

Worldwide Facilities Group Remediation Team

July 14, 2010 Reference No. 013968

Mr. Peter Ramanauskas Project Manager for IND 0060306099 Land and Chemicals Division U.S. EPA Region 5 77 West Jackson Blvd. (LU-9J) Chicago, IL 60604-3507

Dear Mr. Ramanauskas:

Re: GM CETC - Bedford Facility, IND 006036099

Voluntary RCRA Corrective Action

Annual Compliance Report for the East Plant Area Vault Covering Calendar Year 2009

General Motors CETC Group, Bedford Indiana Facility, Bedford, Indiana

Enclosed for your review, please find a copy of the report entitled Annual Compliance Report, East Plant Area Vault, Calendar Year 2009. This document has been submitted by Conestoga-Rovers & Associates (CRA), on behalf of General Motors LLC (GM), to present the requirements for annual reporting in accordance with the Conditions of Approval from October 26, 2006.

Should you have any questions regarding this document, please do not hesitate to contact me at (248) 753-5799.

Yours truly,

General Motors LLC

Cheng R. Hut

Cheryl R. Hiatt Project Manager

LL/sc/128 Encl.

c.c.: See Attached Distribution List

GM Bedford Distribution List

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ANNUAL COMPLIANCE REPORT

EAST PLANT AREA VAULT CALENDAR YEAR 2009

GM CETC- BEDFORD FACILITY 105 GM DRIVE BEDFORD, INDIANA

EPA ID# IND006036099

Prepared For: General Motors LLC

DISCLAIMER:

SOME FORMATTING CHANGES MAY HAVE OCCURRED WHEN THE ORIGINAL DOCUMENT WAS PRINTED TO PDF; HOWEVER, THE ORIGINAL CONTENT REMAINS UNCHANGED.

JULY 14, 2010 Ref. no. 013968 (319) Prepared by: Conestoga-Rovers & Associates

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LIST OF TERMS AND ACRONYMS

Approval(s) U.S. EPA and IDEM PCB Risk-Based Disposal Approvals

CA Corrective Action

CFR Code of Federal Regulations

CRA Conestoga-Rovers & Associates, Inc.

CETC Castings Engines Transmissions and Components

EQ tank equalization tank FA Financial Assurance

Facility GM CETC Bedford Facility in Bedford, Indiana

GM General Motors LLC HASP Health and Safety Plan

IDEM Indiana Department of Environmental Management

IM Interim Measure

LCS Leachate Collection System
LDS Leak Detection System
mg/L milligram-per-liter

NPDES National Pollutant Discharge Elimination System

PCB Polychlorinated biphenyl

ppm part per million

QAPP Quality Assurance Project Plan

RA Removal Action

RCRA Resource Conservation and Recovery Act

Report East Plant Area Vault Annual Compliance Report Covering the

Calendar Year of 2009

RFI RCRA Facility Investigation
Site Facility IM Work Areas
SSC Site Source Control

TSCA Toxic Substance Controls Act

U.S. EPA United States Environmental Protection Agency

Vault East Plant Area TSCA landfill vault

VOCs Volatile organic compounds

WTP Water Treatment Plant

1.0 INTRODUCTION

This Annual Compliance Report (Report) summarizes data from the calendar year of 2009 for the Toxic Substances Control Act (TSCA) landfill vault (Vault), located in the East Plant Area of the General Motors LLC (GM) Castings Engines Transmissions and Components (CETC, formerly Powertrain) Bedford Plant (Facility), in Lawrence County, Bedford, Indiana. This Report has been prepared by Conestoga-Rovers & Associates, Inc. (CRA) on behalf of GM in accordance with Condition 27 of the Conditions of Approval, presented in both the Risk-Based Polychlorinated Biphenyl (PCB) Disposal Approval and the TSCA Approval to Dispose PCBs (Approvals) issued by the Indiana Department of Environmental Management (IDEM) and United States Environmental Protection Agency (U.S. EPA), respectively, on October 26, 2006, for the Vault. The Vault is part of the cleanup activities being conducted at the Facility under the East Plant Area Interim Measure (IM) and concurrent with other IMs at the Facility (Site). The Approvals became effective on October 26, 2006, and were issued pursuant to 40 Code of Federal Regulations (CFR) § 761.61 (c) for the disposal of PCB contaminated waste in the Vault. The Vault was constructed as a component of the East Plant IM during Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) activities being conducted under the Performance-Based CA Agreement (effective March 20, 2001, and amended October 1, 2002, March 29, 2007, and May 9, 2008) between U.S. EPA and GM Corporation for the Facility.

The next Annual Compliance Report for the East Plant Area Vault, covering the calendar year of 2010, will be submitted on or before July 15, 2011.

1.1 PURPOSE AND ORGANIZATION OF REPORT

This Report presents the requirements for current annual reporting in compliance with the conditions of the Approvals by U.S. EPA and IDEM for the Vault.

This Report is organized as follows:

Section 2.0 - Summary of Record Keeping Log

This section provides a summary of the daily waste information, quantity of liquid collected from the leachate collection system (LCS), leak detection system (LDS), and the underdrain system, water elevation in the underdrain system and over the primary liner, and the amount of water treated in the Site Source Control (SSC) Water Treatment Plant (WTP).

Section 3.0 - Analytical Results

This section provides all analytical results from the monitoring of the air, groundwater, LCS, LDS, underdrain, and the water treatment facility.

Section 4.0 - Leachate and Leak Detection Water Disposal

This section provides details related to the volume, PCB concentration and disposal destination for leachate and leak detection water with a PCB concentration equal to or greater than (\geq) 1 part per million (ppm).

Section 5.0 - Summary of Water Elevation

This section provides a summary of the water elevation over the primary liner and in the underdrain system.

Section 6.0 - Spill Cleanup Reports

This section identifies any PCB spill cleanups that occurred outside of the Exclusion Zone established in accordance with the Site Health and Safety Plan (HASP).

Section 7.0 - Financial Assurance

This section discusses the upcoming financial assurance for the Vault.

Section 8.0 - References

This section presents references cited in this Report.

2.0 SUMMARY OF RECORD KEEPING LOG

The following information is recorded as required by Condition 25 of the Conditions of Approval:

- a) Daily waste information:
 - i) Identification of the source of excavated material, and
 - ii) Estimated quantity of material excavated and placed in the Vault;
- b) The quantity of liquid collected from the LCS;
- c) The quantity of liquid collected from the LDS;
- d) The quantity of liquid collected from the underdrain;
- e) The water elevation in the underdrain and over the primary liner; and
- f) The amount of water (liquid) treated in the water treatment facility and the PCB concentration (if known).

2.1 DAILY WASTE INFORMATION SUMMARY

There is no daily waste information to report for the calendar year of 2009. Placement of all the ≥50 mg/kg PCB material in the Vault was completed on September 27, 2008. A summary of the daily waste information for all PCB material placed in the Vault was presented in the Annual Compliance Report for the East Plant Area Vault Covering Calendar Years 2006, 2007, and 2008 (CRA, June 2009), which was submitted to U.S. EPA on June 24, 2009.

2.2 <u>SUMMARY OF LCS, LDS, AND UNDERDRAIN SYSTEM LOGS</u>

The water level in the LCS, LDS, and underdrain system has been monitored on a daily basis since the start of operation commencing on August 30, 2006; with the exception that water levels were not recorded on Sundays or holidays, unless a precipitation event had occurred within 24 hours, and with some additional exceptions due to weather, access limitations, or equipment malfunctions. Summaries of the daily water levels for the LCS, LDS, and underdrain system are presented in Tables 2.1, 2.2, and 2.3, respectively. A summary of the maximum water elevation in each of the systems for each month of 2009 is presented in Table 2.4.

2.3 SUMMARY OF WATER TREATED IN THE WATER TREATMENT FACILITY

Water removed from the Vault sumps is re-directed by permanent forcemain to the equalization tank (EQ tank) where it mixes with water from three wet well groundwater collection systems prior to treatment in the SSC WTP. The effluent from the SSC WTP was sampled monthly under the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. IN0003573) to discharge at Outfall 003 and data collected during the 2009 calendar year was reported according to the permit.

3.0 ANALYTICAL RESULTS

All sampling and analysis was performed in accordance with the Quality Assurance Project Plan (QAPP) Addendum No. 2 (CRA, July 19, 2006) for the RCRA CA Work Plans and IMs, and the Removal Action (RA) Work Plans.

3.1 AIR MONITORING ANALYTICAL RESULTS

The air monitoring program was terminated on October 7, 2008, as approved by U.S. EPA (formal request was submitted October 29, 2008). No air monitoring was conducted for Vault activities in 2009.

3.2 GROUNDWATER MONITORING ANALYTICAL RESULTS

Groundwater sampling proximate to the Vault has been conducted under separate programs for the RCRA Facility Investigation (RFI). Sampling at the perimeter of the Facility is conducted under the CA750 on a semi-annual basis. Groundwater samples were not collected in the vicinity of the Vault throughout 2009. Groundwater sampling locations in the vicinity of the Vault are presented on Figure 3.1.

3.3 LEACHATE AND LEAK DETECTION WATER MONITORING ANALYTICAL RESULTS

Water from the LCS and LDS is sampled monthly for PCBs before being sent to the SSC WTP, as required by Condition 8 of the Approval. All analytical data for samples collected from the LCS and LDS in 2009 are presented in Tables 3.1 and 3.2, respectively. The LCS samples were analyzed for volatile organic compounds (VOCs) and PCBs, while LDS samples were only analyzed for PCBs. No samples collected from the LCS and LDS exhibited results with PCB concentrations ≥ 1 milligram-per-liter (mg/L), therefore there was no TSCA material to report, as required by the October 26, 2006 approval. All LCS and LDS water was treated in the on-Site SSC WTP during 2009.

3.4 UNDERDRAIN ANALYTICAL RESULTS

There were no samples collected from the underdrain system in 2009. Perforated drain pipes beneath the base of the Vault collect bedrock groundwater beneath the Vault and direct it to a sump located outside (north side) the Vault footprint. All groundwater

collected in the underdrain sump was directed for treatment in the SSC WTP. There have not been conditions at the LCS or LDS to warrant sampling of the underdrain system. Analytical results for samples collected from the SSC WTP are discussed in the following section.

3.5 WATER TREATMENT FACILITY ANALYTICAL RESULTS

Water removed in 2009 from the LCS, LDS, and underdrain system sumps was directed by permanent forcemain to the SSC WTP for treatment. The effluent from the SSC WTP was sampled monthly in 2009 under the NPDES permit (NPDES Permit No. IN0003573) to discharge at Outfall 003 and data has been reported according to the permit. The analytical results for monthly samples collected from the SSC WTP effluent in 2009 are presented in Table 3.3.

4.0 <u>LEACHATE AND LEAK DETECTION WATER DISPOSAL</u>

There were no analytical results with ≥ 1 mg/L PCBs for water samples collected from the LCS or LDS during the calendar year of 2009. All of the pumped leachate and leak detection water was treated in the SSC WTP.

5.0 SUMMARY OF WATER ELEVATIONS

The level of water in the underdrain system and the level of water over the primary liner (i.e., the LCS) continued to be monitored daily throughout 2009. Any substantial accumulation of water was removed from each chamber/sump via pumping at the maximum achievable removal rate until the level in the underdrain and above the primary liner was reduced to the minimum acceptable level for appropriate pump operations (e.g., sufficient water present above the pump motor to prevent overheating). Accumulated water continues to be transported via forcemain and discharged for treatment to the on-Site SSC WTP, as required in the October 26, 2006 Approval. In addition, the LDS is monitored and manually pumped, when necessary, to maintain the levels below the base of the Vault. As previously described in Section 2.2, a summary of the water elevation in the underdrain system and above the primary liner are presented in Tables 2.3, 2.2, and 2.1, respectively. Figure 5.1 presents a graphical representation of the average monthly volume of water removed from the LCS and LDS since commencement of pumping operations on August 30, 2006. Summaries of the maximum monthly water elevations are presented in Table 2.4.

Pump operations at the LCS manhole to reduce the maximum water elevations typically occurred once or twice a month, with the more frequent pumping occurring during the spring months (i.e., more rain). A permanent pump was installed in the LCS manhole in November 2008 and this required an adjustment to the standard pumping operations. In order to prevent the pump from overheating, the motor must remain submerged at all times (i.e., not less than 2 feet of water depth). Based on instructions from the pump installer, the field monitoring personnel generally reduced the water level from 3 to 4 feet of water depth to 2 to 3 feet of water depth following most pumping activities. (In 2010, the pump operations will be more closely scrutinized to attain generally lower water depths, possibly down to 1.5 to 1.0 feet of water depth).

The monthly maximum water elevation in the LDS generally occurred at similar times to the LCS (i.e., once or twice a month, with the more frequent pumping occurring during the spring months). Pumping at the LDS manhole is performed using a temporary pump, for which the typical water levels were reduced from 1 to 3 feet of water depth to effectively zero. A permanent pump has not been installed in the LDS manhole, as this system is not expected to generate significant volumes of water. Readily extractable water was removed following LDS flushing activities that were conducted in 2007 between January 23 and June 5. Remaining water from interstitial spaces is expected to gradually drain from the material (the total volume extracted from the LDS in 2009 represents less than 2 percent of the interstitial volume of the LDS).

Pump operations in the underdrain system to reduce the maximum water elevations typically occurred once or twice a month, with the more frequent pumping occurring during the spring months (i.e., more rain). A permanent pump was installed in the underdrain sump in November 2008 and this required an adjustment to the standard pumping operations. In order to prevent the vertical pump from overheating, the motor must remain submerged at all times (i.e., not less than 4 feet of water depth). Based on instructions from the pump installer, the field monitoring personnel generally reduced the water level from 6 to 7 feet of water depth to 5 to 6 feet of water depth following most pumping activities. (In 2010, the pump operations will be more closely scrutinized to attain generally lower water depths, potentially down to 4 feet of water depth or less).

6.0 SPILL CLEANUP REPORTS

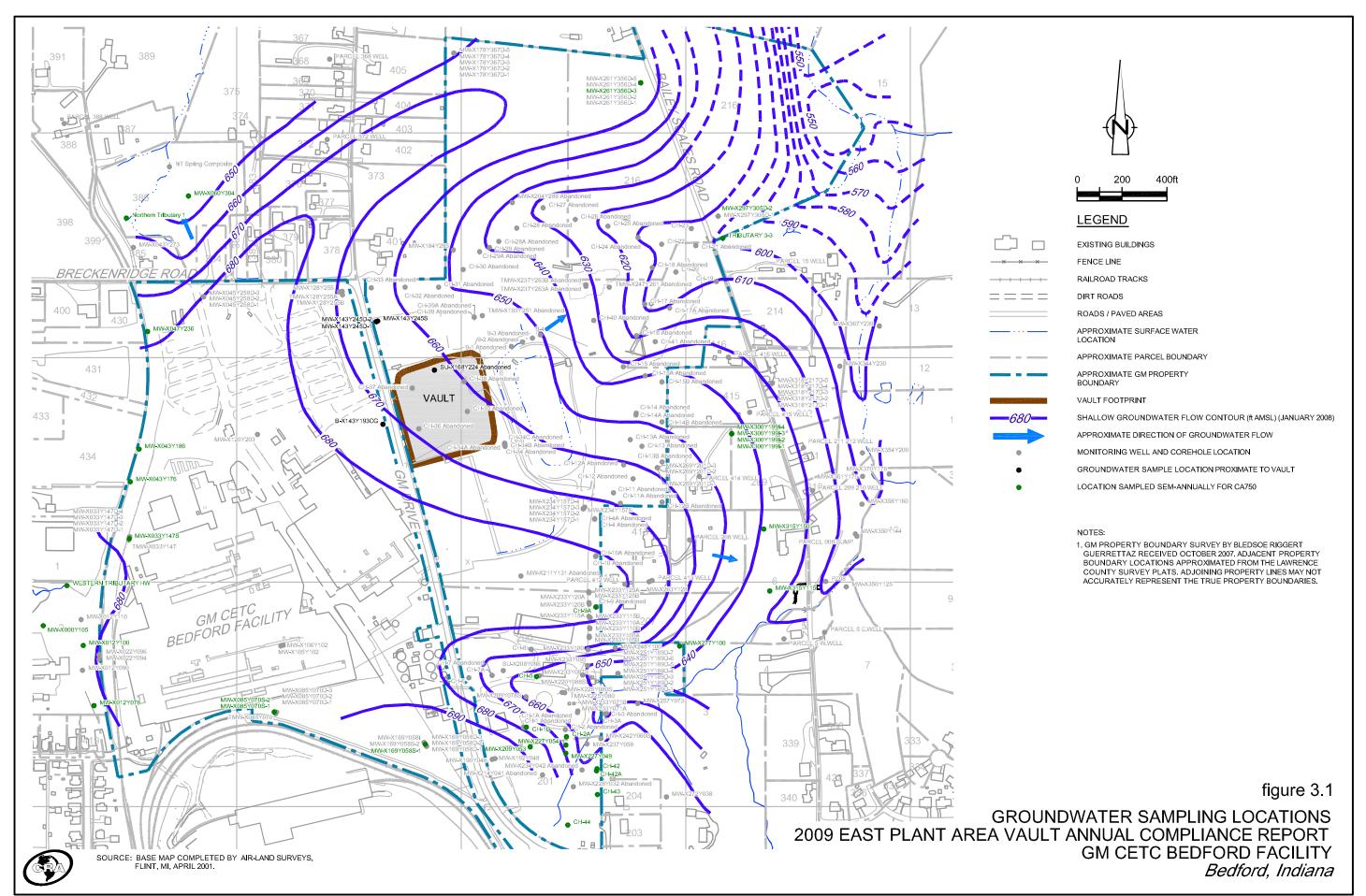
There were no on-Site PCB spills that occurred outside or inside the Exclusion Zone that was established in accordance with the Site HASP (CRA, August 2008). Additionally, there were no spills on public roads.

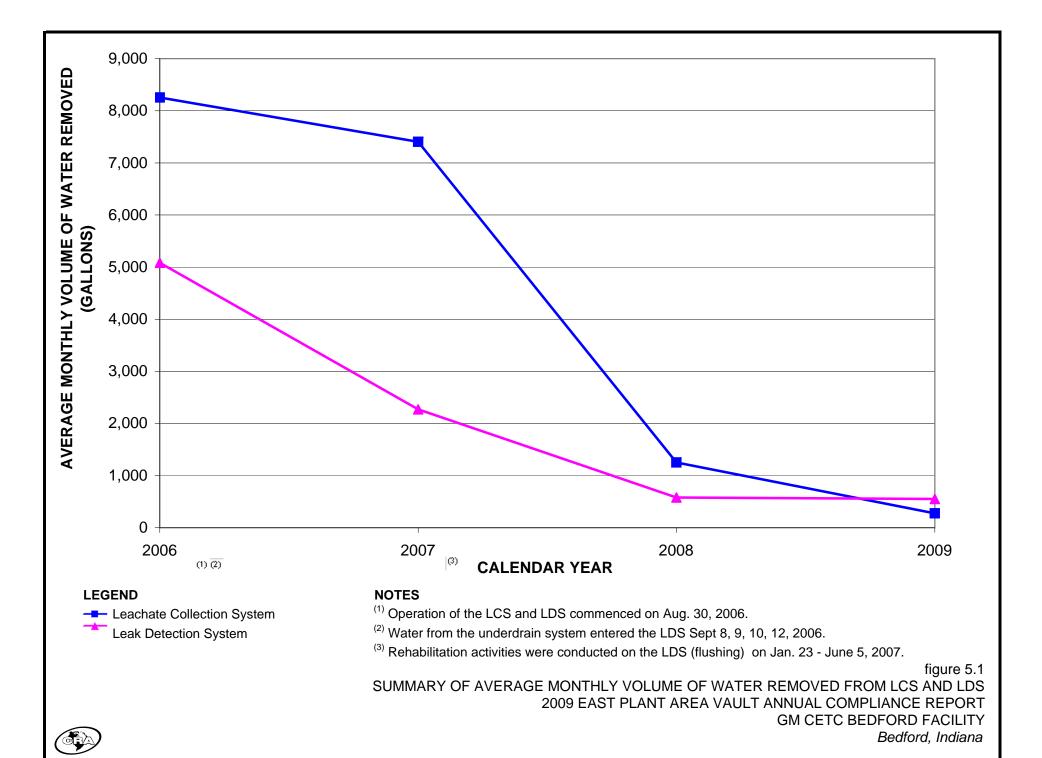
7.0 FINANCIAL ASSURANCE

Remedial construction of the IMs for the East Plant Area, which includes the Vault, is continuing at the Site. The Approvals establish that, "The financial assurance (FA) mechanism can be part of the financial assurance mechanism developed for the East Plant Area or the final Corrective Measures". GM continues to elect to obtain the FA mechanism for the Vault as part of the FA for the final Corrective Measures for the Facility. Upon construction completion of the Corrective Measures for the Site, FA will be established for all operation, maintenance, and monitoring activities.

8.0 <u>REFERENCES</u>

- CRA, Modification Request to the Ambient Air Quality Monitoring Plan (AAQMP), correspondence on October 29, 2008.
- CRA, Annual Compliance Report, East Plant Area Vault, Calendar Years 2006, 2007, and 2008, June 24, 2009.
- CRA, Quality Assurance Project Plan (QAPP) Resource Conservation and Recovery Act (RCRA) Facility Investigation and Removal Action Work Plan: Addendum No. 2, July 2006.
- CRA, Consolidated GM Bedford Health and Safety Plan (HASP), August 2008.





2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gal.)	Original Sevenson Comments (additional CRA comments)
1 /1 /2000						
1/1/2009	F.4.F0	4.10	1/.05			Holiday, no w/l measurement
1/2/2009	54.70	4.10	16:35			SES did not pump
1/3/2009	54.70	4.10	17:41			SES did not pump
1/4/2009	54.60	4.20 4.30	15:04			SES did not pump
1/5/2009	54.50		15:08			SES did not pump
1/6/2009	54.70	4.10 3.90	15:42			SES did not pump
1/7/2009 1/8/2009	54.90 54.40	4.40	14:16 15:05			SES did not pump
1/9/2009	54.40	4.40	15:23			SES did not pump SES did not pump
1/10/2009	54.20	4.60	20:05			pumped (no water removed?)
1/11/2009	54.20	4.60	18:34			not pumped
1/12/2009	54.20	4.60	17:43			not pumped
1/13/2009	54.20	4.60	17:50			not pumped
1/14/2009	54.20	4.60	17:15			not pumped
1/15/2009	54.00	4.80	18:18			not pumped
1/16/2009	54.00	4.80	13:27			not pumped
1/17/2009						Saturday, no w/l measurement.
1/18/2009	54.00	4.80	15:05			not pumped
1/19/2009	54.00	4.80	16:42			not pumped
1/20/2009	53.90	4.90	17:43			not pumped
1/21/2009	53.90	4.90	17:47			not pumped
1/22/2009	53.90	4.90	17:24			not pumped
1/23/2009	53.80	5.00	16:00			not pumped
1/24/2009	53.80	5.00	14:58			not pumped
1/25/2009						Sunday, no w/l measurement
1/26/2009	53.60	5.20	16:39			not pumped
1/27/2009	53.60	5.20	14:54			tried to pump line was frozen
1/28/2009	53.40	5.40	13:31			not pumped, line frozen
1/29/2009	53.40	5.40	12:34			not pumped, line frozen
1/30/2009	53.40	5.40	10:27			not pumped, line frozen
1/31/2009						Saturday, no w/l measurement.
2/1/2009						Sunday, no w/l measurement
2/2/2009	54.70	4.10	10:27	1.30	275	frozen (apparently pumped?)
2/3/2009	54.40	4.40	11:31			frozen
2/4/2009	54.40	4.40	10:07			frozen
2/5/2009	54.40	4.40	9:29			frozen
2/6/2009	54.30	4.50	10:27			did not pump
2/7/2009	54.10	4.70	15:21			did not pump
2/8/2009	53.50	5.30	9:34			did not pump
2/9/2009	53.70	5.10	16:05			did not pump
2/10/2009	53.50	5.30	15:08			did not pump
2/11/2009	53.50 53.50	5.30 5.30	13:30 18:15			did not pump
2/12/2009 2/13/2009	53.50 53.50	5.30	13:35			did not pump did not pump
2/13/2009	53.30	5.50	15:27			did not pump
2/15/2009	53.30	5.50	14:34			did not pump
2/16/2009	52.60	6.20	16:08			did not pump
2/17/2009	52.60	6.20	13:52			did not pump
2/18/2009	52.40	6.40	17:53			did not pump
2/19/2009	52.40	6.40	17:10			did not pump
2/20/2009	52.40	6.40	17:52			did not pump
2/21/2009	52.40	6.40	18:15			did not pump
2/22/2009		-				Sunday, no w/l measurement
2/23/2009	52.20	6.60	17:48			did not pump
2/24/2009	52.20	6.60	14:50			did not pump
2/25/2009	52.20	6.60	13:22			did not pump
2/26/2009	52.10	6.70	10:34			did not pump
2/27/2009	52.10	6.70	17:43			did not pump
2/28/2009	51.10	7.70	14:47			pumped (w/l prior to pumping)

2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference) 729.83 Bottom of sump (feet BTOS) 58.8 Diameter of sump (feet) 6

	Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gal.)	Original Sevenson Comments (additional CRA comments)
	3/1/2009	52.90	5.90	11:17	1.80	381	(w/1 measured after previous day's pumping)
	3/2/2009	52.90	5.90	18:14	1.00	301	(w) i incustred arter previous day 5 paintping)
	3/3/2009	52.80	6.00	18:07			
	3/4/2009	53.40	5.40	18:12	0.60	127	pumped
	3/5/2009	56.00	2.80	18:21	2.60	550	pumped
	3/6/2009	56.00	2.80	18:47	2.00	330	y unipeu
	3/7/2009	56.00	2.80	11:36			pumped (no water removed?)
		30.00	2.00	11.50			:
	3/8/2009 3/9/2009	55.80	3.00	17:46			Sunday, no w/l measurement
	/10/2009	55.80	3.00	15:42			not pumped not pumped
		55.60	3.20	18:27			
	/11/2009	55.60	3.20	17:07			not pumped not pumped
	/12/2009	55.50	3.30	18:35			
	/13/2009						not pumped
	/14/2009	55.40	3.40	17:26			not pumped
	/15/2009	55.40	3.40	14:35	0.60	127	not pumped pumped
	/16/2009	56.00	2.80	17:25	0.60	12/	
	/17/2009	56.00	2.80	17:13			not pumped
	/18/2009	56.00	2.80	16:35			not pumped
	/19/2009	55.90	2.90	9:44			not pumped
	/20/2009	55.80	3.00	12:50			not pumped
	/21/2009	55.70	3.10	11:34			not pumped
	/22/2009						Sunday, no w/l measurement
	/23/2009	55.50	3.30	16:24			not pumped
3,	/24/2009	56.20	2.60	17:44	0.70	148	pumped
3,	/25/2009	56.20	2.60	16:31			not pumped
3,	/26/2009	56.10	2.70	16:34			not pumped
3,	/27/2009	56.10	2.70	14:06			not pumped
3,	/28/2009						Saturday, no w/l measurement
3,	/29/2009	56.00	2.80	12:42			not pumped
3,	/30/2009	56.00	2.80	9:06			not pumped
3,	/31/2009	56.00	2.80	9:31			pumped (no water removed?)
4	1/1/2009	56.00	2.80	11:46			not pumped
4	1/2/2009	56.00	2.80	14:31			not pumped
4	1/3/2009	56.00	2.80	13:38			not pumped
4	1/4/2009	55.90	2.90	14:42			not pumped
4	1/5/2009						Sunday, no w/1 measurement
4	1/6/2009	55.90	2.90	15:42			not pumped
4	1/7/2009	55.80	3.00	11:34			not pumped
4	1/8/2009	55.60	3.20	13:34			not pumped
4	1/9/2009	55.60	3.20	11:21			not pumped
	/10/2009	55.50	3.30	8:34			not pumped
	/11/2009	55.40	3.40	8:15			not pumped
	/12/2009						Sunday, no w/l measurement
	/13/2009	55.80	3.00	13:24	0.40	85	pumped 4 hrs
	/14/2009	56.00	2.80	12:22	0.20	42	not pumped (delayed response?)
	/15/2009	56.00	2.80	13:47			not pumped
	/16/2009	56.00	2.80	13:34			not pumped
	/17/2009	56.00	2.80	14:35			not pumped
	/18/2009	50.00	2.00	11.00			Saturday, no w/l measurement
	/19/2009	56.00	2.80	16:34			not pumped
	/20/2009	55.80	3.00	14:35			not pumped
	/21/2009	55.80	3.00	14:10			not pumped
	/22/2009	55.80	3.00	13:12			not pumped
	/23/2009	55.80	3.00	15:34			not pumped
		55.80 55.80	3.00				
	/24/2009			15:35			not pumped not pumped
	/25/2009	55.60	3.20	13:49			
	/26/2009	FF F0	2.20	12.07			Sunday not pumped
	/27/2009	55.50	3.30	12:27			not pumped
	/28/2009	55.30 (?)	3.50	8:27			not pumped
	/29/2009	55.60 (?)	3.20	15:10			not pumped
4,	/30/2009	55.50	3.30	15:21			not pumped

2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
5/1/2009	55.40	3.40	15:32			not pumped
5/2/2009	55.16	0.10	10.02			Saturday, no w/l measurement
5/3/2009	55.50	3.30	6:21			Saturday, no w, i measurement
5/4/2009	55.20	3.60	14:58			
5/5/2009	55.10	3.70	15:31			
5/6/2009	56.80	2.00	18:04	1.70	360	pumped
5/7/2009	56.80	2.00	14:41			•
5/8/2009	56.80	2.00	18:29			
5/9/2009	56.70	2.10	14:41			
5/10/2009						Sunday, no w/l measurement
5/11/2009						SES on alternating work weeks
5/12/2009						SES on alternating work weeks
5/13/2009						SES on alternating work weeks
5/14/2009						SES on alternating work weeks
5/15/2009						SES on alternating work weeks
5/16/2009						Saturday, no w/l measurement
5/17/2009	56.60	2.20	15:06			
5/18/2009	56.60	2.20	12:21			
5/19/2009	56.60	2.20	14:31			
5/20/2009	56.60	2.20	14:03			
5/21/2009	56.50	2.30	12:24			
5/22/2009	56.50	2.30	15:12			
5/23/2009	56.50	2.30	14:14			
5/24/2009						Sunday, no w/l measurement
5/25/2009						Holiday, no w/l measurement
5/26/2009						SES on alternating work weeks
5/27/2009						SES on alternating work weeks
5/28/2009						SES on alternating work weeks
5/29/2009						SES on alternating work weeks
5/30/2009	56.20	2.60	11:22			
5/31/2009	=	. =0	44.40			Sunday, no w/l measurement
6/1/2009	56.10	2.70	14:49			not pumped
6/2/2009	56.10	2.70	13:04			not pumped
6/3/2009	56.20	2.60 2.80	11:38 13:45			not pumped
6/4/2009	56.00 56.00	2.80	14:20			not pumped
6/5/2009	56.00	2.80	15:05			not pumped not pumped
6/6/2009 6/7/2009	36.00	2.80	15.05			Sunday, no w/l measurement
6/8/2009						(no data available)
6/9/2009	55.80	3.00	7:45			not pumped
6/10/2009	55.60	3.20	9:00			not pumped
6/11/2009	55.60	3.20	8:15			not pumped
6/12/2009	55.70	3.10	8:30			not pumped
6/13/2009						Saturday, no w/1 measurement
6/14/2009						Sunday, no w/l measurement
6/15/2009	55.70	3.10	11:07			not pumped
6/16/2009	55.60	3.20	14:52			not pumped
6/17/2009	56.20	2.60	15:02	0.60	127	pumped
6/18/2009	56.20	2.60	13:29			not pumped
6/19/2009	56.10	2.70	14:42			not pumped
6/20/2009	56.10	2.70	13:55			not pumped
6/21/2009						Sunday, no w/1 measurement
6/22/2009	55.80	3.00	8:45			not pumped
6/23/2009	55.80	3.00	7:45			not pumped
6/24/2009	55.80	3.00	7:00			not pumped
6/25/2009	55.70	3.10	8:00			not pumped
6/26/2009	55.60	3.20	6:45			not pumped
6/27/2009						Saturday, no w/l measurement
6/28/2009	56.20	2.60	14:34	0.60	127	not pumped (water removed?)
6/29/2009	56.00	2.80	14:11			not pumped
6/30/2009	55.90	2.90	11:17			not pumped

2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gal.)	Original Sevenson Comments (additional CRA comments)
		*	16.57		<u> </u>	
7/1/2009	55.90	2.90	16:57			not pumped
7/2/2009	55.80	3.00	14:44			not pumped
7/3/2009	55.60	3.20	14:24			not pumped
7/4/2009	55.70	3.10	13:19			not pumped
7/5/2009						Sunday, no w/l measurement
7/6/2009	55.80	3.00	8:30			not pumped
7/7/2009	55.80	3.00	8:00			not pumped
7/8/2009	55.70	3.10	8:00			not pumped
7/9/2009	55.70	3.10	6:45			not pumped
7/10/2009	55.80	3.00	8:00			not pumped
7/11/2009						Saturday, no w/l measurement
7/12/2009	55.70	3.10	11:12			not pumped
7/13/2009	55.60	3.20	14:01			not pumped
7/14/2009	56.60	2.20	12:21	1.00	212	not pumped (water removed?)
7/15/2009	56.00	2.80	14:02			not pumped
7/16/2009	56.00	2.80	14:19			not pumped
7/17/2009	56.10	2.70	11:39			not pumped
7/18/2009	56.10	2.70	14:13			not pumped
7/19/2009						Sunday, no w/l measurement
7/20/2009	56.00	2.80	15:20			not pumped
7/21/2009	56.10	2.70	14:30			not pumped
7/22/2009	56.10	2.70	8:45			not pumped
		3.00	8:15			not pumped
7/23/2009	55.80					
7/24/2009	55.60	3.20	8:30			not pumped
7/25/2009	FF 00	2.00	14.00			Saturday, no w/l measurement
7/26/2009	55.80	3.00	14:20			not pumped
7/27/2009	55.80	3.00	13:20			not pumped
7/28/2009	55.70	3.10	16:22			not pumped
7/29/2009	55.60	3.20	13:35			not pumped
7/30/2009	55.70	3.10	13:57			not pumped
7/31/2009	55.60	3.20	10:37			not pumped
8/1/2009	55.50	3.30	14:40			not pumped
8/2/2009	55.60	3.20	13:21			not pumped
8/3/2009	55.60	3.20	11:31			not pumped
8/4/2009	55.50	3.30	13:15			not pumped
8/5/2009	55.60	3.20	14:15			not pumped
8/6/2009	55.50	3.30	15:22			not pumped
8/7/2009	55.50	3.30	15:04			not pumped
8/8/2009						Saturday, no w/1 measurement
8/9/2009	55.50	3.30	15:15			not pumped
8/10/2009	56.20	2.60	14:15	0.70	148	pumped
8/11/2009	56.20	2.60	17;44			not pumped
8/12/2009	56.20	2.60	16:47			not pumped
8/13/2009	56.10	2.70	15:04			not pumped
8/14/2009	56.10	2.70	13:25			not pumped
8/15/2009	56.10	2.70	14:16			not pumped
8/16/2009	55.70	3.10	7:50			not pumped
8/17/2009	55.60	3.20	8:00			not pumped
8/18/2009	55.50	3.30	7:45			
8/19/2009	55.50	3.30	8:00			not pumped not pumped
8/20/2009	55.40	3.40				
			7:30			not pumped
8/21/2009	55.30	3.50	8:25			not pumped
8/22/2009	FF 30	2.50	44.24			Saturday, no w/l measurement
8/23/2009	55.20	3.60	14:06			not pumped
8/24/2009	55.20	3.60	11:12	0		pumped (w/l prior to pumping)
8/25/2009	55.80	3.00	14:07	0.60	127	(w/l measured after previous day's pumping)
8/26/2009	55.70	3.10	11:25			not pumped
8/27/2009	55.60	3.20	14:18			not pumped
0 / 20 / 2000	55.60	3.20	11:07			not pumped
8/28/2009		0.00	1.4.40			mak muummad
8/29/2009	55.60	3.20	14:43			not pumped
	55.60 55.70	3.20	14:43 13:34			not pumped (no data available)

2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
9/1/2009	55.40	3.40	8:00			not numnod
		3.40	7:40			not pumped
9/2/2009	55.40					not pumped
9/3/2009	55.40	3.40	8:00			not pumped
9/4/2009	55.40	3.40	8:30			not pumped
9/5/2009	FF 40	2.40	10.45			Saturday, no w/l measurement
9/6/2009	55.40	3.40	10:47			not pumped
9/7/2009	55.40	3.40	11:55			not pumped
9/8/2009	55.40	3.40	11:06			not pumped
9/9/2009	55.40	3.40	13:34			not pumped
9/10/2009	55.40	3.40	14:25			not pumped
9/11/2009	55.40	3.40	15:08			not pumped
9/12/2009	55.40	3.40	13:25			not pumped
9/13/2009	55.30	3.50	14:48			not pumped
9/14/2009	55.30	3.50	14:21			not pumped
9/15/2009	55.30	3.50	11:51			not pumped
9/16/2009	55.40	3.40	17:06			not pumped
9/17/2009	55.40	3.40	17:13			not pumped
9/18/2009	55.40	3.40	14:14			not pumped
9/19/2009						Saturday, no w/l measurement
9/20/2009						Sunday, no w/1 measurement
9/21/2009	55.20	3.60	14:14			not pumped
9/22/2009	55.10	3.70	14:38			not pumped
9/23/2009	55.10	3.70	17:45			not pumped
9/24/2009	55.00	3.80	13:31			not pumped
9/25/2009	54.90	3.90	17:19			not pumped
9/26/2009	54.90	3.90	14:14			not pumped
9/27/2009	54.80	4.00	16:23			not pumped
9/28/2009	54.70	4.10	16:45			not pumped
9/29/2009	54.70	4.10	14:46			not pumped
9/30/2009	54.70	4.10	13:25			not pumped
10/1/2009	54.70	4.10	14:20			not pumped
10/2/2009	54.70	4.10	14:44			not pumped
10/3/2009	54.60	4.20	11:52			not pumped
10/4/2009						Sunday, no w/l measurement
10/5/2009	54.60	4.20	15:32			not pumped
10/6/2009	54.60	4.20	14:25			not pumped
10/7/2009	54.60	4.20	13:39			not pumped
10/8/2009	54.60	4.20	10:36			not pumped
10/9/2009	54.50	4.30	14:57			not pumped
10/10/2009	54.50	4.30	9:37			not pumped
10/11/2009	54.50	4.30	17:03			not pumped
10/12/2009	54.40	4.40	14:17			not pumped
10/13/2009	54.40	4.40	10:34			not pumped
10/14/2009	54.40	4.40	9:28			not pumped
10/15/2009	54.40	4.40	11:43			not pumped
10/16/2009	54.40	4.40	14:37			not pumped
10/17/2009						Saturday, no w/l measurement
10/18/2009	56.20	2.60	10:35	1.80	381	pumped
10/19/2009						(no data available)
10/20/2009	56.20	2.60	14:16			not pumped
10/21/2009	56.10	2.70	11:45			not pumped
10/22/2009	56.10	2.70	11:08			not pumped
10/23/2009	56.10	2.70	17:24			not pumped
10/24/2009	56.10	2.70	10:20			not pumped
10/25/2009						Sunday, no w/l measurement
10/26/2009	56.10	2.70	13:19			not pumped
10/27/2009	56.10	2.70	17:45			not pumped
10/28/2009	56.10	2.70	14:29			not pumped
10/29/2009	56.10	2.70	16:42			not pumped
10/30/2009	55.80	3.00	15:57			not pumped
10/31/2009						Saturday, no w/l measurement
						•

2009 PUMPING DATA LEACHATE COLLECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

 $\underline{Monitoring\ Location\ Information}$

Top of sump (datum reference) 729.83

Bottom of sump (feet BTOS) 58.8

Diameter of sump (feet) 6

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
11 /1 /2000						Cum days ma vis/1 macaassumamant
11/1/2009 11/2/2009	55.60	3.20	14:31			Sunday, no w/l measurement not pumped
11/3/2009	55.40	3.40	10:35			not pumped
11/4/2009	55.30	3.50	14:04			not pumped
11/5/2009	55.30	3.50	11:52			not pumped
11/6/2009	55.30	3.50	16:37			not pumped
11/7/2009	55.20	3.60	14:26			not pumped
11/8/2009						Sunday, no w/1 measurement
11/9/2009	55.10	3.70	9:37			not pumped
11/10/2009	55.00	3.80	14:34			not pumped
11/11/2009	55.00	3.80	10:54			not pumped
11/12/2009	55.00	3.80	15:04			not pumped
11/13/2009	55.00	3.80	11:38			not pumped
11/14/2009	55.00	3.80	14:24			not pumped
11/15/2009	55.00	3.80	9:07			not pumped
11/16/2009	55.00	3.80	13:29			not pumped
11/17/2009	55.00	3.80	14:54			not pumped
11/18/2009	55.00	3.80	9:31			not pumped
11/19/2009	55.00	3.80	14:20			not pumped
11/20/2009						(no data available)
11/21/2009						Saturday, no w/l measurement
11/22/2009	E4.00	4.00	15.50			Sunday, no w/l measurement
11/23/2009	54.80	4.00 4.00	15:59			not pumped not pumped
11/24/2009	54.80 54.80	4.00	15:07 9:46			not pumped
11/25/2009 11/26/2009	34.60	4.00	9.40			Holiday, no w/l measurement
11/27/2009	54.80	4.00	13:41			not pumped
11/28/2009	01.00	1.00	10.11			Saturday, no w/l measurement
11/29/2009						Sunday, no w/1 measurement
11/30/2009	54.40	4.40	10:51			pumped (w/l prior to pumping)
12/1/2009	54.90	3.90	13:34	0.50	106	(w/l measured after previous day's pumping)
12/2/2009	54.90	3.90	10:43			
12/3/2009	54.80	4.00	14:39			
12/4/2009	54.80	4.00	12:06			
12/5/2009	54.80	4.00	15:42			
12/6/2009	54.80	4.00	11:58			and to it to
12/7/2009						SES on alternating work weeks
12/8/2009						SES on alternating work weeks
12/9/2009						SES on alternating work weeks SES on alternating work weeks
12/10/2009						SES on alternating work weeks
12/11/2009 12/12/2009						Saturday, no w/l measurement
12/13/2009						Sunday, no w/1 measurement
12/14/2009	54.70	4.10	11:40			Suredy, no w/ i incustrement
12/15/2009	54.70	4.10	14:34			
12/16/2009	54.70	4.10	10:22			
12/17/2009	54.70	4.10	16:27			
12/18/2009	54.50	4.30	11:16			
12/19/2009	54.50	4.30	10:36			
12/20/2009						Sunday, no w/l measurement
12/21/2009	54.40	4.40	8:28			
12/22/2009	54.40	4.40	9:32			
12/23/2009	54.40	4.40	11:49			
12/24/2009	54.30	4.50	8:29			
12/25/2009						Holiday, no w/l measurement
12/26/2009						Saturday, no w/l measurement
12/27/2009	E4 20	4.50	11.00			Sunday, no w/l measurement
12/28/2009	54.30 54.30	4.50	11:39			
12/29/2009 12/30/2009	54.30 54.30	4.50 4.50	14:41 10:34			
12/31/2009	54.30 54.30	4.50	9:31			
12,01,2007	01.00	1.00	J.J.I	15.70	3,321	TOTAL
Notes:					-,0=1	

Notes:

A permanent pump was installed in the LCS manhole on November 10, 2008 (however, pump was operated manually throughout 2009).

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
				*	<u> </u>	
1/1/2009						Holiday, no w/l measurement
1/2/2009	51.00	0.80	16:22			not pumped
1/3/2009	50.80	1.00	17:34			not pumped
1/4/2009	50.60	1.20	14:52			not pumped
1/5/2009	50.10	1.70	14:57			not pumped
1/6/2009	49.80	2.00	15:36			not pumped
1/7/2009	49.60	2.20	14:12			not pumped
1/8/2009	49.30	2.50	14:51			not pumped
1/9/2009	49.10	2.70	15:07	1.90	402	not pumped pump thawed out, (pumped?)
1/10/2009	51.00	0.80	19:51		21	
1/11/2009	51.10	0.70 0.70	18:33 17:31	0.10	21	not pumped (delayed response?) not pumped
1/12/2009	51.10 51.00	0.70	17:47			
1/13/2009	50.90	0.90	17:08			not pumped
1/14/2009	50.80	1.00	18:12			not pumped
1/15/2009 1/16/2009	49.90	1.90	13:19			not pumped not pumped
1/17/2009	49.90	1.90	13.19			Saturday, no w/l measurement
1/18/2009	49.40	2.40	14:57			not pumped
1/19/2009	49.20	2.60	16:37			not pumped
1/20/2009	49.00	2.80	17:31			not pumped
1/21/2009	48.60	3.20	17:42			not pumped
1/22/2009	48.60	3.20	17:18			not pumped
1/23/2009	48.40	3.40	15:50			not pumped
1/24/2009	48.10	3.70	14:51			not pumped
1/25/2009	40.10	3.70	14.01			Sunday, no w/l measurement
1/26/2009	48.10	3.70	16:31			not pumped
1/27/2009	48.10	3.70	14:48			not pumped
1/28/2009	48.00	3.80	13:25			not pumped
1/29/2009	48.00	3.80	12:27			tried to pump line was frozen
1/30/2009	48.00	3.80	10:15			frozen
1/31/2009						Saturday, no w/l measurement
2/1/2009						Sunday, no w/l measurement
2/2/2009	47.20	4.60	10:34			frozen
2/3/2009	48.30	3.50	11:39	1.10	233	pumped 3.5 hrs
2/4/2009	48.20	3.60	10:14			frozen
2/5/2009	48.20	3.60	9:34			frozen
2/6/2009	48.10	3.70	10:31			frozen
2/7/2009	47.30	4.50	9:39			frozen
2/8/2009	47.30	4.50	15:35			not pumped
2/9/2009	47.10	4.70	16:15			not pumped
2/10/2009	47.00	4.80	15:15			not pumped
2/11/2009	47.00	4.80	13:40			not pumped
2/12/2009	47.00	4.80	18:22			not pumped
2/13/2009	47.00	4.80	13:47			not pumped
2/14/2009	47.00	4.80	15:34			not pumped
2/15/2009	46.90	4.90	14:39			not pumped
2/16/2009	46.60	5.20	16:15			not pumped
2/17/2009	46.60	5.20	14:03			not pumped
2/18/2009	46.60	5.20	18:02			not pumped
2/19/2009	46.60	5.20	17:18			not pumped
2/20/2009	46.60	5.20	18:08			not pumped
2/21/2009	46.60	5.20	18:27			not pumped
2/22/2009						Sunday, no w/l measurement
2/23/2009	46.40	5.40	17:57			not pumped
2/24/2009	46.40	5.40	15:00			not pumped
2/25/2009	46.20	5.60	13:34			not pumped
2/26/2009	46.00	5.80	10:47			not pumped
2/27/2009	46.00	5.80	17:52		4	not pumped
2/28/2009	51.10	0.70	14:31	5.10	1079	pumped

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
2 /1 /2000	F0.20	1.00	12.20			
3/1/2009	50.20	1.60	13:38			
3/2/2009	50.00	1.80 2.30	18:12			
3/3/2009 3/4/2009	49.50 50.20	1.60	17:56 18:08	0.70	148	pumped with 2" pump
	51.00	0.80	18:04	0.80	169	pumped with 2" pump
3/5/2009	49.80	2.00		0.80	109	pumpeu with 2 pump
3/6/2009	49.40	2.40	18:31 11:22			
3/7/2009	49.40	2.40	11:22			Sunday, no w/1 massurament
3/8/2009	40.00	2.00	17.22			Sunday, no w/l measurement
3/9/2009	49.00 49.00	2.80 2.80	17:32 15:34			
3/10/2009	49.00	2.80	18:18			
3/11/2009 3/12/2009	48.90	2.90	16:48			
3/13/2009	48.60	3.20	18:22			
	48.30	3.50	17:18			
3/14/2009 3/15/2009	48.20	3.60	14:24			
3/16/2009	51.20	0.60	17:17	3.00	635	pumped with 2" pump
3/17/2009	51.20	0.60	17:08	3.00	035	pumpeu wiii 2 pump
3/18/2009	51.00	0.80	16:27			
3/19/2009	51.00	0.80	9:31			
3/20/2009	50.60	1.20	12:43			
3/21/2009	50.40	1.40	11:21			
3/22/2009	30.40	1.40	11.21			Sunday, no w/l measurement
3/23/2009	49.90	1.90	16:17			Sunday, no w/1 measurement
3/24/2009	51.20	0.60	17:31	1.30	275	pumped with 2" pump
3/25/2009	51.00	0.80	16:25	1.50	2/3	pumpeu with 2 pump
3/26/2009	49.90	1.90	16:22			
3/27/2009	49.70	2.10	13:59			
3/28/2009	47.70	2.10	15.57			Saturday, no w/l measurement
3/29/2009	49.60	2.20	12:31			Saturday, no w/ i measurement
3/30/2009	49.50	2.30	8:52			
3/31/2009	49.50	2.30	9:27			
4/1/2009	49.40	2.40	11:34			
4/2/2009	49.30	2.50	14:26			
4/3/2009	49.30	2.50	13:31			
4/4/2009	49.30	2.50	14:34			
4/5/2009						Sunday, no w/1 measurement
4/6/2009	49.30	2.50	15:36			
4/7/2009	49.20	2.60	11:22			
4/8/2009	49.20	2.60	13:29			
4/9/2009	49.10	2.70	11:15			
4/10/2009	49.10	2.70	8:21			
4/11/2009	49.10	2.70	8:05			
4/12/2009						Sunday, no w/l measurement
4/13/2009	48.90	2.90	13:21			pumped (w/l prior to pumping)
4/14/2009	51.00	0.80	12:16	2.10	444	(w/1 measured after previous day's pumping)
4/15/2009	51.00	0.80	13:39			not pumped
4/16/2009	51.00	0.80	13:32			1 1
4/17/2009	51.00	0.80	14:27			
4/18/2009						Saturday, no w/l measurement
4/19/2009	51.00	0.80	16:28			,
4/20/2009	50.80	1.00	14:31			
4/21/2009	50.70	1.10	14:07			
4/22/2009	50.60	1.20	13:09			
4/23/2009	50.60	1.20	14:29			
4/24/2009	50.60	1.20	15:27			
4/25/2009	50.40	1.40	13:34			
4/26/2009						Sunday, no w/l measurement
4/27/2009	50.20	1.60	12:19			•
4/28/2009	50.00	1.80	8:18			
4/29/2009	50.60	1.20	15:04	0.60	127	CRA tested (water removed for sampling)
4/30/2009	50.60	1.20	15:09			not pumped

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
5/1/2009	50.40	1.40	15:23			
5/2/2009	50.00	1.80	6:14			
5/3/2009	49.80	2.00	14:46			
5/4/2009	49.80	2.00	14:46			
5/5/2009	49.70	2.10	15:24			
5/6/2009	51.30	0.50	17:51	1.60	338	pumped
5/7/2009	51.30	0.50	14:33	1.00	000	rumpeu
5/8/2009	51.20	0.60	18:21			
5/9/2009	51.30	0.50	14:34			
5/10/2009						Sunday, no w/l measurement
5/11/2009						SES on alternating work weeks
5/12/2009						SES on alternating work weeks
5/13/2009						SES on alternating work weeks
5/14/2009						SES on alternating work weeks
5/15/2009						SES on alternating work weeks
5/16/2009						Saturday, no w/l measurement
5/17/2009	51.10	0.70	14:54			•
5/18/2009	51.00	0.80	12:15			
5/19/2009	51.00	0.80	14:24			
5/20/2009	51.00	0.80	13:51			
5/21/2009	51.00	0.80	12:16			
5/22/2009	50.95	0.85	15:07			
5/23/2009	50.90	0.90	14:04			
5/24/2009						Sunday, no w/l measurement
5/25/2009						Holiday, no w/l measurement
5/26/2009						SES on alternating work weeks
5/27/2009						SES on alternating work weeks
5/28/2009						SES on alternating work weeks
5/29/2009						SES on alternating work weeks
5/30/2009						Saturday, no w/l measurement
5/31/2009	50.90	0.90	11:14			
6/1/2009	50.35	1.45	14:41			
6/2/2009	50.30	1.50	12:52			
6/3/2009	50.20	1.60	11:34			
6/4/2009	50.20	1.60	13:31			
6/5/2009	50.20	1.60	14:14			
6/6/2009	50.10	1.70	14:51			C d /1
6/7/2009						Sunday, no w/l measurement
6/8/2009	40.80	2.00	7:30			(no data available)
6/9/2009	49.80 49.80	2.00	7:30 8:45			
6/10/2009 6/11/2009	49.80	2.00	8:00			
6/12/2009	49.80	2.00	8:15			
6/13/2009	47.00	2.00	0.15			Saturday, no w/l measurement
6/14/2009						Sunday, no w/1 measurement
6/15/2009	49.80	2.00	10:55			Suriday, no w, i measurement
6/16/2009	49.80	2.00	14:44			
6/17/2009	51.20	0.60	14:51	1.40	296	pumped
6/18/2009	51.20	0.60	13:24			
6/19/2009	51.15	0.65	14:37			
6/20/2009	51.15	0.65	13:48			
6/21/2009						Sunday, no w/l measurement
6/22/2009	50.80	1.00	8:30			•
6/23/2009	50.90	0.90	7:30			
6/24/2009	50.80	1.00	6:48			
6/25/2009	50.80	1.00	7:45			
6/26/2009	50.40	1.40	6:30			
6/27/2009						Saturday, no w/l measurement
6/28/2009	50.40	1.40	14:29			
6/29/2009	50.20	1.60	14:01			
6/30/2009	50.10	1.70	11:08			

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference) 719.94
Bottom of sump (feet BTOS) 51.8
Diameter of sump (feet) 6

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
				•	-	
7/1/2009	50.00	1.80	16:45			
7/2/2009	50.00 50.00	1.80 1.80	14:37 14:11			
7/3/2009 7/4/2009	49.90	1.90	13:12			
7/5/2009	49.90	1.90	13.12			Sunday, no w/l measurement
7/6/2009	49.40	2.40	8:15			Suredy, no w/ i measurement
7/7/2009	49.30	2.50	7:45			
7/8/2009	49.40	2.40	7:45			
7/9/2009	49.30	2.50	6:30			
7/10/2009	49.30	2.50	7:30			
7/11/2009						Saturday, no w/l measurement
7/12/2009	49.30	2.50	11:04			
7/13/2009	49.20	2.60	13:52			
7/14/2009	51.10	0.70	12:14	1.90	402	pumped
7/15/2009	51.10	0.70	13:52			
7/16/2009	51.10	0.70	14:12			
7/17/2009	51.10	0.70	11:31			
7/18/2009	51.10	0.70	14:04			
7/19/2009	E0.00	0.00	15.14			Sunday, no w/l measurement
7/20/2009 7/21/2009	50.90 50.80	0.90 1.00	15:14 14:15			
7/21/2009	50.70	1.10	8:30			
7/23/2009	49.70	2.10	8:00			
7/24/2009	49.90	1.90	8:15			
7/25/2009						Saturday, no w/l measurement
7/26/2009	49.90	1.90	14:15			,
7/27/2009	49.90	1.90	13:12			
7/28/2009	49.80	2.00	16:15			
7/29/2009	49.80	2.00	13:24			
7/30/2009	49.80	2.00	13:48			
7/31/2009	49.70	2.10	10:28			
8/1/2009	49.60	2.20	14:34			
8/2/2009	49.70	2.10	13:15			
8/3/2009	49.60	2.20	11:24			
8/4/2009	49.60	2.20	13:04			
8/5/2009	49.60	2.20	14:09			
8/6/2009 8/7/2009	49.50 49.50	2.30 2.30	15:12 14:54			
8/8/2009	49.50	2.30	14.54			Saturday, no w/l measurement
8/9/2009	49.50	2.30	15:09			Saturday, no w/ i measurement
8/10/2009	51.20	0.60	14:08	1.70	360	pumped
8/11/2009	51.20	0.60	17:37			1. 1
8/12/2009	51.20	0.60	16:39			
8/13/2009	51.20	0.60	14:51			
8/14/2009	51.10	0.70	13:15			
8/15/2009	51.10	0.70	14:09			
8/16/2009	50.50	1.30	7:35			
8/17/2009	50.30	1.50	7:45			
8/18/2009	50.00	1.80	7:30			
8/19/2009	49.90	1.90	7:45			
8/20/2009	49.80	2.00	7:15			
8/21/2009	49.60	2.20	8:10			6 . 1
8/22/2009	40.50	2.20	12:52			Saturday, no w/l measurement
8/23/2009 8/24/2009	49.50 49.50	2.30 2.30	13:52 11:04			pumped (w/l prior to pumping)
8/25/2009	49.50 51.10	0.70	13:59	1.60	338	(w/1 measured after previous day's pumping)
8/26/2009	51.10	0.70	11:11	1.00	330	(11) I measured after previous day's pullipling)
8/27/2009	51.20	0.60	14:10			
8/28/2009	51.10	0.70	10:58			
8/29/2009	51.10	0.70	14:31			
8/30/2009	51.10	0.70	13:27			
8/31/2009						(no data available)
•						

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference) 719.94
Bottom of sump (feet BTOS) 51.8
Diameter of sump (feet) 6

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
9/1/2009	49.70	2.10	7:45			
9/2/2009	49.70	2.10	7:25			
9/3/2009	49.80	2.00	7:45			
9/4/2009	49.80	2.00	8:15			C-11
9/5/2009	49.90	1.90	10:38			Saturday, no w/l measurement
9/6/2009	49.90	2.10	11:48			
9/7/2009 9/8/2009	49.60	2.10	10:57			
9/9/2009	49.50	2.30	13:27			
9/10/2009	49.40	2.40	14:15			
9/11/2009	49.50	2.30	14:57			
9/12/2009	49.50	2.30	13:18			
9/13/2009	49.40	2.40	14:41			
9/14/2009	49.40	2.40	14:14			
9/15/2009	49.40	2.40	11:46			
9/16/2009	49.20	2.60	16:51			pumped (w/l prior to pumping)
9/17/2009	51.20	0.60	17:06	2.00	423	(w/1 measured after previous day's pumping)
9/18/2009	51.20	0.60	14:05			
9/19/2009						Saturday, no w/l measurement
9/20/2009						Sunday, no w/l measurement
9/21/2009	50.60	1.20	14:06			
9/22/2009	50.40	1.40	14:31			
9/23/2009	50.30	1.50	17:34			
9/24/2009	50.30	1.50	13:20			
9/25/2009	49.90	1.90	17:12			
9/26/2009	49.90	1.90	14:06			
9/27/2009	49.80	2.00	16:15			
9/28/2009	49.80	2.00	16:37			
9/29/2009	49.70	2.10	14:31			
9/30/2009	49.70	2.10	13:18			
10/1/2009	49.70	2.10	14:14			
10/2/2009	49.70	2.10	14:31			
10/3/2009 10/4/2009	49.70	2.10	11:46			Sunday, no w/1 measurement
10/4/2009	49.50	2.30	15:27			Sunday, no w/1 measurement
10/6/2009	49.50	2.30	14:18			
10/7/2009	49.50	2.30	13:32			
10/8/2009	49.40	2.40	10:27			
10/9/2009	49.40	2.40	14:45			
10/10/2009	49.40	2.40	9:29			
10/11/2009						Sunday, no w/l measurement
10/12/2009	49.40	2.40	16:52			,,
10/13/2009	49.40	2.40	14:09			
10/14/2009	49.30	2.50	10:27			
10/15/2009	49.30	2.50	9:31			
10/16/2009	49.30	2.50	11:35			
10/17/2009	49.30	2.50	14:28			
10/18/2009						Sunday, no w/l measurement
10/19/2009	51.20	0.60	10:27	1.90	402	pumped
10/20/2009	51.20	0.60	14:10			
10/21/2009	51.20	0.60	11:34			
10/22/2009	51.20	0.60	10:52			
10/23/2009			17:15			Installed new pump and control panel & took
10/24/2009	51.50	0.30	10:07			out CRA pump and returned it to CRA
10/25/2009		0	40.5			Sunday, no w/l measurement
10/26/2009	51.50	0.30	13:12			
10/27/2009	51.40	0.40	17:38			
10/28/2009	51.40	0.40	14:23			
10/29/2009	51.40	0.40	16:35			
10/30/2009	51.30	0.50	15:42			Saturday no w/l measurement
10/31/2009						Saturday, no w/l measurement

2009 PUMPING DATA LEAK DETECTION SYSTEM EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference) 719.94
Bottom of sump (feet BTOS) 51.8
Diameter of sump (feet) 6

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gallons)	Original Sevenson Comments (additional CRA comments)
11/1/2009						Sunday, no w/l measurement
11/2/2009	50.80	1.00	14:21			Surady, no w/ i incusurement
11/3/2009	50.70	1.10	10:20			
11/4/2009	50.60	1.20	13:52			
11/5/2009	50.50	1.30	11:45			
11/6/2009	50.40	1.40	16:28			
11/7/2009	50.40	1.40	14:19			
11/8/2009						Sunday, no w/l measurement
11/9/2009	50.40	1.40	9:24			
11/10/2009	50.30	1.50	14:28			
11/11/2009	50.30	1.50	10:47			
11/12/2009	50.20	1.60	14:53			
11/13/2009	50.20	1.60	11:24			
11/14/2009	50.10	1.70	14:11			
11/15/2009	50.10	1.70	8:59			
11/16/2009	50.10	1.70	13:21			
11/17/2009	50.10	1.70	14:46			
11/18/2009	50.10	1.70	9:24			
11/19/2009	50.10	1.70	14:12			(4-1:1-11-)
11/20/2009						(no data available)
11/21/2009						Saturday, no w/l measurement Sunday, no w/l measurement
11/22/2009 11/23/2009	50.30	1.50	15:51			Sunday, no w/1 measurement
11/24/2009	50.30	1.50	14:59			
11/25/2009	50.20	1.60	9:35			
11/26/2009	50.10	1.70	13:35			
11/27/2009	20120					(no data available)
11/28/2009	50.10	1.70				()
11/29/2009						Sunday, no w/l measurement
11/30/2009	49.20	2.60	10:42			pumped (w/1 prior to pumping)
12/1/2009	51.00	0.80	13:19	1.80	381	(w/1 measured after previous day's pumping)
12/2/2009	51.00	0.80	10:35			
12/3/2009	50.90	0.90	14:27			
12/4/2009	50.90	0.90	11:58			
12/5/2009	50.90	0.90	15:35			
12/6/2009						Sunday, no w/l measurement
12/7/2009	50.80	1.00	11:51			OFC 11 C 1 1
12/8/2009						SES on alternating work weeks
12/9/2009			CEC			SES on alternating work weeks
12/10/2009	not recorded		SES			SES on alternating work weeks SES on alternating work weeks
12/11/2009						e e e e e e e e e e e e e e e e e e e
12/12/2009 12/13/2009						Saturday, no w/l measurement Sunday, no w/l measurement
12/14/2009	51.60	0.20	11:31	0.80	169	Sunday, no w/ i measurement
12/15/2009	51.20	0.60	14:27	0.00	107	
12/16/2009	51.20	0.60	10:14			
12/17/2009	51.20	0.60	16:13			
12/18/2009	51.10	0.70	11:09			
12/19/2009	51.10	0.70	10:29			
12/20/2009						Sunday, no w/l measurement
12/21/2009	51.10	0.70	8:19			•
12/22/2009	51.10	0.70	9:24			
12/23/2009	51.10	0.70	11:41			
12/24/2009	51.00	0.80	8:20			
12/25/2009						Holiday, no w/l measurement
12/26/2009						Saturday, no w/l measurement
12/27/2009		_				Sunday, no w/l measurement
12/28/2009	51.00	0.80	11:23			
12/29/2009	51.00	0.80	14:37			
12/30/2009	51.00	0.80	10:25			
12/31/2009	51.00	0.80	9:22	31.40	6.641	TOTAL
				31.40	6,641	TOTAL

2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
1/1/2009						Holiday, no w/l measurement
1/2/2009	41.20	5.47	16:15			SES did not pump
1/3/2009	41.10	5.57	17:20			SES did not pump
1/4/2009	41.00	5.67	14:40			SES did not pump
1/5/2009	41.00	5.67	14:44			SES did not pump
1/6/2009	40.90	5.77	15:25			SES did not pump
1/7/2009	40.90	5.77	14:06			SES did not pump
1/8/2009	40.90	5.77	14:43			SES did not pump
1/9/2009	41.00	5.67	14:51			SES did not pump
1/10/2009	41.10	5.57	19:40			pumped (w/1 prior to pumping)
1/11/2009	41.80	4.87	18:24	0.90	33	pumped (w/1 prior to pumping)
1/12/2009	42.30	4.37	17:22	0.50	18	(w/1 measured after previous day's pumping)
1/13/2009	41.90	4.77	17:40	0.50	10	SES did not pump
1/14/2009	41.70	4.97	16:56			SES did not pump
1/15/2009	41.60	5.07	18:05			SES did not pump
1/16/2009	41.45	5.22	13:14			SES did not pump
	41.45	3.22	15.14			Saturday, no w/l measurement
1/17/2009	41.20	5.47	14:51			
1/18/2009 1/19/2009	41.20		16:30			SES did not pump
		5.47				SES did not pump
1/20/2009	41.10	5.57	17:20			SES did not pump
1/21/2009	41.00	5.67	17:35			SES did not pump
1/22/2009	41.00	5.67	17:10			SES did not pump
1/23/2009	40.90	5.77	15:40			SES did not pump
1/24/2009	41.10	5.57	14:46			SES did not pump
1/25/2009	41.00	F 47	16.05			Sunday, no w/l measurement
1/26/2009	41.00	5.67	16:25			SES did not pump
1/27/2009	41.00	5.67	14:40			SES did not pump
1/28/2009	41.00	5.67	13:20			SES did not pump
1/29/2009	40.90	5.77	12:15			tried to pump, line was frozen
1/30/2009	40.90	5.77	10:05			Frozen, could not pump
1/31/2009						Saturday, no w/l measurement
2/1/2009	41.00	F 47	10.22			Sunday, no w/l measurement
2/2/2009	41.00	5.67	10:22			Frozen, could not pump
2/3/2009	40.90	5.77	11:24			Frozen, could not pump
2/4/2009	40.90	5.77	9:52			Frozen, could not pump
2/5/2009	40.70	5.97	9:20			did not pump
2/6/2009	40.70	5.97	10:15			did not pump
2/7/2009	41.00	5.67	9:28			did not pump
2/8/2009	41.00	5.67	15:12			did not pump
2/9/200	40.90	5.77	15:55			did not pump
2/10/2009	41.00	5.67	14:50			did not pump
2/11/2009	41.00	5.67	13:20			did not pump
2/12/2009	41.00	5.67	18:04			did not pump
2/13/2009	41.00	5.67	13:20			did not pump
2/14/2009	41.00	5.67	15:15			did not pump
2/15/2009	40.90	5.77	14:25			did not pump
2/16/2009	40.90	5.77	15:56			did not pump
2/17/2009	40.90	5.77	13:45			did not pump
2/18/2009	40.80	5.87	17:48			did not pump
2/19/2009	40.80	5.87	17:04			did not pump
2/20/2009	40.80	5.87	17:40			did not pump
2/21/2009	40.80	5.87	18:05			did not pump
2/22/2009	40.00	.	47.05			Sunday, no w/l measurement
2/23/2009	40.60	6.07	17:35	0.50		did not pump
2/24/2009	41.20	5.47	14:40	0.60	22	did not pump
2/25/2009	41.40	5.27	13:10	0.20	7	did not pump
2/26/2009	41.70	4.97	10:25	0.30	11	did not pump
2/27/2009	41.90	4.77	17:37	0.20	7	did not pump
2/28/2009	41.30	5.37	14:24			pumped (previous four days?)

2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

ъ.	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
3/1/2009	41.20	5.47	13:30			
3/2/2009	41.00	5.67	18:06			
3/3/2009	41.00	5.67	17:42			
3/4/2009	41.00	5.67	17:56			pumped 4 1/2 hrs (no water removed?)
3/5/2009	41.60	5.07	17:52	0.60	22	pumped 6 hrs
3/6/2009	41.60	5.07	18:24			did not pump
3/7/2009	41.40	5.27	11:15			did not pump
3/8/2009						Sunday, no w/l measurement
3/9/2009	41.10	5.57	17:20			did not pump
3/10/2009	41.10	5.57	15:27			did not pump
3/11/2009	41.00	5.67	18:10			did not pump
3/12/2009	41.00	5.67	16:37			did not pump
3/13/2009	41.00	5.67	18:15			did not pump
3/14/2009	40.90	5.77	17:10			did not pump
3/15/2009	40.90	5.77	14:10			did not pump
3/16/2009	41.00	5.67	17:02	0.10	4	pumped
3/17/2009	41.00	5.67	16:54			did not pump
3/18/2009	41.00	5.67	16:20			did not pump
3/19/2009	41.00	5.67	9:27			did not pump
3/20/2009	40.90	5.77	12:36			did not pump
3/21/2009	40.90	5.77	11:10			did not pump
3/22/2009						Sunday, no w/l measurement
3/23/2009	40.90	5.77	16:10			did not pump
3/24/2009	41.20	5.47	17:23	0.30	11	pumped
3/25/2009	41.00	5.67	16:18			did not pump
3/26/2009	40.90	5.77	13:52			did not pump
3/27/2009	41.00	5.67	16:10			did not pump
3/28/2009						Saturday, no w/l measurement
3/29/2009	40.90	5.77	12:24			did not pump
3/30/2009	40.90	5.77	8:40			did not pump
3/31/2009	40.80	5.87	9:15			<pre>pumped (no water removed?)</pre>
4/1/2009	40.80	5.87	11:27			did not pump
4/2/2009	40.90	5.77	14:23			did not pump
4/3/2009	40.90	5.77	13:20			did not pump
4/4/2009	40.90	5.77	14:21			did not pump
4/5/2009						Sunday, no w/l measurement
4/6/2009	40.90	5.77	15:24			did not pump
4/7/2009	40.80	5.87	11:15			did not pump
4/8/2009	40.80	5.87	13:20			did not pump
4/9/2009	40.80	5.87	11:10			did not pump
4/10/2009	40.80	5.87	8:10			did not pump
4/11/2009	40.80	5.87	7:51			did not pump
4/12/2009						Sunday, no w/l measurement
4/13/2009	40.80	5.87	13:12			pumped (no water removed?)
4/14/2009	40.80	5.87	12:10			did not pump
4/15/2009	40.80	5.87	13:31			did not pump
4/16/2009	40.80	5.87	13:25			did not pump
4/17/2009	40.80	5.87	14:20			did not pump
4/18/2009	40.70	F 05	16.22			Saturday, no w/l measurement
4/19/2009	40.70	5.97	16:22			Sunday, no w/l measurement
4/20/2009	40.90	5.77	14:27			did not pump
4/21/2009	40.70	5.97	14:03			did not pump
4/22/2009	40.70	5.97	13:04			did not pump
4/23/2009	40.70	5.97	14:20			did not pump
4/24/2009	40.70	5.97	15:15			did not pump
4/25/2009	40.70	5.97	13:22			did not pump
4/26/2009	40.60	6.07	19:10			Sunday, no w/l measurement
4/27/2009	40.60	6.07	12:10			did not pump
4/28/2009	40.60 40.60	6.07	8:09			did not pump
4/29/2009 4/30/2009	40.60	6.07 6.07	14:58 15:04			did not pump did not pump
T/ 30/ 4007	40.00	0.07	10.04			ara not pump

2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gal.)	Original Sevenson Comments (additional CRA comments)
Dute	(Jeel B1O3)	(Jeel APOS)	(mi.mm)	(Jeel)	(811.)	(unutional CRA comments)
5/1/2009	40.60	6.07	15:15			did not pump
5/2/2009						Saturday, no w/l measurement
5/3/2009	40.70	5.97	18:10			did not pump
5/4/2009	40.60	6.07	14:40			did not pump
5/5/2009	40.60	6.07	15:16			did not pump
5/6/2009	41.20	5.47	17:42	0.60	22	pumped
5/7/2009	41.10	5.57	14:24			did not pump
5/8/2009	41.10	5.57	18:15			did not pump
5/9/2009	41.00	5.67	14:27			did not pump
5/10/2009						Sunday, no w/l measurement SES on alternating work weeks
5/11/2009 5/12/2009						SES on alternating work weeks
5/13/2009						SES on alternating work weeks
5/14/2009						SES on alternating work weeks
5/15/2009						SES on alternating work weeks
5/16/2009						Saturday, no w/l measurement
5/17/2009	40.70	5.97	14:46			did not pump
5/18/2009	40.70	5.97	12:10			did not pump
5/19/2009	40.60	6.07	14:14			did not pump
5/20/2009	40.60	6.07	13:42			did not pump
5/21/2009	40.60	6.07	12:08			did not pump
5/22/2009	40.60	6.07	14:52			did not pump
5/23/2009	40.60	6.07	14:01			did not pump
5/24/2009						Sunday, no w/l measurement
5/25/2009						Holiday, no w/l measurement
5/26/2009						SES on alternating work weeks
5/27/2009						SES on alternating work weeks
5/28/2009						SES on alternating work weeks
5/29/2009						SES on alternating work weeks
5/30/2009	10.00		44.00			Saturday, no w/l measurement
5/31/2009	40.60	6.07	11:08			did not pump
6/1/2009	40.80	5.87	14:34			did not pump
6/2/2009	40.80 40.60	5.87 6.07	12:42 11:27			did not pump
6/3/2009 6/4/2009	40.60	6.07	13:22			did not pump did not pump
6/5/2009	40.50	6.17	14:10			did not pump
6/6/2009	40.60	6.07	14:43			did not pump
6/7/2009	10.00	0.07	11.10			Sunday, no w/1 measurement
6/8/2009						(no data available)
6/9/2009	40.20	6.47	7:15			did not pump
6/10/2009	40.20	6.47	8:30			did not pump
6/11/2009	40.30	6.37	7:45			did not pump
6/12/2009	40.40	6.27	8:00			did not pump
6/13/2009						Saturday, no w/l measurement
6/14/2009						Sunday, no w/l measurement
6/15/2009	40.50	6.17	10:47			did not pump
6/16/2009	40.40	6.27	14:31			did not pump
6/17/2009	40.80	5.87	14:47	0.40	15	pumped
6/18/2009	40.60	6.07	13:15			did not pump
6/19/2009	40.60	6.07	14:25			did not pump
6/20/2009	40.50	6.17	13:40			did not pump
6/21/2009	40.20	6.05	0.15			Sunday, no w/l measurement
6/22/2009	40.30	6.37	8:15			did not pump
6/23/2009	40.30 40.30	6.37	7:00			did not pump
6/24/2009 6/25/2009	40.30	6.37 6.27	6:30 7:30			did not pump did not pump
6/26/2009	40.40	6.27	6:15			did not pump
6/27/2009	40.30	0.37	0.13			Saturday, no w/l measurement
6/28/2009	40.50	6.17	14:20	0.20	7	did not pump (looks like pumping)
6/29/2009	40.50	6.17	13:52		•	did not pump
6/30/2009	40.50	6.17	10:57			did not pump
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2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Date	Water Level (feet BTOS)	Water Depth (feet AFOS)	Time of Water Level Measurement (hh:mm)	Water Depth Removed (feet)	Volume Removed (gal.)	Original Sevenson Comments (additional CRA comments)
7/1/2009	40.50	6.17	16:38			did not numn
						did not pump
7/2/2009	40.40	6.27	14:29			did not pump
7/3/2009	40.40	6.27	14:03			did not pump
7/4/2009	40.40	6.27	13:04			did not pump
7/5/2009	40.50		0.00			Sunday, no w/l measurement
7/6/2009	40.20	6.47	8:00			did not pump
7/7/2009	40.20	6.47	7:30			did not pump
7/8/2009	40.20	6.47	7:30			did not pump
7/9/2009	40.10	6.57	6:15			did not pump
7/10/2009	40.10	6.57	7:15			did not pump
7/11/2009						Saturday, no w/l measurement
7/12/2009	40.40	6.27	10:52			did not pump
7/13/2009	40.40	6.27	13:40			did not pump
7/14/2009	40.40	6.27	12:06			did not pump
7/15/2009	40.50	6.17	13:40			did not pump
7/16/2009	40.50	6.17	14:04			did not pump
7/17/2009	40.50	6.17	11:24			did not pump
7/18/2009	40.50	6.17	13:55			did not pump
7/19/2009						Sunday, no w/l measurement
7/20/2009	40.50	6.17	15:02			did not pump
7/21/2009	40.50	6.17	14:00			did not pump
7/22/2009	40.40	6.27	8:15			did not pump
7/23/2009	40.10	6.57	7:45			did not pump
7/24/2009	40.10	6.57	8:00			did not pump
7/25/2009						Saturday, no w/l measurement
7/26/2009	40.40	6.27	14:07			did not pump
7/27/2009	40.40	6.27	13:04			did not pump
7/28/2009	40.50	6.17	16:08			did not pump
7/29/2009	40.40	6.27	13:17			did not pump
7/30/2009	40.40	6.27	13:40			did not pump
7/31/2009	40.50	6.17	10:20			did not pump
8/1/2009	40.50	6.17	14:20			did not pump
8/2/2009	40.50	6.17	13:08			did not pump
8/3/2009	40.50	6.17	11:15			did not pump
8/4/2009	40.50	6.17	12:50			did not pump
8/5/2009	40.40	6.27	14:01			did not pump
8/6/2009	40.40	6.27	15:04			did not pump
8/7/2009	40.40	6.27	14:47			did not pump
8/8/2009						Saturday, no w/l measurement
8/9/2009	40.40	6.27	15:02	0.20	-	did not pump
8/10/2009	40.60	6.07	13:57	0.20	7	pumped
8/11/2009	40.60	6.07	17:20			did not pump
8/12/2009	40.60	6.07	16:30			did not pump
8/13/2009	40.60	6.07	14:40			did not pump
8/14/2009	40.70	5.97	13:07			did not pump
8/15/2009	40.60	6.07	14:01			did not pump
8/16/2009	40.60	6.07	7:20			did not pump
8/17/2009	40.50	6.17	7:30			did not pump
8/18/2009	40.50	6.17	7:15			did not pump
8/19/2009	40.30 40.30	6.37	7:30			did not pump did not pump
8/20/2009		6.37	7:00			did not pump
8/21/2009 8/22/2009	40.30	6.37	7:55			Saturday, no w/l measurement
8/23/2009	40.20	6 27	12.40			· · · · · · · · · · · · · · · · · · ·
8/24/2009	40.30 40.30	6.37 6.37	13:40 10:50			did not pump did not pump
8/25/2009	40.30	6.37	13:52			did not pump
8/26/2009	40.30	6.37	11:02			did not pump
8/27/2009	40.30	6.37	14:04			did not pump
8/28/2009	40.30	6.37	10:45			did not pump
8/29/2009	40.30	6.37	14:24			did not pump
8/30/2009	40.30	6.37	13:15			did not pump
8/31/2009	-5.00					(no data available)
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TABLE 2.2

2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

<u>Monitoring Location Information</u> Top of sump (datum reference) 708.81 Bottom of sump (feet BTOS)

Diameter of sump (feet) 46.67 1.5

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
0/1/2000	40.20	6 27	7.20			did not nume
9/1/2009	40.30	6.37	7:30			did not pump
9/2/2009	40.30	6.37	7:10			did not pump
9/3/2009	40.20	6.47	7:30			did not pump
9/4/2009	40.30	6.37	8:00			did not pump
9/5/2009	40.20	6.27	10.24			Saturday, no w/l measurement
9/6/2009	40.30	6.37	10:24			did not pump
9/7/2009	40.30	6.37	11:34			did not pump
9/8/2009	40.30	6.37	10:40			did not pump
9/9/2009	40.30 40.30	6.37 6.37	13:15 14:07			did not pump
9/10/2009	40.30		14:40			did not pump
9/11/2009	40.30	6.37				did not pump
9/12/2009	40.40	6.37 6.27	13:11 14:30			did not pump
9/13/2009						did not pump
9/14/2009	40.40	6.27	14:09			did not pump
9/15/2009	40.40 40.40	6.27 6.27	11:30 16:41			did not pump
9/16/2009		6.27	16:58			did not pump
9/17/2009	40.40 40.30	6.27	13:56			did not pump did not pump
9/18/2009	40.50	0.57	15:56			
9/19/2009						Saturday, no w/l measurement Sunday, no w/l measurement
9/20/2009 9/21/2009	40.30	6.37	1:58			did not pump
	40.30	6.37				did not pump
9/22/2009 9/23/2009	40.40		14:24			
	40.40	6.27 6.37	17:27 13:08			did not pump
9/24/2009	40.30	6.37	17:04			did not pump
9/25/2009	40.30	6.37	13:58			did not pump
9/26/2009	40.30	6.37	16:07			did not pump did not pump
9/27/2009	40.30	6.37	16:24			
9/28/2009	40.30	6.37	14:24			did not pump
9/29/2009	40.30	6.37	13:12			did not pump
9/30/2009	40.30	6.37	14:06			did not pump did not pump
10/1/2009 10/2/2009	40.30	6.37	14:24			did not pump
10/3/2009	40.30	6.37	11:39			did not pump
10/4/2009	40.50	0.57	11.57			Sunday, no w/l measurement
10/5/2009	40.30	6.37	15:15			did not pump
10/6/2009	40.30	6.37	14:10			did not pump
10/7/2009	40.30	6.37	13:25			did not pump
10/8/2009	40.30	6.37	10:15			did not pump
10/9/2009	40.30	6.37	14:37			did not pump
10/10/2009	40.30	6.37	9:20			did not pump
10/11/2009	40.50	0.57	7.20			Sunday, no w/l measurement
10/12/2009	40.30	6.37	16:40			did not pump
10/13/2009	40.30	6.37	14:01			did not pump
10/14/2009	40.30	6.37	10:15			did not pump
10/15/2009	40.30	6.37	9:21			did not pump
10/16/2009	40.30	6.37	11:28			did not pump
10/17/2009	40.30	6.37	14:16			did not pump
10/18/2009	40.00	0.57	14.10			Sunday, no w/l measurement
10/19/2009	40.80	5.87	10:15	0.50	18	pumped
10/20/2009	40.80	5.87	14:04			did not pump
10/21/2009	40.80	5.87	11:20			did not pump
10/22/2009	40.80	5.87	10:40			did not pump
10/23/2009	40.80	5.87	17:05			did not pump
10/24/2009	40.80	5.87	9:50			did not pump
10/25/2009	10.00	5.67	7.50			Sunday, no w/l measurement
10/26/2009	40.80	5.87	13:04			did not pump
10/27/2009	40.70	5.97	17:20			did not pump
10/28/2009	40.70	5.97	14:15			did not pump
10/29/2009	40.70	5.97	16:27			did not pump
10/30/2009	40.70	5.97	15:35			did not pump
10/31/2009	10.70	0.77	10.00			Saturday, no w/1 measurement
, -1, 2007						

TABLE 2.2

2009 PUMPING DATA GRAVEL UNDERDRAIN SUMP EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

 $\underline{Monitoring\ Location\ Information}$

Top of sump (datum reference) 708.81

Bottom of sump (feet BTOS) 46.67

Diameter of sump (feet) 1.5

	Water Level	Water Depth	Time of Water Level Measurement	Water Depth Removed	Volume Removed	Original Sevenson Comments
Date	(feet BTOS)	(feet AFOS)	(hh:mm)	(feet)	(gal.)	(additional CRA comments)
11 /1 /2000						
11/1/2009	40.50	6.17	14:10			Sunday, no w/l measurement
11/2/2009		6.27	10:05			did not pump
11/3/2009 11/4/2009	40.40 40.40	6.27	13:40			did not pump did not pump
11/5/2009	40.40	6.27	11:32			did not pump
11/6/2009	40.40	6.27	16:20			did not pump
11/7/2009	40.30	6.37	14:11			did not pump
11/8/2009	10.00	0.07	11111			Sunday, no w/l measurement
11/9/2009	40.20	6.47	16:15			did not pump
11/10/2009	40.10	6.57	14:20			did not pump
11/11/2009	40.10	6.57	10:35			did not pump
11/12/2009	40.00	6.67	14:45			did not pump
11/13/2009	40.00	6.67	11:15			did not pump
11/14/2009	40.10	6.57	14:00			did not pump
11/15/2009	40.10	6.57	8:50			did not pump
11/16/2009	40.10	6.57	13:12			did not pump
11/17/2009	40.10	6.57	14:38			did not pump
11/18/2009	40.10	6.57	9:15			did not pump
11/19/2009	40.10	6.57	14:05			did not pump
11/20/2009						(no data available)
11/21/2009						Saturday, no w/l measurement
11/22/2009 11/23/2009	40.10	6.57	15:42			Sunday, no w/l measurement did not pump
11/24/2009	40.10	6.57	14:50			did not pump
11/25/2009	40.10	6.57	9:20			did not pump
11/26/2009	40.10	0.57	7.20			Holiday, no w/l measurement
11/27/2009	40.10	6.57	13:27			did not pump
11/28/2009						Saturday, no w/1 measurement
11/29/2009						Sunday, no w/l measurement
11/30/2009	40.10	6.57	10:37			did not pump
12/1/2009	41.10	5.57	13:12	1.00	37	pump operational
12/2/2009	41.10	5.57	10:26			did not pump
12/3/2009	41.10	5.57	14:15			did not pump
12/4/2009	41.10	5.57	11:49			did not pump
12/5/2009	41.10	5.57	15:28			did not pump
12/6/2009	41.10	5.57	11:42			did not pump
12/7/2009						SES on alternating work weeks
12/8/2009						SES on alternating work weeks
12/9/2009						SES on alternating work weeks SES on alternating work weeks
12/10/2009 12/11/2009						SES on alternating work weeks
12/11/2009						Saturday, no w/l measurement
12/13/2009						Sunday, no w/1 measurement
12/14/2009	40.10	6.57	12:23			did not pump
12/15/2009	40.10	6.57	14:14			· · · · · · · · · · · · · · · · · · ·
12/16/2009	40.10	6.57	10:08			
12/17/2009	40.10	6.57	16:06			
12/18/2009	40.10	6.57	11:01			
12/19/2009	40.10	6.57	10:21			
12/20/2009						Sunday, no w/l measurement
12/21/2009	40.10	6.57	8:07			
12/22/2009	40.10	6.57	9:15			
12/23/2009	40.10	6.57	11:30			
12/24/2009	40.10	6.57	8:14			ti 1
12/25/2009						Holiday, no w/l measurement
12/26/2009						Saturday, no w/l measurement
12/27/2009	40.10	6.57	11.10			Sunday, no w/l measurement
12/28/2009 12/29/2009	40.10 40.10	6.57 6.57	11:10 14:25			
12/29/2009	40.10	6.57	14:25 10:17			
12/31/2009	40.10	6.57	9:14			
,,				6.60	242	TOTAL
N.T						

Notes:

Permanent pump installed in the underdrain sump on November 10, 2008 is a 3 foot vertical submersible pump that needs 2 to 3 feet of water above the pump intake in order to operate properly; therefore, the water depth in the underdrain sump is expected to be maintained between 5 & 6 feet above bottom.

TABLE 2.4

MAXIMUM WATER ELEVATION SUMMARY EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

	Maximum Water Level, measured in feet BTOS (Water Depth, measured in feet AFOS)							
Date	LO	LCS ¹		LDS ²		in System³		
Jan-09	53.4	(5.4)	48.0	(3.80)	40.9	(5.77)		
Feb-09	51.1	(7.7)	46.0	(5.80)	40.6	(6.07)		
<i>Mar-09</i>	52.8	(6.0)	48.2	(3.60)	40.8	(5.87)		
Apr-09	55.4	(3.5)	48.9	(2.90)	40.6	(6.07)		
<i>May-</i> 09	55.1	(3.7)	49.7	(2.10)	40.6	(6.07)		
Jun-09	55.6	(3.2)	49.8	(2.00)	40.2	(6.47)		
Jul-09	55.6	(3.2)	49.2	(2.60)	40.1	(6.57)		
Aug-09	55.2	(3.6)	49.5	(2.30)	40.3	(6.37)		
Sep-09	54.7	(4.1)	49.2	(2.60)	40.2	(6.47)		
Oct-09	54.4	(4.4)	49.3	(2.50)	40.3	(6.37)		
<i>Nov-</i> 0 9	54.4	(4.4)	49.2	(2.60)	40.0	(6.67)		
Dec-09	54.3	(4.5)	50.8	(1.00)	40.1	(6.57)		

Notes:

BTOS - Below top of sump

AFOS - Above floor of sump

Top of sump (datum reference) = 0.0

Diameter of LCS and LDS sumps = 6.0 feet

Diameter of Underdrain sump = 1.5 feet

¹ LCS bottom of sump (feet BTOS) = 58.8

²LDS bottom of sump (feet BTOS) = 51.80

³ Underdrain System bottom of sump (feet BTOS) = 46.67. The permanent pump installed in the underdrain system sump is a 3 foot vertical submersible pump that requires 2 to 3 feet of water above the pump intake (at the top of the pump); however, it was advised that 5ft of water be maintained above the pump in order for the pump to operate properly; therefore, the water depth in the underdrain sump is expected to be in the 6 to 7 foot range.

TABLE 3.1

LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A007	A007	A007	A007	A007	A007 EPA LCS
Sample Location Sample Identification		EPA LCS WL-AOI7-012209-JN-37189	EPA LCS WL-AOI7-021309-JN-37191	EPA LCS WL-AO17-032609-JN-39026	EPA LCS WL-AOI7-042909-JN-39057	EPA LCS WL-AO17-052209-JN-39077	WL-AOI7-062409-JN-39102
Sample Date		1/22/2009	2/13/2009	3/26/2009	WL-AO17-042909-JN-39037 4/29/2009	WL-AO17-032209-JN-39077 5/22/2009	6/24/2009
Sample Type		1/22/2009	2/13/2009	3/20/2009	4/23/2005	3/22/2009	0/24/2009
Sample Type	Units						
PCBs	umis						
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.88	0.20 U	0.20 U	2.0	0.20 U	1.1
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U 0.20 U	0.20 U 0.20 U	0.20 U 0.20 U	0.20 U 0.20 U	0.20 U 0.20 U	0.20 U 0.20 U
Aroclor-1260 (PCB-1260)	ug/L		0.20 U	0.20 U 0	0.20 U 2	0.20 U 0	
Total PCBs	ug/L	0.88	Ü	0	2	0	1.1
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chloroethyl vinyl ether	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl Bromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane) Chloromethane (Methyl Chloride)	ug/L	1.0 U 1.0 U	1.0 U 1.0 U	1.0 U 1.0 U	1.0 U 1.0 U	1.0 U 1.0 U	1.0 U 1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L ug/L	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J B	1.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters							
Conductivity field	mS/cm		_	2.595	2.455	2.384	2.165
pH field	s.u.		-	6.17	6.75	6.63	6.79

Notes:

U - Not present at or above the associated value.

CRA 013968 (319)

TABLE 3.1

LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Company Comp	Sample Area Sample Location Sample Identification Sample Date Sample Type		A007 EPA LCS WL-AOI7-072909-JN-39132 7/29/2009	A007 EPA LCS WL-A017-082509-JN-39156 8/25/2009	A007 EPA LCS WL-A017-092809-JN-39182 9/28/2009	A007 EPA LCS WL-A017-102609-JN-39206 10/26/2009	A007 EPA LCS WL-A017-112309-JN-39229 11/23/2009	A007 EPA LCS WL-AOI7-121509-KK-39258 12/15/2009
Accidence Application Ap	PCBs	Units						
Account Acco	Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Analone 248 Col. 248	Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Δοκούα-129 ((1912-139) 19/1 2014 20	Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Anches 158 (CF-158) 159 159 159 159 150 15	Aroclor-1242 (PCB-1242)		0.47	0.50	0.64	0.36	0.42	0.20 U
Accidence (1997 19	,							
Total Cognic Companies Validatio Cognic	, ,							
1,1,1-Trichirecethane								
1,1,1-Tickherechame	Total PCBs	ug/L	0.47	0.50	0.64	0.36	0.42	0
1-15-Pichlorocethane ug/L 10U	Volatile Organic Compounds							
1-15-Pichlorocethane ug/L 10U	1.1.Trichloroethane	ng/L	1011	1011	1011	1011	1011	1011
1-10-filohroechame		-						
1.10 1.00								
1.23-Dichlorobenzees 10g/L 10U 10U 10U 10U 10U 10U 10U 12D 12D 12D 12D 12D 10U 12D	1,1-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.2-Dichloropropane Ug/L 10 U	1,2-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.2-Dichloropropane Ug/L 10 U	1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1-1-Dickhorebenzene	1,2-Dichloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chorocethyl vinyl ether ug/L 20U	1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	0.17 J	1.0 U	1.0 U	1.0 U
Renorderhape ug/L 0.18 1.0 U 0.13 1.0 U	1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	0.38 J	1.0 U	1.0 U	1.0 U
Bromodich bromethane ug/L 10 U	2-Chloroethyl vinyl ether		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform Ug/L 10U	Benzene		0.18 J	1.0 U	,		1.0 U	1.0 U
Bromomethane (Methyl Bromide)								
Carbon tetrachoride								
Chlorobenzene ug/L 1.0 U								
Chlorochane ug/L 1,0 U		0.						
Chloroform (Trichloromethane) ug/L 1.0 U								
Chloromethane (Methyl Chloride) ug/L 1.0 U								
Conductivity field 10 U	,							
Dichomochloromethane ug/L 1.0 U	. , , ,							
Dichlorodifiluoromethane (CFC-12) ug/L 1.0 U								
Ethylbenzene ug/L 1.0 U								
Methylene chloride ug/L 1.0 U								
Styrene ug/L 1.0 U 1.0 U <t< td=""><td>*</td><td>0.</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	*	0.						
Tetrachloroethene ug/L 1.0 U	-				1.0 U	1.0 U		1.0 U
Toluene ug/L 1.0 U 1.0 U <t< td=""><td>Tetrachloroethene</td><td></td><td>1.0 U</td><td>1.0 U</td><td>1.0 U</td><td>1.0 U</td><td>1.0 U</td><td>1.0 U</td></t<>	Tetrachloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene ug/L 1,0 U 1,0 U 0,29 J 1,0 U 0,18 J 1,0 U 1,0	Toluene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11) ug/L 1.0 U <	trans-1,2-Dichloroethene		1.0 U	1.0 U	0.29 J	1.0 U	0.18 J	1.0 U
Vinyl chloride ug/L 1.0 U 1.0 U 0.55 J 1.0 U 0.38 J 1.0 U Field Parameters Conductivity field mS/cm 2.276 2.535 2.604 2.229 2.497 2.724	trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters Conductivity field mS/cm 2.276 2.535 2.604 2.229 2.497 2.724	Trichlorofluoromethane (CFC-11)	ug/L						
Conductivity field mS/cm 2.276 2.535 2.604 2.229 2.497 2.724	Vinyl chloride	ug/L	1.0 U	1.0 U	0.55 J	1.0 U	0.38 J	1.0 U
	Field Parameters							
	Conductivity field	mS/cm	2 276	2.535	2 604	2.229	2 497	2 724
	,							

Notes:

U - Not present at or above the associated value.

CRA 013968 (319)

LEAK DETECTION SYSTEM MONITORING ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area Sample Location Sample Identification Sample Date Sample Type PCBs	Units	A007 EPA LDS WL-AOI7-012209-JN-37188 1/22/2009	A007 EPA LDS WL-AO17-021309-JN-37190 2/13/2009	A007 EPA LDS WL-AOI7-032609-JN-39025 3/26/2009	A007 EPA LDS WL-AOI7-042909-JN-39056 4/29/2009	A007 EPA LDS WL-AOI7-052209-JN-39076 5/22/2009	A007 EPA LDS WL-AOI7-062409-JN-39101 6/24/2009	A007 EPA LDS WL-AOI7-07299-JN-39130 7/29/2009	A007 EPA LDS WL-AOI7-072909-JN-39131 7/29/2009 Duplicate
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U					
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U					
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U					
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U	0.20 U	4.1	5.5	11	31	22
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U					
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.20 U					
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	0.20 U					
Total PCBs	ug/L	0	0	0	4.1	5.5	11	31	22

Notes

U - Not present at or above the associated value.

LEAK DETECTION SYSTEM MONITORING ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area Sample Location Sample Identification Sample Date Sample Type	Units	A007 EPA LDS WL-AOI7-082509-JN-39155 8/25/2009	A007 EPA LDS WL-AOI7-092809-JN-39180 9/28/2009	A007 EPA LDS WL-A017-092809-JN-39181 9/28/2009 Duplicate	A007 EPA LDS WL-AOI7-102609-JN-39205 10/26/2009	A007 EPA LDS WL-AOI7-112309-JN-39230 11/23/2009	A007 EPA LDS WL-AO17-112309-JN-39231 11/23/2009 Duplicate	A007 EPA LDS WL-A017-121509-KK-39257 12/15/2009
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	40	43	5.8	2.4	2.2	0.92	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	1.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total PCBs	ug/L	41.1	43	5.8	2.4	2.2	0.92	0

Notes:

U - Not present at or above the associate

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A010, East Plant	A010, East Plant
Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-011209-JN-35095	WW-AOI10-021009-JN-35103
Sample Date		1/12/2009	2/10/2009
Sample Type			
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L	2000 U	
Chemical oxygen demand (COD)	ug/L	4300 B	
Nitrite/Nitrate	ug/L	300	
Oil and grease (HEM), total	ug/L	4800 U	
pH field	s.u.	8.4	7.9
Phosphorus	ug/L	100 U	
Total Kjeldahl Nitrogen (TKN)	ug/L	3000	
Total suspended solids (TSS)	ug/L	4000 U	
Turbidity	NTU	1.9	

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A010, East Plant	A010, East Plant
Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-032609-JN-35117	WW-AOI10-040109-JN-35123
Sample Date		3/26/2009	4/1/2009
Sample Type			
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L		
Chemical oxygen demand (COD)	ug/L		
Nitrite/Nitrate	ug/L		 -
Oil and grease (HEM), total	ug/L		
pH field	s.u.	7.1	7.4
Phosphorus	ug/L		
Total Kjeldahl Nitrogen (TKN)	ug/L		
Total suspended solids (TSS)	ug/L		
Turbidity	NTU		

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A010, East Plant	A010, East Plant
Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-040109-JN-35124	WW-AOI10-050409-JN-35131
Sample Date		4/1/2009	5/4/2009
Sample Type		Duplicate	
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L		
Chemical oxygen demand (COD)	ug/L		
Nitrite/Nitrate	ug/L		
Oil and grease (HEM), total	ug/L		
pH field	s.u.	7.4	7.7
Phosphorus	ug/L		
Total Kjeldahl Nitrogen (TKN)	ug/L		
Total suspended solids (TSS)	ug/L		
Turbidity	NTU		

Notes:

 \boldsymbol{U} - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A010, East Plant	A010, East Plant
Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-060309-JN-35144	WW-AOI10-060309-JN-35145
Sample Date		6/3/2009	6/3/2009
Sample Type			Duplicate
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L		
Chemical oxygen demand (COD)	ug/L		
Nitrite/Nitrate	ug/L		
Oil and grease (HEM), total	ug/L		
pH field	s.u.	7.6	7.6
Phosphorus	ug/L		
Total Kjeldahl Nitrogen (TKN)	ug/L		
Total suspended solids (TSS)	ug/L		
Turbidity	NTU		

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area Sample Location Sample Identification Sample Date Sample Type		A010, East Plant CRA WWTP Tag 66 WW-AOI10-070709-JN-35161 7/7/2009	A010, East Plant CRA WWTP Tag 66 WW-A0I10-081009-JN-35203 8/10/2009
non	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.10 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.10 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.10 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.10 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.10 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.10 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.10 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L		
Chemical oxygen demand (COD)	ug/L		
Nitrite/Nitrate	ug/L		
Oil and grease (HEM), total	ug/L		
pH field	s.u.	7.6	7.3
Phosphorus	ug/L		
Total Kjeldahl Nitrogen (TKN)	ug/L		
Total suspended solids (TSS)	ug/L		
Turbidity	NTU		

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area		A010, East Plant	A010, East Plant
Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-090909-JN-35218	WW-AOI10-100109-JN-35232
Sample Date		9/9/2009	10/1/2009
Sample Type			
	Units		
PCBs			
	-		
Aroclor-1016 (PCB-1016)	ug/L	0.10 U	0.10 U
Aroclor-1221 (PCB-1221)	ug/L	0.10 U	0.10 U
Aroclor-1232 (PCB-1232)	ug/L	0.10 U	0.10 U
Aroclor-1242 (PCB-1242)	ug/L	0.10 U	0.10 U
Aroclor-1248 (PCB-1248)	ug/L	0.10 U	0.10 U
Aroclor-1254 (PCB-1254)	ug/L	0.10 U	0.10 U
Aroclor-1260 (PCB-1260)	ug/L	0.10 U	0.10 U
Total PCBs	ug/L	0	0
General Chemistry			
Biochemical oxygen demand (BOD)	ug/L		
Chemical oxygen demand (COD)	_		
Nitrite/Nitrate	ug/L ug/L		
Oil and grease (HEM), total			
9 , ,	ug/L	 7./	 7 F
pH field	s.u.	7.6	7.5
Phosphorus (TIO)	ug/L	 -	
Total Kjeldahl Nitrogen (TKN)	ug/L		
Total suspended solids (TSS)	ug/L		
Turbidity	NTU		

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics:

SSC WTP (CRA WWTP TAG 66) EFFLUENT ANALYTICAL RESULTS EAST PLANT AREA VAULT GM CETC BEDFORD FACILITY BEDFORD, INDIANA

Sample Area Sample Location Sample Identification Sample Date Sample Type	Units	A010, East Plant CRA WWTP Tag 66 WW-AOI10-110309-JN-35238 11/3/2009	A010, East Plant CRA WWTP Tag 66 WW-A0I10-120309-JN-35255 12/3/2009
PCBs			
Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242) Aroclor-1248 (PCB-1248) Aroclor-1254 (PCB-1254) Aroclor-1260 (PCB-1260) Total PCBs General Chemistry	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U	0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U
Biochemical oxygen demand (BOD) Chemical oxygen demand (COD) Nitrite/Nitrate Oil and grease (HEM), total pH field Phosphorus Total Kjeldahl Nitrogen (TKN) Total suspended solids (TSS) Turbidity	ug/L ug/L ug/L s.u. ug/L ug/L ug/L Ug/L	 7.7 	 7.4

Notes:

U - Not present at or above the associated value.

STL - Lab Qualifiers:

Organics: