Assistance Detail

Assistance ID: 36872

Contact: Fred Doggett

Date: 07/22/2011

Assistance Type: Operator

Staff: Paul Brandt

Program Type(s):

Note(s):

Date: 07/25/2011

Sender: paul.brandt@dnr.iowa.gov

On 7-19-2011, I received an e-mail from Fred Doggett. Alliant Energy had contacted him about discharging to the sewer, about 2400 gallons of water from excavation dewatering which they had stored in a "frac" tank. Mr. Doggett provided anaylsis from Alliant. There was an extensive list of compounds including metals, volatile organics and semi-volatile organics. There were various parameters above detection, but all at very low levels. I wrote Mr. Doggett back and told him it would be acceptable for them to discharge it to the collection system.

Site Detail

Site Name: Washington City Of Stp

State ID: 310643746

Location Address:

Derived Address: False

City/State/Zip: Washington Iowa 52353

Direction:

County: Washington

GIS Accuracy: 1140

Field Office: FO 6-Washington

Location Comment: From original WWTP.shp where Location Method=Locator Map

Township Name: WASHINGTO N

Sec: 19 Tier: 5 Range: 7 W

Program Name	Program Id
Floodplain - Flood Plan Permit	1987-167
Wastewater - NPDES Wastewater Treatment Operating Permit	9271001

Brandt, Paul [DNR]

From: Brandt, Paul [DNR]
Sent: Friday, July 22, 2011 3:16 PM
To: 'Fred E. Doggett'
Subject: RE: Washington - discharge of wastewater

Fred – I have reviewed the attached data. For lack of a better reference, I compared them to our list of ground water standards. All of the compounds that showed detectable levels were well-below the groundwater standards except for one. That one is cyanide. It was detected at 0.120 mg/l and the ground water standard is 1.0 mg/l, so it is still below the GW standard. Based on this review, discharging this 2400 gallon batch to the Washington collection system is acceptable. Paul

From: Fred E. Doggett [mailto:fdoggett@washingtoniowa.net]
Sent: Tuesday, July 19, 2011 11:04 AM
To: Brandt, Paul [DNR]
Cc: AbellGG@bv.com
Subject: Fw: Washington - discharge of wastewater

Hi Paul,

This is a e-mail I received from Alliant Energy project engineer wanting to discharge some water to our collection system.
Upon reveiwing the test results I didn't see anything that should keep them from discharging it. However, I would like you to review the
results to make sure I didn't miss something. Thanks

Fred E. Doggett
Washington WWTP Supt.
P.O. Box 516
Washington, IA 52353
(319)653-2638
Fax (319)653-2638

-----Original Message-----
From: "Abell, Gordon G." <AbellGG@bv.com>
Sent 7/19/2011 9:49:10 AM
To: "fdoggett@washingtoniowa.net" <fdoggett@washingtoniowa.net>
Subject: Washington - discharge of wastewater

Fred, as discussed this morning, we have approximately 2,400 gallons of water from excavation dewatering efforts that we would like to discharge to the City of Washington sanitary sewer system. The water is currently stored in a frac tank at the Alliant Energy facility (220 East 3rd Street). I've attached the analytical results from a sample of the water collected on July 8 for your review. The water sample was submitted with several soil samples, so I've only included the water results and chain-of-custody pages with this submittal. Please contact me if you have any questions or need additional information. Thank you.

Gordon Abell | Project Engineer, Water
Black & Veatch Corporation | 8400 Ward Parkway, Kansas City, MO 64114
913-458-6542 p | 913-458-3626 f | abellgg@bv.com
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BLACK & VEATCH CORPORATION - KANSAS CITY
8400 Ward Parkway
Kansas City, MO 64114
Erin Huttig

Work Order: CUG0456
Project: IPL Washington Waste Characteristic Samples
Project Number: [none]

Received: 07/08/11
Reported: 07/15/11 12:06

ANALYTICAL REPORT

GW std.

Analyte	Sample Result	Data Qualifiers	Units	Quant Limit	Dilution Factor	Date Analyzed	Analyst	Reg. Limit	Method
Sample ID: CUG0456-01 (WAIDW01W01P - Waste Water)						**Sampled: 07/08/11 08:00**			**Recvd: 07/08/11 14:25**
General Chemistry Parameters									
Cyanide	**0.120**	~~1000~~ pretreat = 0.120 max	mg/L	0.0100	1	07/11/11 22:49	lcb		SW 9012A Mod
Total Metals by SW 846 Series Methods									
Arsenic	<0.0800		mg/L	0.0800	1	07/12/11 02:02	cjt		SW 6010B
Barium	**0.221**	— 10	mg/L	0.0100	1	07/12/11 02:02	cjt		SW 6010B
Cadmium	<0.0200		mg/L	0.0200	1	07/12/11 02:02	cjt		SW 6010B
Chromium	<0.0200		mg/L	0.0200	1	07/12/11 02:02	cjt		SW 6010B
Lead	<0.100		mg/L	0.100	1	07/12/11 02:02	cjt		SW 6010B
Mercury	<0.000200		mg/L	0.000200	1	07/13/11 15:41	cjt		SW 7470A
Selenium	<0.150		mg/L	0.150	1	07/12/11 02:02	cjt		SW 6010B
Silver	<0.0200		mg/L	0.0200	1	07/12/11 02:02	cjt		SW 6010B
Volatile Organic Compounds									
Acetone	**150**	— 3500	ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
Acrylonitrile	<10.0		ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
Benzene	**13.2**	— 120	ug/L	0.500	1	07/09/11 10:03	sjn		SW 8260B
Bromobenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Bromochloromethane	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Bromoform	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Bromomethane	<10.0		ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
2-Butanone (MEK)	**43.3**	— 21,000	ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
n-Butylbenzene	<1.00	C	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
sec-Butylbenzene	<1.00	C	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
tert-Butylbenzene	<1.00	C	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Carbon Tetrachloride	<2.00	C9	ug/L	2.00	1	07/09/11 10:03	sjn		SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Chlorodibromomethane	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Chloroethane	<4.00		ug/L	4.00	1	07/09/11 10:03	sjn		SW 8260B
Chloroform	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Chloromethane	<3.00		ug/L	3.00	1	07/09/11 10:03	sjn		SW 8260B
2-Chlorotoluene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
4-Chlorotoluene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2-Dibromo-3-chloropropane	<10.0		ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
1,2-Dibromoethane (EDB)	<10.0		ug/L	10.0	1	07/09/11 10:03	sjn		SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,3-Dichlorobenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Dichlorodifluoromethane	<3.00		ug/L	3.00	1	07/09/11 10:03	sjn		SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,1-Dichloroethene	<2.00		ug/L	2.00	1	07/09/11 10:03	sjn		SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B

BLACK & VEATCH CORPORATION - KANSAS CITY
8400 Ward Parkway
Kansas City, MO 64114
Erin Huttig

Work Order: CUG0456
Project: IPL Washington Waste Characteristic Samples
Project Number: [none]

Received: 07/08/11
Reported: 07/15/11 12:06

ANALYTICAL REPORT

Sample ID: CUG0456-01 (WAIDW01W01P - Waste Water) - cont. **Sampled: 07/08/11 08:00** **Recvd: 07/08/11 14:25**

Semivolatile Organics by GC/MS - cont.

Analyte	Sample Result	Data Qualifiers	Units	Quant Limit	Dilution Factor	Date Analyzed	Analyst	Reg. Limit	Method
Bis(2-chloroethyl)ether	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Bis(2-chloroethoxy)methane	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Bis(2-ethylhexyl)phthalate	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Bis(2-chloroisopropyl) ether	<10.0	L1	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Bromophenyl phenyl ether	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Carbazole	**22.5**	- 180	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Chloroaniline	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2-Chloronaphthalene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Chlorophenyl phenyl ether	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Chrysene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Dibenzo (a,h) anthracene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Dibenzofuran	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Di-n-butyl phthalate	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
1,2-Dichlorobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
1,3-Dichlorobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
1,4-Dichlorobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
3,3'-Dichlorobenzidine	<50.0		ug/L	50.0	1.05	07/11/11 16:32	DMD		SW 8270C
Diethyl phthalate	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Dimethyl phthalate	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4-Dinitrotoluene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,6-Dinitrotoluene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Di-n-octyl phthalate	<20.0		ug/L	20.0	1.05	07/11/11 16:32	DMD		SW 8270C
Fluoranthene	**20.7**	- 1400	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Fluorene	**25.8**	- 1400	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Hexachlorobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Hexachlorobutadiene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Hexachlorocyclopentadiene	<20.0		ug/L	20.0	1.05	07/11/11 16:32	DMD		SW 8270C
Hexachloroethane	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Indeno (1,2,3-cd) pyrene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Isophorone	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2-Methylnaphthalene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Naphthalene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2-Nitroaniline	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
3-Nitroaniline	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Nitroaniline	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Nitrobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
N-Nitrosodimethylamine	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
N-Nitrosodiphenylamine	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
N-Nitrosodi-n-propylamine	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Phenanthrene	**48.9**	—	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Pyrene	**28.1**	- 1100	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Pyridine	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
1,2,4-Trichlorobenzene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzoic acid	<100		ug/L	100	1.05	07/11/11 16:32	DMD		SW 8270C
4-Chloro-3-methylphenol	<10.0	L1	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C

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BLACK & VEATCH CORPORATION - KANSAS CITY
8400 Ward Parkway
Kansas City, MO 64114
Erin Huttig

Work Order: CUG0456
Project: IPL Washington Waste Characteristic Samples
Project Number: [none]

Received: 07/08/11
Reported: 07/15/11 12:06

ANALYTICAL REPORT

Sample ID: CUG0456-01 (WAIDW01W01P - Waste Water) - cont. — **Sampled: 07/08/11 08:00** — **Recvd: 07/08/11 14:25**

Analyte	Sample Result	Data Qualifiers	Units	Quant Limit	Dilution Factor	Date Analyzed	Analyst	Reg. Limit	Method
Volatile Organic Compounds - cont.									
1,3-Dichloropropane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
2,2-Dichloropropane	<4.00	L	ug/L	4.00	1	07/09/11 10:03	sjn		SW 8260B
1,1-Dichloropropene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
cis-1,3-Dichloropropene	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
trans-1,3-Dichloropropene	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Ethylbenzene	**9.97**	- 3500	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Hexane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Isopropylbenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
p-Isopropyltoluene	<1.00	C	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Methylene Chloride	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
Methyl tert-Butyl Ether	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Naphthalene	**77.7**	- ~~700~~ 700	ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
n-Propylbenzene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Styrene	**2.93**	- 7000	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,1,1,2-Tetrachloroethane	<1.00	L	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Toluene	**12.7**	- 7000	ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2,3-Trichlorobenzene	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
1,2,4-Trichlorobenzene	<5.00		ug/L	5.00	1	07/09/11 10:03	sjn		SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Trichlorofluoromethane	<4.00		ug/L	4.00	1	07/09/11 10:03	sjn		SW 8260B
1,2,3-Trichloropropane	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,2,4-Trimethylbenzene	**7.85**		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
1,3,5-Trimethylbenzene	**3.05**		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	07/09/11 10:03	sjn		SW 8260B
Xylenes, total	**17.3**	70,000	ug/L	3.00	1	07/09/11 10:03	sjn		SW 8260B
Surr: Dibromofluoromethane (75-120%)	*99 %*								
Surr: Toluene-d8 (80-120%)	*107 %*								
Surr: 4-Bromofluorobenzene (75-110%)	*95 %*								
Semivolatile Organics by GC/MS									
Acenaphthene	**28.1**	- 2100	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Acenaphthylene	**21.1**		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Anthracene	**17.9**	- 11,000	ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzidine	<100		ug/L	100	1.05	07/11/11 16:32	DMD		SW 8270C
Benzo (a) anthracene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzo (b) fluoranthene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzo (k) fluoranthene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzo (a) pyrene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzo (g,h,i) perylene	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Benzyl alcohol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Butyl benzyl phthalate	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C

TestAmerica Cedar Falls
Angela Muehling
Project Coordinator

BLACK & VEATCH CORPORATION - KANSAS CITY
8400 Ward Parkway
Kansas City, MO 64114
Erin Huttig

Work Order: CUG0456
Project: IPL Washington Waste Characteristic Samples
Project Number: [none]

Received: 07/08/11
Reported: 07/15/11 12:06

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quant Limit	Dilution Factor	Date Analyzed	Analyst	Reg. Limit	Method
Sample ID: CUG0456-01 (WAIDW01W01P - Waste Water) - cont.					**Sampled: 07/08/11 08:00**			**Recvd: 07/08/11 14:25**	
Semivolatile Organics by GC/MS - cont.									
2-Chlorophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Cresol(s)	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4-Dichlorophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4-Dimethylphenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4-Dinitrophenol	<20.0		ug/L	20.0	1.05	07/11/11 16:32	DMD		SW 8270C
4,6-Dinitro-2-methylphenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2-Methylphenol (o-Cresol)	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Methylphenol (p-Cresol)	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2-Nitrophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
4-Nitrophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Pentachlorophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Phenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4,5-Trichlorophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
2,4,6-Trichlorophenol	<10.0		ug/L	10.0	1.05	07/11/11 16:32	DMD		SW 8270C
Surr: Nitrobenzene-d5 (35-110%)	*37 %*								
Surr: 2-Fluorobiphenyl (35-100%)	*43 %*								
Surr: Terphenyl-d14 (35-135%)	*70 %*								
Surr: Phenol-d6 (10-60%)	*17 %*								
Surr: 2-Fluorophenol (20-80%)	*23 %*								
Surr: 2,4,6-Tribromophenol (45-120%)	*57 %*								
VOC Preservation Check									
pH	<2.00		units	2.00	1	07/11/11 16:16	cmm		SW
Sample ID: CUG0456-02 (WAIDW01S01P - Soil)					**Sampled: 07/06/11 14:40**			**Recvd: 07/08/11 14:25**	
General Chemistry Parameters									
% Solids	**68.6**		%	0.100	1	07/11/11 09:00	sas		SM 2540 G
Cyanide	**11.9**	M1	mg/kg dry	1.46	0.978	07/11/11 22:20	lcb		SW 9012A Mod
pH	**8.10**	H3	pH Units	0.100	1	07/11/11 16:30	mrh		SW 9045D
Total Metals by SW 846 Series Methods									
Arsenic	<17.5	IE	mg/kg dry	17.5	2.86	07/12/11 16:25	cjt		SW 6010B
Barium	**251**		mg/kg dry	2.19	2.86	07/12/11 16:25	cjt		SW 6010B
Cadmium	<4.37	IE	mg/kg dry	4.37	2.86	07/12/11 16:25	cjt		SW 6010B
Chromium	**18.9**		mg/kg dry	4.37	2.86	07/12/11 16:25	cjt		SW 6010B
Lead	**117**		mg/kg dry	21.9	2.86	07/12/11 16:25	cjt		SW 6010B
Mercury	**0.147**	M1, R	mg/kg dry	0.0292	0.998	07/12/11 13:52	dis		SW 7471A
Selenium	<32.8	IE	mg/kg dry	32.8	2.86	07/12/11 16:25	cjt		SW 6010B
Silver	<4.37	IE	mg/kg dry	4.37	2.86	07/13/11 12:11	cjt		SW 6010B
Volatile Organic Compounds									
Acetone	<0.697		mg/kg dry	0.697	9.56	07/13/11 15:14	EEE		SW 8260B
Acrylonitrile	<0.697		mg/kg dry	0.697	9.56	07/13/11 15:14	EEE		SW 8260B
Benzene	**36.8**		mg/kg dry	3.47	476	07/13/11 23:04	sjn		SW 8260B
Bromobenzene	<0.0697		mg/kg dry	0.0697	9.56	07/13/11 15:14	EEE		SW 8260B
Bromochloromethane	<0.0697		mg/kg dry	0.0697	9.56	07/13/11 15:14	EEE		SW 8260B
Bromodichloromethane	<0.0697		mg/kg dry	0.0697	9.56	07/13/11 15:14	EEE		SW 8260B
Bromoform	<0.139	CIN	mg/kg dry	0.139	9.56	07/13/11 15:14	EEE		SW 8260B