluene	ug/l	lbs/day	200000 ug/l	44978.36 lbs/day
Trichloroethylene	ug/l	lbs/day	81.0 ug/l	18.22 lbs/day
Vinyl chloride	ug/l	lbs/day	525.0 ug/l	118.07 lbs/day
				lbs/day
				lbs/day
Pesticides				
Aldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Dieldrin	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Chlordane	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDT	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDE	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
4,4'-DDD	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
alpha-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.45 lbs/day
beta-Endosulfan	ug/l	lbs/day	2.0 ug/l	0.45 lbs/day
Endosulfan sulfate	ug/l	lbs/day	2.0 ug/l	0.45 lbs/day
Endrin	ug/l	lbs/day	0.8 ug/l	0.18 lbs/day
Endrin aldehyde	ug/l	lbs/day	0.8 ug/l	0.18 lbs/day
Heptachlor	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Heptachlor epoxide				
PCB's				
PCB 1242 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1254 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1221 (Arochlor 122	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1232 (Arochlor 123	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1248 (Arochlor 124	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1260 (Arochlor 126	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
PCB-1016 (Arochlor 101	ug/l	lbs/day	0.0 ug/l	0.00 lbs/day
Pesticide				
Toxaphene	ug/l		0.0 ug/l	0.00 lbs/day
Dioxin				
Dioxin (2,3,7,8-TCDD)	ug/l	lbs/day		

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Metals

Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	4300.00 ug/l	967.03 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	2.2E+05 ug/l	49476.20 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.03 lbs/day
Nickel			4600.00 ug/l	1034.50 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			6.30 ug/l	1.42 lbs/day
Zinc				

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

VII. Mathematical Modeling of Stream Quality

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

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

(1) The Utah River Model, Utah Division of Water Quality, 1992. Based upon STREAMDO IV (Region VIII) and Supplemental Ammonia Toxicity Models; EPA Region VIII, Sept. 1990 and QUAL2E (EPA, Athens, GA).

(2) Utah Ammonia/Chlorine Model, Utah Division of Water Quality, 1992.

(3) AMMTOX Model, University of Colorado, Center of Limnology, and EPA Region 8

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

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

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

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

VIII. Modeling Information

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

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

Other Conditions

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

Model Inputs

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

**Current Upstream Information
Stream
Critical**

Sewage Canal at Cudahay Lane

	Low Flow	Temp.	pH	T-NH3	BOD5	DO	TRC	TDS
	cfs	Deg. C		mg/l as N	mg/l	mg/l	mg/l	mg/l
Summer (Irrig. Season)	36.0	20.0	7.6	3.00	10.00	6.92	0.00	2205.0
Fall	36.0	12.0	7.6	3.00	10.00	---	0.00	2205.0
Winter	36.0	8.0	7.6	3.00	10.00	---	0.00	2205.0
Spring	36.0	12.0	7.6	3.00	10.00	---	0.00	2205.0
Dissolved Metals	Al	As	Cd	CrIII	CrVI	Copper	Fe	Pb
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
All Seasons	15.00	0.53*	0.50	0.53*	2.65*	12.00	121.0	1.50
Dissolved Metals	Hg	Ni	Se	Ag	Zn	Boron		
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
All Seasons	0.0000	0.53*	3.80	0.1*	60.00	10.0		* 1/2 MDL

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Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	3.70000	17.0	1757.00	27.10332
Fall	3.70000	15.0		
Winter	3.70000	12.0		
Spring	3.70000	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	3.700 MGD	5.724 cfs
Fall	3.700 MGD	5.724 cfs
Winter	3.700 MGD	5.724 cfs
Spring	3.700 MGD	5.724 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 3.7 MGD. If the discharger is allowed to have a flow greater than 3.7 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

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

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

WET Requirements	LC50 >	53.0% Effluent	[Acute]
	IC25 >	13.7% Effluent	[Chronic]

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

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

Season	Concentration	
Summer	25.0 mg/l as BOD5	771.3 lbs/day
Fall	25.0 mg/l as BOD5	771.3 lbs/day
Winter	25.0 mg/l as BOD5	771.3 lbs/day
Spring	25.0 mg/l as BOD5	771.3 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:

Dissolved oxygen effluent limit not appropriate as discharge is to a 3E ditch that flows for approximately 10 miles.

Effluent Limitation for Total Ammonia based upon Water Quality Standards

Ammonia limit was set to the mean background ammonia (3.0 mg/l) in Sewage Canal.

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.%.

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Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards

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

Residual Chlorine effluent limit not appropriate as discharge is to a 3E ditch that flows for approximately 10 miles. Residual chlorine is dissipated before reaching Farmington Bay

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season	Concentration	Load
Summer	Maximum, Acute	mg/l #VALUE! tons/day
Fall	Maximum, Acute	mg/l #VALUE! tons/day
Winter	Maximum, Acute	mg/l #VALUE! tons/day
Spring	4 Day Avg. - Chronic	mg/l #VALUE! 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 531.92 mg/l):

	4 Day Average		1 Hour Average		
	Concentration	Load	Concentration	Load	
Aluminum	N/A	N/A	3,061.4	ug/l	94.4 lbs/day
Arsenic	1,379.99 ug/l	27.5 lbs/day	1,406.7	ug/l	43.4 lbs/day
Cadmium	3.66 ug/l	0.1 lbs/day	46.8	ug/l	1.4 lbs/day
Chromium III	2,464.26 ug/l	49.1 lbs/day	29,372.0	ug/l	906.2 lbs/day
Chromium VI	55.18 ug/l	1.1 lbs/day	53.8	ug/l	1.7 lbs/day
Copper	208.16 ug/l	4.2 lbs/day	242.5	ug/l	7.5 lbs/day
Iron	N/A	N/A	3,764.2	ug/l	116.1 lbs/day
Lead	185.26 ug/l	3.7 lbs/day	2,836.0	ug/l	87.5 lbs/day
Mercury	0.09 ug/l	0.0 lbs/day	9.9	ug/l	0.3 lbs/day
Nickel	1,558.59 ug/l	31.1 lbs/day	7,993.9	ug/l	246.6 lbs/day
Selenium	9.63 ug/l	0.2 lbs/day	70.9	ug/l	2.2 lbs/day
Silver	N/A ug/l	N/A lbs/day	277.9	ug/l	8.6 lbs/day
Zinc	3,221.95 ug/l	64.3 lbs/day	1,857.9	ug/l	57.3 lbs/day
Cyanide	37.90 ug/l	0.8 lbs/day	91.2	ug/l	2.8 lbs/day

Effluent Limitations for Heat/Temperature based upon Water Quality Standards

Summer	100.0 Deg. C.	212.0 Deg. F
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Fall	100.0 Deg. C.	212.0 Deg. F
Winter	100.0 Deg. C.	212.0 Deg. F
Spring	100.0 Deg. C.	212.0 Deg. F

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

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

	4 Day Average		1 Hour Average		Load
	Concentration	Load	Concentration	Load	
Aldrin			1.5E+00	ug/l	7.16E-02 lbs/day
Chlordane	4.30E-03 ug/l	1.33E-01 lbs/day	1.2E+00	ug/l	5.73E-02 lbs/day
DDT, DDE	1.00E-03 ug/l	3.09E-02 lbs/day	5.5E-01	ug/l	2.63E-02 lbs/day
Dieldrin	1.90E-03 ug/l	5.86E-02 lbs/day	1.3E+00	ug/l	5.97E-02 lbs/day
Endosulfan	5.60E-02 ug/l	1.73E+00 lbs/day	1.1E-01	ug/l	5.25E-03 lbs/day
Endrin	2.30E-03 ug/l	7.10E-02 lbs/day	9.0E-02	ug/l	4.30E-03 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	4.77E-04 lbs/day
Heptachlor	3.80E-03 ug/l	1.17E-01 lbs/day	2.6E-01	ug/l	1.24E-02 lbs/day
Lindane	8.00E-02 ug/l	2.47E+00 lbs/day	1.0E+00	ug/l	4.77E-02 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	1.43E-03 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	4.77E-04 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	1.91E-03 lbs/day
PCB's	1.40E-02 ug/l	4.32E-01 lbs/day	2.0E+00	ug/l	9.55E-02 lbs/day
Pentachlorophenol	1.30E+01 ug/l	4.01E+02 lbs/day	2.0E+01	ug/l	9.55E-01 lbs/day
Toxephene	2.00E-04 ug/l	6.17E-03 lbs/day	7.3E-01	ug/l	3.48E-02 lbs/day

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

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

	1 Hour Average	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	154.3 lbs/day
Nitrates as N	4.0 mg/l	123.4 lbs/day
Total Phosphorus as P	0.05 mg/l	1.5 lbs/day
Total Suspended Solids	90.0 mg/l	2776.7 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	1.97E+04 ug/l	6.07E+02 lbs/day
Acrolein	5.69E+03 ug/l	1.75E+02 lbs/day
Acrylonitrile	4.81E+00 ug/l	1.48E-01 lbs/day
Benzene	5.18E+02 ug/l	1.60E+01 lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	3.21E+01 ug/l	9.90E-01 lbs/day
Chlorobenzene	1.53E+05 ug/l	4.72E+03 lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	5.61E-03 ug/l	1.73E-04 lbs/day
1,2-Dichloroethane	7.22E+02 ug/l	2.23E+01 lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	6.49E+01 ug/l	2.00E+00 lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	3.06E+02 ug/l	9.45E+00 lbs/day
1,1,2,2-Tetrachloroethane	8.02E+01 ug/l	2.47E+00 lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	1.02E+01 ug/l	3.15E-01 lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	3.13E+04 ug/l	9.67E+02 lbs/day
2,4,6-Trichlorophenol	4.74E+01 ug/l	1.46E+00 lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	3.43E+03 ug/l	1.06E+02 lbs/day
2-Chlorophenol	2.92E+03 ug/l	9.00E+01 lbs/day
1,2-Dichlorobenzene	1.24E+05 ug/l	3.82E+03 lbs/day
1,3-Dichlorobenzene	1.90E+04 ug/l	5.85E+02 lbs/day

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1,4-Dichlorobenzene	1.90E+04 ug/l	5.85E+02 lbs/day
3,3'-Dichlorobenzidine	5.61E-01 ug/l	1.73E-02 lbs/day
1,1-Dichloroethylene	2.33E+01 ug/l	7.20E-01 lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	5.76E+03 ug/l	1.78E+02 lbs/day
1,2-Dichloropropane	2.84E+02 ug/l	8.77E+00 lbs/day
1,3-Dichloropropylene	1.24E+04 ug/l	3.82E+02 lbs/day
2,4-Dimethylphenol	1.68E+04 ug/l	5.17E+02 lbs/day
2,4-Dinitrotoluene	6.63E+01 ug/l	2.05E+00 lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	3.94E+00 ug/l	1.21E-01 lbs/day
Ethylbenzene	2.11E+05 ug/l	6.52E+03 lbs/day
Fluoranthene	2.70E+03 ug/l	8.32E+01 lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	1.24E+06 ug/l	3.82E+04 lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	1.17E+04 ug/l	3.60E+02 lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	2.62E+03 ug/l	8.10E+01 lbs/day
Dichlorobromomethane(HM)	1.60E+02 ug/l	4.95E+00 lbs/day
Chlorodibromomethane (HM)	2.48E+02 ug/l	7.65E+00 lbs/day
Hexachlorocyclopentadiene	1.24E+05 ug/l	3.82E+03 lbs/day
Isophorone	4.37E+03 ug/l	1.35E+02 lbs/day
Naphthalene		
Nitrobenzene	1.38E+04 ug/l	4.27E+02 lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	1.02E+05 ug/l	3.15E+03 lbs/day
4,6-Dinitro-o-cresol	5.58E+03 ug/l	1.72E+02 lbs/day
N-Nitrosodimethylamine	5.90E+01 ug/l	1.82E+00 lbs/day
N-Nitrosodiphenylamine	1.17E+02 ug/l	3.60E+00 lbs/day
N-Nitrosodi-n-propylamine	1.02E+01 ug/l	3.15E-01 lbs/day
Pentachlorophenol	5.98E+01 ug/l	1.84E+00 lbs/day
Phenol	3.35E+07 ug/l	1.03E+06 lbs/day
Bis(2-ethylhexyl)phthalate	4.30E+01 ug/l	1.33E+00 lbs/day
Butyl benzyl phthalate	3.79E+04 ug/l	1.17E+03 lbs/day
Di-n-butyl phthalate	8.75E+04 ug/l	2.70E+03 lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	8.75E+05 ug/l	2.70E+04 lbs/day
Dimethyl phthlate	2.11E+07 ug/l	6.52E+05 lbs/day
Benzo(a)anthracene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Benzo(a)pyrene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Benzo(b)fluoranthene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Benzo(k)fluoranthene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Chrysene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	2.26E-01 ug/l	6.97E-03 lbs/day

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Pyrene (PAH)	8.02E+04 ug/l	2.47E+03 lbs/day
Tetrachloroethylene	6.49E+01 ug/l	2.00E+00 lbs/day
Toluene	1.46E+06 ug/l	4.50E+04 lbs/day
Trichloroethylene	5.90E+02 ug/l	1.82E+01 lbs/day
Vinyl chloride	3.83E+03 ug/l	1.18E+02 lbs/day

Pesticides

Aldrin	1.02E-03 ug/l	3.15E-05 lbs/day
Dieldrin	1.02E-03 ug/l	3.15E-05 lbs/day
Chlordane	4.30E-03 ug/l	1.33E-04 lbs/day
4,4'-DDT	4.30E-03 ug/l	1.33E-04 lbs/day
4,4'-DDE	4.30E-03 ug/l	1.33E-04 lbs/day
4,4'-DDD	6.12E-03 ug/l	1.89E-04 lbs/day
alpha-Endosulfan	1.46E+01 ug/l	4.50E-01 lbs/day
beta-Endosulfan	1.46E+01 ug/l	4.50E-01 lbs/day
Endosulfan sulfate	1.46E+01 ug/l	4.50E-01 lbs/day
Endrin	5.90E+00 ug/l	1.82E-01 lbs/day
Endrin aldehyde	5.90E+00 ug/l	1.82E-01 lbs/day
Heptachlor	1.53E-03 ug/l	4.72E-05 lbs/day
Heptachlor epoxide		

PCB's

PCB 1242 (Arochlor 1242)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1254 (Arochlor 1254)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1221 (Arochlor 1221)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1232 (Arochlor 1232)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1248 (Arochlor 1248)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1260 (Arochlor 1260)	3.28E-04 ug/l	1.01E-05 lbs/day
PCB-1016 (Arochlor 1016)	3.28E-04 ug/l	1.01E-05 lbs/day

Pesticide

Toxaphene	5.47E-03 ug/l	1.69E-04 lbs/day
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Metals

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

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Dioxin
Dioxin (2,3,7,8-TCDD) 1.02E-07 ug/l 3.15E-09 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		3061.4				3061.4	N/A
Antimony				31344.5		31344.5	
Arsenic		1406.7			0.0	1406.7	1380.0
Barium						0.0	
Beryllium						0.0	
Cadmium		46.8			0.0	46.8	3.7
Chromium (III)		29372.0			0.0	29372.0	2464.3
Chromium (VI)		53.8			0.0	53.82	55.18
Copper		242.5				242.5	208.2
Cyanide		91.2	1603672.0			91.2	37.9
Iron		3764.2				3764.2	
Lead		2836.0			0.0	2836.0	185.3
Mercury		9.95		1.09	0.0	1.09	0.087
Nickel		7993.9		33531.3		7993.9	1558.6
Selenium		70.9			0.0	70.9	9.6
Silver		277.9			0.0	277.9	
Thallium				45.9		45.9	
Zinc		1857.9				1857.9	3221.9
Boron	5467.1					5467.1	

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	3061.4	N/A	
Antimony	31344.50		
Arsenic	1406.7	1380.0	
Asbestos	0.00E+00		
Barium			
Beryllium			
Cadmium	46.8	3.7	
Chromium (III)	29372.0	2464	
Chromium (VI)	53.8	55.2	Acute Controls
Copper	242.5	208.2	

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Cyanide	91.2	37.9	
Iron	3764.2		
Lead	2836.0	185.3	
Mercury	1.093	0.087	
Nickel	7993.9	1559	
Selenium	70.9	9.6	
Silver	277.9	N/A	
Thallium	45.9		
Zinc	1857.9	3221.9	Acute Controls
Boron	5467.06		

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 not required.

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.

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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.

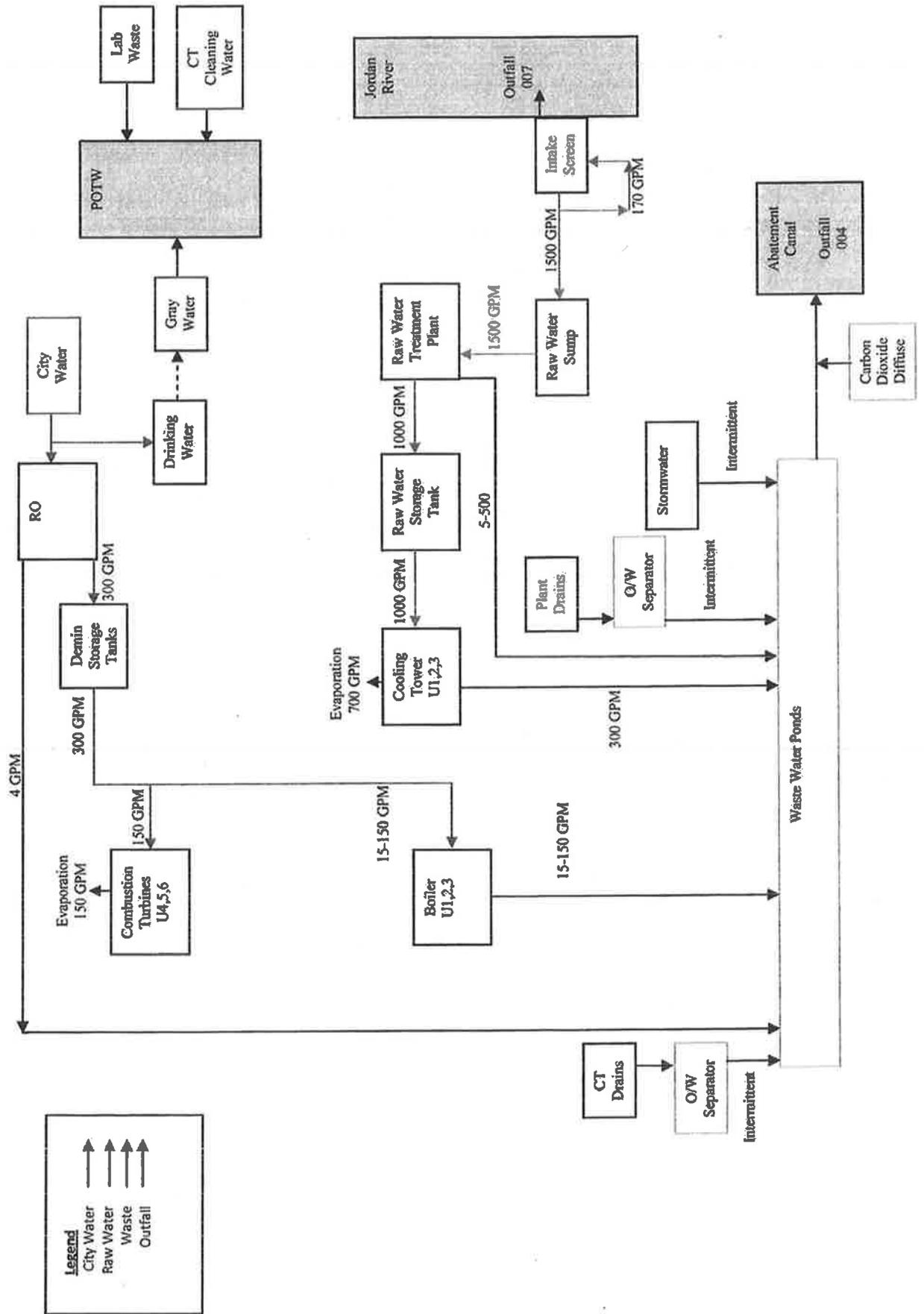
Utah Division of Water Quality
801-538-6052
File Name: Gatsby_WLA_11-8-12.xls

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APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day 2.000	CBOD Coeff. FORCED (Kd)/day 0.000	CBOD Coeff. (Ka)T 1/day 2.000	REAER. Coeff. (Ka)20 (Ka)/day 18.711	REAER. Coeff. FORCED 1/day 0.000	REAER. Coeff. (Ka)T 1/day 18.711	NBOD Coeff. (Kn)20 1/day 0.600	NBOD Coeff. (Kn)T 1/day 0.600
Open Coeff. (K4)20 1/day 0.000	Open Coeff. (K4)T 1/day 0.000	NH3 LOSS (K5)20 1/day 4.000	NH3 LOSS (K5)T 1/day 4.000	NO2+NO3 LOSS (K6)20 1/day 0.000	NO2+NO3 LOSS (K6)T 1/day 0.000	TRC Decay K(CI)20 1/day 32.000	TRC K(CI)(T) 1/day 32.000
BENTHIC DEMAND (SOD)20 gm/m2/day 1.000	BENTHIC DEMAND (SOD)T gm/m2/day 1.000						
K1 CBOD {theta} 1.0	K2 Reaer. {theta} 1.0	K3 NH3 {theta} 1.1	K4 Open {theta} 1.0	K5 NH3 Loss {theta} 1.0	K6 NO2+3 {theta} 1.0	K(CI) TRC {theta} 1.1	S Benthic {theta} 1.1

Flow Diagram



pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and the following pretreatment standards for new sources (PSNS).

(a) There shall be no discharge of polychlorinated biphenyl compounds such as those used for transformer fluid.

(b) The pollutants discharged in chemical metal cleaning wastes shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS pretreatment standards
	Maximum for 1 day (mg/l)
Copper, total	1.0

(c) [Reserved—Nonchemical Metal Cleaning Wastes].

(d)(1) The pollutants discharged in cooling tower blowdown shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS pretreatment standards
	Maximum for any time (mg/l)
The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	
Chromium, total	0.2
Zinc, total	1.0

(2) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(e) There shall be no discharge of wastewater pollutants from fly ash transport water.

Appendix A to Part 423—126 Priority Pollutants



- 001 Acenaphthene
- 002 Acrolein
- 003 Acrylonitrile
- 004 Benzene
- 005 Benzidine
- 006 Carbon tetrachloride (tetrachloromethane)
- 007 Chlorobenzene
- 008 1,2,4-trichlorobenzene
- 009 Hexachlorobenzene

010 1,2-dichloroethane
011 1,1,1-trichloroethane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
018 Bis(2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4, 6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4-dimethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
039 Fluoranthene
040 4-chlorophenyl phenyl ether

- 041 4-bromophenyl phenyl ether
- 042 Bis(2-chloroisopropyl) ether
- 043 Bis(2-chloroethoxy) methane
- 044 Methylene chloride (dichloromethane)
- 045 Methyl chloride (dichloromethane)
- 046 Methyl bromide (bromomethane)
- 047 Bromoform (tribromomethane)
- 048 Dichlorobromomethane
- 051 Chlorodibromomethane
- 052 Hexachlorobutadiene
- 053 Hexachloromyclopentadiene
- 054 Isophorone
- 055 Naphthalene
- 056 Nitrobenzene
- 057 2-nitrophenol
- 058 4-nitrophenol
- 059 2,4-dinitrophenol
- 060 4,6-dinitro-*o*-cresol
- 061 N-nitrosodimethylamine
- 062 N-nitrosodiphenylamine
- 063 N-nitrosodi-*n*-propylamine
- 064 Pentachlorophenol
- 065 Phenol
- 066 Bis(2-ethylhexyl) phthalate
- 067 Butyl benzyl phthalate
- 068 Di-*N*-Butyl Phthalate
- 069 Di-*n*-octyl phthalate
- 070 Diethyl Phthalate
- 071 Dimethyl phthalate
- 072 1,2-benzanthracene (benzo(a) anthracene)

- 073 Benzo(a)pyrene (3,4-benzo-pyrene)
- 074 3,4-Benzofluoranthene (benzo(b) fluoranthene)
- 075 11,12-benzofluoranthene (benzo(b) fuoranthene)
- 076 Chrysene
- 077 Acenaphthylene
- 078 Anthracene
- 079 1,12-benzoperylene (benzo(ghi) perylene)
- 080 Fluorene
- 081 Phenanthrene
- 082 1,2,5,6-dibenzanthracene (dibenzo(.h) anthracene)
- 083 Indeno (.1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
- 084 Pyrene
- 085 Tetrachloroethylene
- 086 Toluene
- 087 Trichloroethylene
- 088 Vinyl chloride (chloroethylene)
- 089 Aldrin
- 090 Dieldrin
- 091 Chlordane (technical mixture and metabolites)
- 092 4,4-DDT
- 093 4,4-DDE (p,p-DDX)
- 094 4,4-DDD (p,p-TDE)
- 095 Alpha-endosulfan
- 096 Beta-endosulfan
- 097 Endosulfan sulfate
- 098 Endrin
- 099 Endrin aldehyde
- 100 Heptachlor
- 101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
- 102 Alpha-BHC

- 103 Beta-BHC
- 104 Gamma-BHC (lindane)
- 105 Delta-BHC (PCB-polychlorinated biphenyls)
- 106 PCB-1242 (Arochlor 1242)
- 107 PCB-1254 (Arochlor 1254)
- 108 PCB-1221 (Arochlor 1221)
- 109 PCB-1232 (Arochlor 1232)
- 110 PCB-1248 (Arochlor 1248)
- 111 PCB-1260 (Arochlor 1260)
- 112 PCB-1016 (Arochlor 1016)
- 113 Toxaphene
- 114 Antimony
- 115 Arsenic
- 116 Asbestos
- 117 Beryllium
- 118 Cadmium
- 119 Chromium
- 120 Copper
- 121 Cyanide, Total
- 122 Lead
- 123 Mercury
- 124 Nickel
- 125 Selenium
- 126 Silver
- 127 Thallium
- 128 Silver
- 128 Zinc
- 129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)

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FACILITY/ ADDRESS	CONTACT (S)	Month	DMRs on time? (Y/N)	No. of Exc.	EFF AVE Flow(MGD)	EFF Max Flow (MGD)	PH MIN	PH MAX	TSS	SS	Iron, total (mg/L)	TDS (mg/L) daily max.	TDS (lb/day) 2000 max.	O/G	FAC mg/L
2012 UPDES # Gadsby Station PacifiCorp UT0000011 6 Ourfall 004A	Bill Domichael 801-220-7708 1407 West N. Temple SLC, UT 004A	J F M A M J J A S O N D	Y Y Y Y Y Y Y Y Y	0 0 0 0 0 0 0 0 0	0.638 0.091 0.719 0.38 0.62 0.732 0.519 0.711 0.808	0.814 0.692 1.13 1.026 1.115 1.189 0.905 1.536 1.055	8.01 8.07 7.33 8.0 8.03 7.45 7.71 7.41 7.34	8.08 8.77 7.81 8.4 8.11 8.11 8.64 8.11 8.23	6.0 11.0 7.0 6.0 5.0 7.4 15.6 22.8,22.8,2.8 16.8/16.8/16.8 6.8	na na na na na na na na na	0.137 Report quarterly Report quarterly <0.100 NA NA 0.131 NA NA		3.1 <3 <3 3.8 <3.0 3.2 3.6 <3.0 <0.3	0.03 0.1 0.01 0.01 0.02 0.01/0.02 0.02/0.04 0.018/0.02 0.012/0.02	
Average															
0.0405091															

FACILITY/ 2010	ADDRESS	CONTACT(S)	Month	DMRs on time? (Y/N)	No. of Exc.	EFF Avg. Flow(MGD)	EFF Max. Flow (MGD)	PH MIN	PH MAX	TSS	SS	Iron, total (mg/L)	TDS (mg/L) daily max	TDS (lbs/day) 2000 max	O/G	FAC mg/L
UPDES #																
Gadsby Station	1407 West N.	Bill Domichael	J	Y	0	0.44	0.883	8.05	8.38	<3.0	n/a	0.3	n/a	n/a	3.5	0.02
PacifiCorp	Temple BLC, UT	801-220-7708	F	Y	0	0.063	0.171	8.2	8.6	<3.0	n/a	n/a	n/a	n/a	<3.0	0.02
UT0000116	004A		M	Y	0	0.216	0.695	6.73	8.45	<3.0		n/a			<3.0	0.03
Outfall 004A			A	Y	0	1.24	1.744	8.0	8.0	8.0		<0.1			<3.0	0.03
			M	Y	0	0.641	1.067	7.87	8.35	8.0		n/a			<3.0	0.03
			J	Y	0	0.784	1.691	7.86	8.4	10.0		n/a			<3.0	0.03
			J	Y	0	0.925	1.209	6.91	8.02	<3.0		0.136			<3.0	0.04
			A	Y	0	0.966	1.508	7.84	8.05	3		n/a			<4.0	0.02
			S	Y	0	0.926	1.129	7.95	8.04	7.0		n/a			<3.0	0.02
			O	Y	0	1.009	1.368	7.78	8.25	14.0		0.292			3	0.04
			N	Y	0	0.707	1.199	7.81	7.99	7.0		n/a			3.9	0.04
			D	Y	0	0.619	0.835	7.66	7.97	<3		na			<3.0	0.02
		Average				0.71133333	1.12491667	6.73	8.45	8.1		0.2426667			3.4666667	0.0250909

**2009 Discharge Monitoring Report Tracking
PacifiCorp Individual Permits**

FACILITY/ UPDES #	ADDRESS	CONTACT(S)	Month	Discharge Time		No. of Exc.	EFF Avg Flow(MGD)	EFF Max. Flow (MGD)	PH MIN	PH MAX	TSS	SS	Iron, total (mg/L)	TDS (mg/L) daily max.	TDS (lb/day) 2006 max.	O&G	FAC in mg/L
				(Y/N)	Exc.												
Geosby Station	1407 West N. Temple S.L.C. UT 004A	Bill Demichiel 801-220-7708	J	Y	0	0.184	0.695	8.6	8.6	4.0	n/a	n/a	<0.05	n/a	n/a	3.4	0.02
PacifiCorp UT0000116			F	Y	0	0.715	0.98	8.13	8.13	9.0	n/a	n/a	n/a	n/a	n/a	6.6	0.05
Orfall 004A			M	Y	0	0.311	1.177	8.22	8.22	5.0	n/a	n/a	n/a	n/a	n/a	3.5	0.05
			A	Y	0	0.185	0.313	8.64	8.64	8.0	n/a	n/a	0.32	n/a	n/a	3.5	0.05
			M	Y	0	0.456	0.734	7.52	8.07	8.0	n/a	n/a	n/a	n/a	n/a	3.3	0.06
			J	Y	0	0.687	1.125	7.77	7.85	9.0	n/a	n/a	n/a	n/a	n/a	4.7	0.05
3009 Data			J	Y	0	0.891	1.359	7.6	8.18	4.0	n/a	n/a	0.37	n/a	n/a	4.5	0.03
			A	Y	0	0.898	1.356	8.1	8.35	<3.0	n/a	n/a	n/a	n/a	n/a	<3.0	0.03
			S	Y	0	0.983	1.255	7.91	8.36	<3.0	n/a	n/a	n/a	n/a	n/a	4.3	0.03
			O	Y	0	0.804	1.288	8.15	8.3	7.0	n/a	n/a	0.38	n/a	n/a	5.5	0.03
			N	Y	0	0.603	1.418	7.89	8.09	5.0	n/a	n/a	n/a	n/a	n/a	4.6	0.03
			D	Y	0	0.602	0.581	7.8	8.14	4.0	n/a	n/a	n/a	n/a	n/a	<3.0	0.03