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Date: January 26, 2009
Refer To: ENV-RCRA-09-011
LA-UR: 09-00262

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Mr. William C. Olson, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

SUBJECT: SANITARY WASTEWATER SYSTEMS PLANT, GROUND WATER DISCHARGE PERMIT (DP-857) ANNUAL REPORT 2008

Dear Mr. Olson:

This report and enclosures are Los Alamos National Laboratory's Annual Report for the TA-46 Sanitary Wastewater Systems (SWWS) Plant's Ground Water Discharge Permit (DP-857) for 2008. In addition to satisfying the annual reporting requirements under DP-857, the report also contains the quarterly monitoring data for the 4th quarter (Oct., Nov., and Dec.) of 2008, as required.

Please call me at (505) 667-7969 if you have any questions regarding this report.

Sincerely,

Bob Beers
Water Quality & RCRA Group

BB/lm

Enclosures: a/s

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GROUND WATER DISCHARGE PLAN (DP-857) ANNUAL REPORT, 2008

for the

TA-46 SANITARY WASTEWATER SYSTEMS (SWWS) PLANT

Los Alamos
National Laboratory

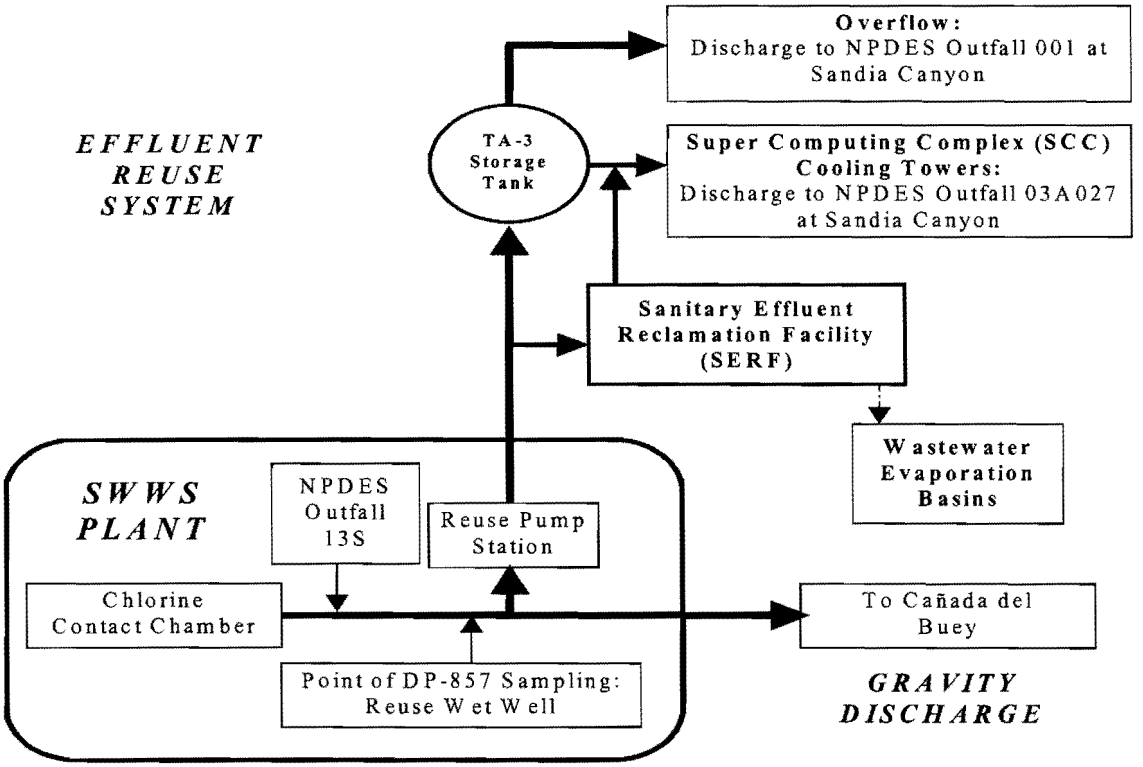
LA-UR-09-00262

January 26, 2009

INTRODUCTION

Sanitary wastewater generated at Los Alamos National Laboratory (Laboratory) is treated at the TA-46 Sanitary Wastewater Systems (SWWS) Plant. The SWWS Plant is an extended-aeration, activated sludge sanitary wastewater treatment plant with a design capacity of 0.6 million gallons per day. As shown in **Figure 1.0**, treated effluent from the SWWS Plant may be discharged through NPDES Outfall 13S by gravity to Cañada del Buey or pumped via a force main to a reuse system at TA-3. Since the SWWS Plant became operational in 1992, all treated effluent has been pumped via the force main for discharge to Sandia Canyon; no effluent has ever been discharged to Cañada del Buey. In 2008, all of the treated effluent generated by the SWWS Plant (approximately 97.6 million gallons) was pumped to TA-3 and discharged to Sandia Canyon through NPDES Outfall 001. No treated effluent was used by the SCC cooling towers during 2008 because the Sanitary Effluent Reclamation Facility (SERF) was out-of-service for the entire year.

Figure 1. Effluent Reuse System Schematic



DISCHARGE PERMIT (DP-857) RENEWAL

In accordance with New Mexico Water Quality Control Commission (NM WQCC) Regulation 3106.F NMAC, on August 27, 2002, the Laboratory submitted an application to the NMED for renewal of Ground Water Discharge Permit DP-857. The Laboratory's renewal application was submitted at least 120 days before the expiration date of January 7, 2003, as required by regulation. As of December 31, 2008, permit renewal was still pending.

SERF EVAPORATION BASINS

The SERF did not operate during 2008. As a result, no process water from the SERF was discharged to the TA-60 Sigma Mesa evaporation basins in 2008. Precipitation accounted for the only water added to the basins in 2008.

EFFLUENT IRRIGATION AT THE SWWS PLANT

During the months of April through October 2008, effluent from the SWWS Plant was re-used to irrigate approximately 1/3 acre of turf grass on the plant's grounds. The irrigated grass is within the confines of the SWWS Plant's perimeter security fence and access is restricted to Laboratory employees/contractors on official business and visitors being escorted by SWWS Plant personnel.

4TH QTR 2008 MONITORING: REUSE WATER, NPDES OUTFALLS 001 & 03A027, CDBO-6

Table 1.0 presents the analytical results from monitoring conducted at the SWWS Plant's reuse wet well, NPDES Outfalls 001 and 03A027, and monitoring well CDBO-6 during the 4th quarter of 2008. All sample results in Table 1.0 are less than New Mexico Water Quality Control Commission (NM WQCC) Regulation 3103 standards for ground water. Copies of the analytical reports are in **Enclosure 2.0**.

Table 2.0 presents the water level in Cañada del Buey alluvial observation well CDBO-6 for the 4th quarter of 2008.

Table 3.0 presents the volume of water discharged from the following locations during the 4th quarter of 2008:

- SWWS Plant effluent (reuse water) pumped to TA-3 via the force main,
- Effluent discharge through NPDES Outfall 001,
- Reuse water used by the SCC cooling towers, and
- Effluent discharged through NPDES Outfall 03A027.

Table 4.0 presents the results from monthly monitoring of the SERF evaporation basins' leak inspection standpipes. **Enclosure 1.0** presents photographs taken during October, November, and December, 2008, of the four leak inspection standpipes. No water was present in any of the basin's four leak inspection standpipes with the exception of minimal amounts of condensate water.

2008 ANNUAL WATER QUALITY MONITORING: SWWS REUSE WET WELL AND CDBO-6

Tables 5.0 through **14.0** present the analytical results from annual monitoring of the SWWS Plant's reuse water (sampling point: SWWS Plant reuse wet well) and CDBO-6. All sample results for inorganics, metals, volatile and semi-volatile organics, and radiological constituents were less than NM WQCC Regulation 3103 standards for ground water. Copies of the analytical reports are provided in **Enclosure 3.0**.

Table 8.0 presents the volatile organic (VOC) and semi-volatile organic (SVOC) compounds detected at CDBO-6 during 2008 at concentrations greater than the analytical laboratory's Method Detection Limit (MDL). These detections are discussed below.

- Acetone was detected at CDBO-6 at a concentration of 1.6J µg/L. The "J" flag indicates that the reported value is estimated. There is no NM WQCC Regulation 3103 standard for acetone.

- Bis(2-ethylhexyl)phthalate, was detected at CDBO-6 at a concentration of 7.23J µg/L. The "J" flag indicates that the reported value is estimated. There is no NM WQCC Regulation 3103 standard for bis(2-ethylhexyl)phthalate.

Table 14.0 presents the volatile organic (VOC) and semi-volatile organic (SVOC) compounds detected in the SWWS Plant's reuse water at concentrations greater than the analytical laboratory's MDL. These detections are discussed below.

- Chlorodibromomethane, chloroform, bromodichloromethane, and bromoform were detected in the SWWS Plant's reuse water. These four compounds are common disinfection by-products resulting from the chlorination of effluent with chlorine compounds. Chloroform was detected at 22 µg/L; the NM WQCC Regulation 3103 standard for chloroform in ground water is 100 µg/L. Chloroform has been detected in the SWWS Plant's reuse water in the past; in 2007, chloroform was detected at a concentration of 28.6 µg/L. There are no NM WQCC Regulation 3103 standards for chlorodibromomethane, bromodichloromethane, or bromoform.

- Dioxane [1,4] was detected in the SWWS Plant's reuse water at a concentration of 2.1J μg/L. The "J" flag indicates that the reported value is estimated. There is no NM WQCC Regulation 3103 standard for dioxane. No dioxane was detected in the SWWS Plant's reuse water in 2007. Dioxane was detected in the SWWS Plant's reuse water in 2006 at a concentration of 6.31J μg/L.

Table 1.0 Water Quality Data: SWWS Plant Reuse Water, NPDES Outfalls 001 and 03A027, and CDBO-6. 4th Quarter, 2008.

Sampling Location	Field Prep[2]	Sample Date	Sample ID No.	TDS (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TKN (mg/L)	NH3-N (mg/L)
SWWS Plant								
SWWS Plant Reuse Wet Well[1]	UF	11/20/2008	GU081000OSRW	479	141	0.68	0.56	0.11
Sandia Canyon								
NPDES Outfall 001	UF	11/21/2008	GU081001A001	448	130	0.96	0.15	0.06
NPDES Outfall 03A027	UF	11/21/2008	GU081003A027	505	19.4	1.2	2.83	0.23
Canada del Buey								
CDBO-6	F	11/13/2008	CAMO-09-754	173	22.0	0.068J		<0.05
CDBO-6	UF	11/13/2008	CAMO-09-753				0.10	
NM WQCC Regulation 3103 Ground Water Standards (mg/L)				*1000*	*250*	*10*[3]	*NA*	*NA*

Notes:

[1]Water in the reuse wet well is representative of water in the reuse pond.

[2]UF means a non-filtered sample, F means a filtered sample.

[3]The NMWQCC Regulation 3103 Ground Water Standard is for NO_3-N.

J means the reported result was greater than the Method Detection Limit but less than the Reporting Limit.

All analytical results by General Engineering Laboratories, Inc., Charleston, SC.

NA means that there is no NM WQCC Regulation 3103 ground water standard for this analyte.

Table 2.0. Water Level in Cañada del Buey Observation Well (CDBO)-6, 4th Quarter 2008

Location	Date	Water Level† (ft)
CDBO-6	11/13/08	35.20

Notes:
† Measured in feet from the top of the well casing to the surface of the water.

Table 3.0. Discharge Volumes from the SWWS Plant and NPDES Outfall 001, and SWWS Plant Reuse Water to SCC Cooling Towers, 4th Quarter 2008 (in millions of gallons).

Month	SWWS Plant Effluent to TA-3[1]	Discharges to NPDES Outfall 001[2]	Reuse Water to SCC Cooling Towers[3] (estimated)	Discharges to NPDES Outfall 03A027[4]
Oct-2008	6.691	7.242	0	1.205
Nov-2008	7.187	8.462	0	1.060
Dec-2008	6.915	8.144	0	1.236

Notes:
[1]In the 4th quarter of 2008, all SWWS Plant effluent was pumped via a force main to TA-3 for reuse or discharge.
[2]Power plant wastewater and all SWWS Plant reuse water not used by the SCC Cooling Towers are discharged at NPDES Outfall 001.
[3]The SCC cooling towers can use potable or SWWS Plant reuse water. Table 3.0 contains the estimated volume of SWWS Plant reuse water that the SCC cooling towers used during the 4th quarter of 2008.
[4]The SCC cooling towers discharge to NPDES Outfall 03A027 at Sandia Canyon.

Table 4.0. Inspection Results, SERF Evaporation Basins, Leak Collection Standpipes.

Inspection Date	Inspection Results
10/21/08	All standpipes are dry or contain minimal amounts of water
11/19/08	All standpipes are dry or contain minimal amounts of water
12/18/08	All standpipes are dry or contain minimal amounts of water

Table 5.0. Annual Water Quality Data: General Inorganics for CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	08/18/08	GENINORG	ALK-CO3	Alkalinity-CO3	EPA:310.1	F	<	1	mg/L	0.73	U	U	GELC	N
CDBO-6	08/18/08	GENINORG	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	EPA:310.1	F		55.7	mg/L	0.73			GELC	N
CDBO-6	08/18/08	GENINORG	Br(-1)	Bromide	EPA:300.0	F	<	0.2	mg/L	0.067	U	U	GELC	N
CDBO-6	08/18/08	GENINORG	Ca	Calcium	SW-846:6010B	F		14.3	mg/L	0.03			GELC	N
CDBO-6	08/18/08	GENINORG	Ca	Calcium	SW-846:6010B	UF		14.6	mg/L	0.03			GELC	N
CDBO-6	08/18/08	GENINORG	Cl(-1)	Chloride	EPA:300.0	F		21.1	mg/L	0.13			GELC	N
CDBO-6	08/18/08	GENINORG	ClO4	Perchlorate	SW-846:6850	F		0.346	ug/L	0.05			GELC	N
CDBO-6	05/22/08	GENINORG	CN(TOTAL)	Cyanide (Total)	EPA:335.3	UF	<	0.005	mg/L	0.0015	U	U	GELC	N
CDBO-6	08/18/08	GENINORG	F(-1)	Fluoride	EPA:300.0	F		0.218	mg/L	0.033			GELC	N
CDBO-6	08/18/08	GENINORG	HARDNESS	Hardness	SM:A2340B	F		49.2	mg/L	0.35			GELC	N
CDBO-6	08/18/08	GENINORG	HARDNESS	Hardness	SM:A2340B	UF		50.7	mg/L	0.35			GELC	N
CDBO-6	08/18/08	GENINORG	K	Potassium	SW-846:6010B	F		1.96	mg/L	0.05			GELC	N
CDBO-6	08/18/08	GENINORG	K	Potassium	SW-846:6010B	UF		2.32	mg/L	0.05			GELC	N
CDBO-6	08/18/08	GENINORG	Mg	Magnesium	SW-846:6010B	F		3.26	mg/L	0.085			GELC	N
CDBO-6	08/18/08	GENINORG	Mg	Magnesium	SW-846:6010B	UF		3.44	mg/L	0.085			GELC	N
CDBO-6	08/18/08	GENINORG	NH3-N	Ammonia as Nitrogen	EPA:350.1	F	<	0.05	mg/L	0.03	U	U	GELC	N
CDBO-6	08/18/08	GENINORG	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	EPA:353.2	F	<	0.05	mg/L	0.01	U	U	GELC	N
CDBO-6	08/18/08	GENINORG	Na	Sodium	SW-846:6010B	F		21.7	mg/L	0.045			GELC	N
CDBO-6	08/18/08	GENINORG	Na	Sodium	SW-846:6010B	UF		23.2	mg/L	0.045			GELC	N
CDBO-6	08/18/08	GENINORG	PO4-P	Total Phosphate as Phosphorus	EPA:365.4	F		0.054	mg/L	0.024			GELC	N
CDBO-6	08/18/08	GENINORG	SO4(-2)	Sulfate	EPA:300.0	F		10.2	mg/L	0.1		J-	GELC	N
CDBO-6	08/18/08	GENINORG	SPEC_CONDC	Specific Conductance	EPA:120.1	F		219	uS/cm	1			GELC	N
CDBO-6	08/18/08	GENINORG	TDS	Total Dissolved Solids	EPA:160.1	F		167	mg/L	2.4			GELC	N
CDBO-6	08/18/08	GENINORG	TKN	Total Kjeldahl Nitrogen	EPA:351.2	UF	<	0.1	mg/L	0.029	U	UJ	GELC	N
CDBO-6	08/18/08	GENINORG	TOC	Total Organic Carbon	SW-846:9060	UF		2.04	mg/L	0.33			GELC	N
CDBO-6	08/18/08	GENINORG	pH	pH	EPA:150.1	F		7.1	SU	0.01	H	J-	GELC	N

Table 6.0. Annual Water Quality Data, Metals, CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	08/18/08	METALS	Ag	Silver	SW-846:6020	F	<	1	ug/L	0.2	U	U	GELC	N
CDBO-6	08/18/08	METALS	Ag	Silver	SW-846:6020	UF	<	1	ug/L	0.2	U	U	GELC	N
CDBO-6	08/18/08	METALS	Al	Aluminum	SW-846:6010B	F		155	ug/L	68	J	J	GELC	N
CDBO-6	08/18/08	METALS	Al	Aluminum	SW-846:6010B	UF		1710	ug/L	68			GELC	N
CDBO-6	08/18/08	METALS	As	Arsenic	SW-846:6020	F	<	5	ug/L	1.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	As	Arsenic	SW-846:6020	UF	<	5	ug/L	1.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	B	Boron	SW-846:6010B	F		35.9	ug/L	10	J	J	GELC	N
CDBO-6	08/18/08	METALS	B	Boron	SW-846:6010B	UF		39.5	ug/L	10	J	J	GELC	N
CDBO-6	08/18/08	METALS	Ba	Barium	SW-846:6010B	F		87.2	ug/L	1			GELC	N
CDBO-6	08/18/08	METALS	Ba	Barium	SW-846:6010B	UF		99.7	ug/L	1			GELC	N
CDBO-6	08/18/08	METALS	Be	Beryllium	SW-846:6010B	F	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	Be	Beryllium	SW-846:6010B	UF	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	Cd	Cadmium	SW-846:6020	F	<	1	ug/L	0.11	U	U	GELC	N
CDBO-6	08/18/08	METALS	Cd	Cadmium	SW-846:6020	UF	<	1	ug/L	0.11	U	U	GELC	N
CDBO-6	08/18/08	METALS	Co	Cobalt	SW-846:6010B	F	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	Co	Cobalt	SW-846:6010B	UF	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	Cr	Chromium	SW-846:6020	F	<	3	ug/L	1.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	Cr	Chromium	SW-846:6020	UF		3.2	ug/L	1.5			GELC	N
CDBO-6	08/18/08	METALS	Cu	Copper	SW-846:6010B	F	<	10	ug/L	3	U	U	GELC	N
CDBO-6	08/18/08	METALS	Cu	Copper	SW-846:6010B	UF	<	10	ug/L	3	U	U	GELC	N
CDBO-6	08/18/08	METALS	Fe	Iron	SW-846:6010B	F		83.9	ug/L	25	J	J	GELC	N
CDBO-6	08/18/08	METALS	Fe	Iron	SW-846:6010B	UF		914	ug/L	25			GELC	N
CDBO-6	08/18/08	METALS	Hg	Mercury	EPA:245.2	F	<	0.2	ug/L	0.03	U	U	GELC	N
CDBO-6	08/18/08	METALS	Hg	Mercury	EPA:245.2	UF	<	0.2	ug/L	0.03	U	U	GELC	N
CDBO-6	08/18/08	METALS	Mn	Manganese	SW-846:6010B	F	<	10	ug/L	2	U	U	GELC	N
CDBO-6	08/18/08	METALS	Mn	Manganese	SW-846:6010B	UF		7.2	ug/L	2	J	J	GELC	N
CDBO-6	08/18/08	METALS	Mo	Molybdenum	SW-846:6020	F	<	0.68	ug/L	0.1		U	GELC	N
CDBO-6	08/18/08	METALS	Mo	Molybdenum	SW-846:6020	UF	<	0.77	ug/L	0.1		U	GELC	N
CDBO-6	08/18/08	METALS	Ni	Nickel	SW-846:6020	F		0.68	ug/L	0.5	J	J	GELC	N
CDBO-6	08/18/08	METALS	Ni	Nickel	SW-846:6020	UF		1.1	ug/L	0.5	J	J	GELC	N
CDBO-6	08/18/08	METALS	Pb	Lead	SW-846:6020	F	<	2	ug/L	0.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	Pb	Lead	SW-846:6020	UF		0.76	ug/L	0.5	J	J	GELC	N
CDBO-6	08/18/08	METALS	Sb	Antimony	SW-846:6020	F	<	2	ug/L	0.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	Sb	Antimony	SW-846:6020	UF	<	2	ug/L	0.5	U	U	GELC	N
CDBO-6	08/18/08	METALS	Se	Selenium	SW-846:6020	F	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	Se	Selenium	SW-846:6020	UF	<	5	ug/L	1	U	U	GELC	N
CDBO-6	08/18/08	METALS	SiO2	Silicon Dioxide	SW-846:6010B	F		54.2	mg/L	0.032			GELC	N

Table 6.0. Annual Water Quality Data, Metals, CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	08/18/08	METALS	Sn	Tin	SW-846:6010B	F	<	100	ug/L	25	U	U	GELC	N
CDBO-6	08/18/08	METALS	Sn	Tin	SW-846:6010B	UF	<	100	ug/L	25	U	U	GELC	N
CDBO-6	08/18/08	METALS	Sr	Strontium	SW-846:6010B	F		92.2	ug/L	1			GELC	N
CDBO-6	08/18/08	METALS	Sr	Strontium	SW-846:6010B	UF		95.3	ug/L	1			GELC	N
CDBO-6	08/18/08	METALS	Tl	Thallium	SW-846:6020	F	<	1	ug/L	0.3	U	U	GELC	N
CDBO-6	08/18/08	METALS	Tl	Thallium	SW-846:6020	UF		0.47	ug/L	0.3	J	J	GELC	N
CDBO-6	08/18/08	METALS	U	Uranium	SW-846:6020	F	<	0.2	ug/L	0.05	U	U	GELC	N
CDBO-6	08/18/08	METALS	U	Uranium	SW-846:6020	UF	<	0.16	ug/L	0.05	J	U	GELC	N
CDBO-6	08/18/08	METALS	V	Vanadium	SW-846:6010B	F		4.7	ug/L	1	J	J	GELC	N
CDBO-6	08/18/08	METALS	V	Vanadium	SW-846:6010B	UF		5.5	ug/L	1			GELC	N
CDBO-6	08/18/08	METALS	Zn	Zinc	SW-846:6010B	F		137	ug/L	2			GELC	N
CDBO-6	08/18/08	METALS	Zn	Zinc	SW-846:6010B	UF		185	ug/L	2			GELC	N

Table 7.0. Annual Water Qualtiy Data, Radionuclides, CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Uncert	Std Mda	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	05/22/08	RAD	GROSSA	Gross alpha	EPA:900	UF		3.7	pCi/L	1.10	2.3			GELC	N
CDBO-6	05/22/08	RAD	Ra-226	Radium-226	EPA:903.1	UF	<	0.428	pCi/L	0.18	0.52	U	U	GELC	N
CDBO-6	08/18/08	RAD	Ra-226	Radium-226	EPA:903.1	UF	<	0.254	pCi/L	0.14	0.43	U	U	GELC	N
CDBO-6	05/22/08	RAD	Ra-228	Radium-228	EPA:904	UF	<	0.641	pCi/L	0.21	0.58		U	GELC	N
CDBO-6	08/18/08	RAD	Ra-228	Radium-228	EPA:904	UF		1.21	pCi/L	0.34	0.88			GELC	N

Table 8.0. Annual Water Quality Data, VOC and SVOC Detections, CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	08/18/08	VOA	67-64-1	Acetone	SW-846:8260B	UF		1.6	ug/L	1.3	J	J	GELC	N
CDBO-6	02/11/08	SVOA	117-81-7	Bis(2-ethylhexyl)phthalate	SW-846:8270C	UF		7.23	ug/L	3.0	J	J	GELC	N

Table 9.0. Annual Water Quality Data, Herbicides, CDBO-6.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	02/11/08	HERB	94-82-6	DB[2,4-]	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	94-75-7	D[2,4-]	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	75-99-0	Dalapon	SW-846:8151A	UF	<	5.49	ug/L	1.1	U	U	GELC	N
CDBO-6	02/11/08	HERB	1918-00-9	Dicamba	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	120-36-5	Dichlorprop	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	88-85-7	Dinoseb	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	94-74-6	MCPA	SW-846:8151A	UF	<	54.9	ug/L	11	U	U	GELC	N
CDBO-6	02/11/08	HERB	93-65-2	MCPP	SW-846:8151A	UF	<	54.9	ug/L	11	U	UJ	GELC	N
CDBO-6	02/11/08	HERB	93-72-1	TP[2,4,5-]	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N
CDBO-6	02/11/08	HERB	93-76-5	T[2,4,5-]	SW-846:8151A	UF	<	0.275	ug/L	0.091	U	U	GELC	N

Table 10.0. Annual Water Quality Data, Pesticides, CDBO-6

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
CDBO-6	05/22/08	309-00-2	Aldrin	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	319-84-6	BHC[alpha-]	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	319-85-7	BHC[beta-]	SW-846:8081A	UF	<	0.02	ug/L	0.0085	U	U	GELC	N
CDBO-6	05/22/08	319-86-8	BHC[delta-]	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	58-89-9	BHC[gamma-]	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	5103-71-9	Chlordane[alpha-]	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	5103-74-2	Chlordane[gamma-]	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	72-54-8	DDD[4,4'-]	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	72-55-9	DDE[4,4'-]	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	50-29-3	DDT[4,4'-]	SW-846:8081A	UF	<	0.04	ug/L	0.01	U	U	GELC	N
CDBO-6	05/22/08	60-57-1	Dieldrin	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	959-98-8	Endosulfan I	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	33213-65-9	Endosulfan II	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	1031-07-8	Endosulfan Sulfate	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	72-20-8	Endrin	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	7421-93-4	Endrin Aldehyde	SW-846:8081A	UF	<	0.04	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	53494-70-5	Endrin Ketone	SW-846:8081A	UF	<	0.04	ug/L	0.013	U	U	GELC	N
CDBO-6	05/22/08	76-44-8	Heptachlor	SW-846:8081A	UF	<	0.02	ug/L	0.0066	U	U	GELC	N
CDBO-6	05/22/08	1024-57-3	Heptachlor Epoxide	SW-846:8081A	UF	<	0.02	ug/L	0.005	U	U	GELC	N
CDBO-6	05/22/08	72-43-5	Methoxychlor[4,4'-]	SW-846:8081A	UF	<	0.2	ug/L	0.05	U	U	GELC	N
CDBO-6	05/22/08	8001-35-2	Toxaphene (Technical Grade)	SW-846:8081A	UF	<	0.5	ug/L	0.15	U	U	GELC	N

Table 11.0. Annual Water Quality Data, General Inorganics, SWWS Plant Reuse Water.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
SWS Facility Reuse Well	11/20/08	GENINORG	CN(Amenable)	Cyanide, Amenable to Chlorination	EPA:335.3	F	<	0.0015	mg/L	0.0015	U		GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	CN(TOTAL)	Cyanide (Total)	EPA:335.3	F	<	0.0015	mg/L	0.0015	U		GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	Cl(-1)	Chloride	EPA:300.0	UF		141	mg/L	1.32			GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	F(-1)	Fluoride	EPA:300.0	UF		0.24	mg/L	0.03			GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	NH3-N	Ammonia as Nitrogen	EPA:350.1	UF		0.11	mg/L	0.03		J, J-	GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	EPA:353.2	UF		0.68	mg/L	0.05			GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	SO4(-2)	Sulfate	EPA:300.0	UF		12.1	mg/L	0.1			GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	TDS	Total Dissolved Solids	EPA:160.1	UF		479	mg/L	2.38			GELC	N
SWS Facility Reuse Well	11/20/08	GENINORG	TKN	Total Kjeldahl Nitrogen	EPA:351.2	UF		0.56	mg/L	0.029			GELC	N

Table 12.0. Annual Water Quality Data, Metals, SWWS Plant Reuse Water.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
SWS Facility Reuse Well	11/20/08	METALS	Ag	Silver	EPA:200.7	F	<	1.0	ug/L	1.0	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Al	Aluminum	EPA:200.7	F	<	68	ug/L	68	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	As	Arsenic	EPA:200.7	F	<	5.0	ug/L	5.0	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	B	Boron	EPA:200.7	F		51	ug/L	10			GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Ba	Barium	EPA:200.7	F		26.5	ug/L	1.0			GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Cd	Cadmium	EPA:200.8	F	<	0.11	ug/L	0.11	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Co	Cobalt	EPA:200.7	F	<	1.0	ug/L	1.0	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Cr	Chromium	EPA:200.8	F		1.8	ug/L	1.5	J		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Cu	Copper	EPA:200.7	F		3.6	ug/L	3	J		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Fe	Iron	EPA:200.7	F		67.9	ug/L	25	J		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Hg	Mercury	EPA:245.2	UF	<	0.067	ug/L	0.067	U	UJ	GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Mn	Manganese	EPA:200.7	F		13.2	ug/L	2.0			GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Mo	Molybdenum	EPA:200.7	F		2.4	ug/L	2.0	J		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Ni	Nickel	EPA:200.7	F	<	1.0	ug/L	1.0	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Pb	Lead	EPA:200.8	F	<	0.5	ug/L	0.5	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Se	Selenium	EPA:200.7	F	<	5.0	ug/L	5.0	U		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	U	Uranium	EPA:200.8	F		0.07	ug/L	0.05	J		GELC	N
SWS Facility Reuse Well	11/20/08	METALS	Zn	Zinc	EPA:200.7	F		74.6	ug/L	2.0			GELC	N

Table 13.0. Annual Water Qualtiy Data, Radionuclides, SWWS Plant Reuse Water.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Uncert	Std Mda	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
SWS Facility Reuse Well	11/20/08	RAD	GROSSA	Gross alpha	EPA:900	UF	<	0.016	pCi/L	0.95	4.5	U	U	GELC	N
SWS Facility Reuse Well	11/20/08	RAD	Ra-226	Radium-226	EPA:903.1	UF	<	0.503	pCi/L	0.27	0.86	U	U	GELC	N
SWS Facility Reuse Well	11/20/08	RAD	Ra-228	Radium-228	EPA:904	UF	<	0.641	pCi/L	0.38	1.2	U	J-,U	GELC	N

Table 14.0. Annual Water Quality Data, VOC and SVOC Detections, SWWS Plant Reuse Water.

Location Name	Start Date	Anyl Suite Code	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Lab Code	Prelim Flag
SWS Facility Reuse Well	11/20/08	VOA	124-48-1	Chlorodibromomethane	SW-846:8260B	UF		19.7	ug/L	0.26			GELC	N
SWS Facility Reuse Well	11/20/08	VOA	67-66-3	Chloroform	SW-846:8260B	UF		22.0	ug/L	0.25			GELC	N
SWS Facility Reuse Well	11/20/08	VOA	75-25-2	Bromoform	SW-846:8260B	UF		2.45	ug/L	0.25			GELC	N
SWS Facility Reuse Well	11/20/08	VOA	75-27-4	Bromodichloromethane	SW-846:8260B	UF		31.4	ug/L	0.25			GELC	N
SWS Facility Reuse Well	11/20/08	SVOA	123-91-1	Dioxane[1,4-]	SW-846:8270C	UF		2.1	ug/L	1.08	J		GELC	N