

Bioassays of

Reed Minerals Division, Harsco Corporation

Hillsborough County

NPDES #FL0038636

Sampled July 27, 2004

November 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Reed Minerals Division, Harsco Corporation, 5950 Old 41A Highway, Tampa, Hillsborough County, Florida, NPDES #FL0038636. Effluent samples for this facility were collected on July 27, 2004.

Introduction

Reed Minerals Division, Harsco Corporation, operates a bottom slag processing plant where coal slag generated from the production of electricity is converted into a product for reuse such as blasting abrasives or roofing granules. This facility does not have a design flow, and mean flows for March, June, July, August, and September, 2003, were 1,449, 18,184, 4,254, 8,741, and 1,764 gallons per day, respectively. Discharge is intermittent; there was no flow January through May 2004, and there was no flow during the present survey. The process water generated in the plant is sent to concrete-lined settling chambers and recycled on-site. The contact storm water runoff from the slag stockpiles and plant area is collected in an unlined, vegetated, detention pond, having an area of approximately 75,000 square-feet. Effluent from the detention pond discharges via Outfall D001 to Delaney Creek Pop-off Canal and thence to Tampa Bay. The Delaney Creek Pop-off Canal is officially a Class III Fresh waterbody, though brackish salinities have been observed in it. This facility does not have any mixing zones (facility information provided by Nahir Cornwell and Lori Pillsbury of FDEP Southwest District office).

Methods

Samples were collected from the NPDES D001 sampling point by Nahir Cornwell and Lori Pillsbury (FDEP Southwest District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOP's are available on the web at: http://www.floridadep.org/labs/qa/sops.htm

The 48-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOP's TA07_01,TA07_02, and TA08_01 through TA08_07. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp. While the 48-hour acute screening toxicity tests do not reflect the permit required conditions, the Department uses it to provide reasonable assurance that the facility does not adversely affect waters of the state.

Bioassay samples were aerated for 30 minutes at approximately 100 bubbles per minute to increase the dissolved oxygen concentration from 4.3 mg/L to 7.0 mg/L prior to test initiation.

Toxicity Test Results

Tests were performed July 28-30, 2004.

Ceriodaphnia dubia 48-hr acute screening bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours
Cyprinella leedsi 48-hr acute screening bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours

See Appendix 1 for bioassay bench sheets.

*NOTE: In a 48-hr acute screening test of 100% effluent, mortality of <20% provides reasonable assurance that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1)(a)4, F.A.C.). Mortality between 20-50% mortality indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% provides reasonable assurance that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3)(a), F.A.C.).

Algal Growth Potential

The effluent AGP was 4.84 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that Algal Growth Potential (AGP) values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is nitrogen-limited. The predicted AGP based on inorganic nitrogen concentrations was 2.51 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

Chemistry Results

Total residual chlorine (TRC) was detected in the bioassay sample at 0.08 mg/L. This result is likely due to interfering substances within the sample since chlorine is not used in the wastewater treatment process. Total ammonia was not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.066 mg/L. Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia concentration was <0.001 mg/L.

Copper and lead were detected at levels between the laboratory minimum detection limit and the practical quantitation limit (PQL). Aluminum was detected above the PQL. Effluent iron (639 µg/L) and nickel (43.2 µg/L) exceeded the permit limits (≤300 and ≤8.3 µg/L, respectively) but did not exceed Class III fresh water quality criteria (≤1,000 and ≤100.9 µg/L, respectively. Effluent dissolved oxygen (1.2 mg/L) met neither the permit limit (≥ 4.0) nor the Class III fresh water quality criterion (≥ 5.0; 62-302.530(31), F.A.C.).

See Table 2 for results of analytes detected in the effluent, and corresponding limits.

See Appendix 2 for a complete list of chemical analyses performed.

Conclusion

The effluent samples collected from D001 for this facility on July 27, 2004, did not show acute toxicity to either test species during the 48-hour acute bioassays. The effluent AGP result was less than the "problem” threshold for fresh receiving waters. Effluent concentrations of iron, nickel, and dissolved oxygen failed to meet permit requirements, and dissolved oxygen concentrations failed to meet Class III fresh water quality standards.

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Table 1. Measured and predicted algal growth potential (AGP) for total soluble nitrogen (TSIN) and total nitrogen (TN) limitation of Pseudokirchneriella subcapitata *for samples collected on July 27, 2004, from Reed Minerals Division, Harsco Corporation.*

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Inorganic N:P ratio	Predicted AGP (TN) ± 20%	Total N:P ratio
Effluent Samples	4.84	2.51 ± 0.502	0.71	36.6 ± 7.3	6.9

Table 2. Effluent limits, Class III Criteria, and chemical data for samples from Reed Minerals Division, Harsco Corporation, collected on July 27, 2004.

Reed Minerals Division	Class III Fresh Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
None Detected	-	-	-
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	115 A
Arsenic	≤ 50	≤ 50	6 U
Cadmium	≤ 2.1 b	-	0.025 U
Calcium (mg/L)	-	-	71.8
Chromium-III	≤ 163.2 b	-	2 U
Copper	≤ 18.2 b	≤ 2.9	1.7 I
Iron	≤ 1000	≤ 300	639
Lead	≤ 8.6 b	≤ 5.6	0.2 I
Magnesium (mg/L)	-	-	9.4
Nickel	≤ 100.9 b	≤ 8.3	43.2
Selenium	≤ 5	-	0.5 U
Silver	≤ 0.07	≤ 2.3	0.01 U
Zinc	≤ 231.9 b	-	4.8 I
Nutrients (mg/L)			
TSS	-	-	8 I
Ortho-phosphate	-	-	0.093
Total Phosphorus	-	-	0.14
Ammonia	-	-	0.066
Unionized Ammonia	≤ 0.02	-	< 0.001 c
Nitrate+Nitrite	-	-	0.004 U
Total Kjeldahl Nitrogen	-	-	0.96
Organic Nitrogen	-	-	0.89 c
Total Nitrogen	-	-	0.96 c
Turbidity	t	t	5.6 A
General Physical and Chemical Parameters			
Alpha, Total (pCi/L)	≤ 15	-	1.3 U
Alpha-Counting Error (pCi/L)	-	-	0.9
Radium 226 (pCi/L)	-	-	0.2
Radium 226-Counting Error (pCi/L)	-	-	0.1
Radium 228 (pCi/L)	-	-	1
Radium 228-Counting Error (pCi/L)	-	-	0.6
Radium 226 + 228 (pCi/L)	≤ 5	-	1.2 c
Dissolved Oxygen (mg/L)	≥ 5	≥ 4 s	1.2
pH (S.U.)	6.0 - 8.5	-	7
Conductivity (umhos/cm)	≤ 1275	Report	626
Temperature (C)	-	-	25.3
BOD, N-inhib (mg/L)	-	-	2.8
BOD (mg/L)	-	-	3.8 A
Hardness (mg/L)	-	-	218 c
Total Residual Chlorine (mg/L)(lab)	≤ 0.01	-	0.08
AGP (mg DryWt/L)	-	-	4.84

Value exceeds the Class III Fresh Water Quality Criteria (62-302, F.A.C.) and/or Effluent Limits.

a - Annual average

b - Value is calculated based on hardness

c - calculated value

s - single sample

t - Shall not exceed 29 NTUs above background

A - Value reported is the mean of two or more determinations

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U - Material analyzed for but not detected; value reported is the minimum detection limit

FDEP Biology Section - Acute
Bioassay Bench Sheets

Facility: Reed Minerals

Address: Old Hwy 41A and Jensen Rd. # 5950

City: Tampa County: ~~Hillsboro~~ Hillsborough

Contact/District: Nahin Cornwell/Lori Pillsbury / South West

NPDES Permit #: FL 0038636

LIMS Job #: TCH-20040728-10 LIMS Sample #: T70277

Sample Collection: Date: 7/27/04 per Mark 7/29/04 Time: 1010

Hold time Start: Date: 7/27/04 Time: 1010

Comments: tests performed per NPDES permit, MF 7/28/04

Lims Data Entry: 8/6/04 MF Data Entry Verification: 8/9/04 JD

Instructions (for below): Circle appropriate wording. If yes is circled complete blanks.

Test Type: Screening/Definitive

Static / Static Renewal / Flow-through

Test Duration: (48) 96 Hours.

Light Intensity : 50 - 100 ft. candles.

Photoperiod : 16 hours light 8 hours dark.

Initial sample handling:

Test 1 validation:
Control survival ≥90%: (yes) No
Temperature Range ≤3 C (Yes) No

Test 2 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3 C (Yes) No

PH adjustment : yes (no) Initial pH NaOH N HCl N Drops mL Final pH

Aeration : (yes) no Initial DO: 7.3 mg/L Final DO: ~7.0mg/L Duration: 30 minutes Rate: ~100 bubbles/min

Salinity adjusted (Test 1): yes (no) Initial Salinity: Final Salinity: Salts Hypersaline brine

Salinity adjusted (Test 2): yes (no) Initial Salinity: Final Salinity: Salts Hypersaline brine

Dechlorination: yes (no) mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC

Temperature Range °C
Incubator # 3 Range 23.5-24.0
Room B246: 25.5-27.0°C
Waterbath: N/A

Sample Validation:
Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received C < collected °C) Yes No
Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected; 4 in 24 - time last sample collected)

Investigators' Signatures

Deanna Nicholson
Krista Cuevas
James Dunn
Jacob Pritchard
Marshall Faircloth
Mark Wellendorf

REVIEWER

V.2 2/26/04

Water Quality Parameters	20% DMW	Well Water	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Moderately Hard Water	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl2 (mg/L):	N/A	N/A	N/A	N/A	N/A	not measured	—	—	DAP
Lab Total Residual Cl2 (mg/L):	<0.03	<0.03				0.08	HACH	SP	MF
Alkalinity (mg/L as CaCO3):	89.5	142				103	HACH	JD	MF
Hardness (mg/L as CaCO3):	81.5	130				298	HACH	JD	MF
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	DN	MF
Salinity (ppt):	<1	<1				<1	YSI	DN	MF

Page 000122

FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 770277 Test #: 1 Test Started: Date 07/27/04 (8 mF corrected date error) Time: 1300
Organism: C. dubia Test Ended: Date 7/30/04 Time: 1300
Organism Batch: 27 Diluent/ Batch: 20% DMW / 27
Organism Age: <24hr Food: (YCT) (P. subcapitata) Artemia
Chamber Size 30 mL Batch: 5 31
Test Volume 20 mL Feeding: (Prior to test) Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A		5	5	5			
	B		5	5	5			
	C		5	5	5			
	D		5	5	5			
100%	A		5	5	5			
	B		5	5	5			
	C		5	5	5			
	D		5	5	5			
Organisms loaded by: MF		Checked by: (initials)	MF	MF	JD			

Loading Verified by: JD

Comments:

m = missing d = dead BR = before renewal AR = after renewal

Test Results:

% mortality in 100% sample 0

LC_{50}: >100% If Calculated: 95% CI____ Method:____

Screening Tests: Report LC50 as >100%, =100%, or <100%.

Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Page 000123 V.1 2/23/04

FDEP Biology Section - - Bioassay Bench Sheet

Survival

mf count data & error.

LIMS Sample #: 770277 Test #: 2 Test Started: Date 07/27/04 Time: 1300

Organism: C. leedsi Test Ended: Date 7/30/04 Time: 1310

Organism Batch: 16 Diluent/ Batch: 1024 H2O N4

Organism Age: 7 dys Food: YCT P. subcapitata (Artemia) 019404256

Chamber Size 1000 mL Batch: ___ ___

Test Volume 500 mL Feeding: (Prior to test) - Prior to renewal - Daily

Concentration	Replicate	Chamber #	0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	61	5	5	5			
	B	62	5	5	5			
	C	63	5	5	5			
	D	64	5	5	5			
100%	A	65	5	5	5			
	B	66	5	5	5			
	C	67	5	5	5			
	D	68	5	5	5			

Organisms loaded by: SB Checked by: SD MF DN (initials)

Loading Verified by: MF

Comments:

m = missing d = dead BR = before renewal AR = after renewal

Test Results:

% mortality in 100% sample Ø

LC_{50}: >100% If Calculated: 95% CI ________ Method: ________

Screening Tests: Report LC50 as >100%, =100%, or <100%.

Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Page 000124 V.1 2/23/04

Bioassay Parameters

LIMS Sample # : 770277 Test # : 1 of 2

TEST SOP: TA07_ 01 Test Species: (Ceriodaphnia dubia) Cyprinella leedsi Pimephales promelas Americamysis bahia Menidia beryllina Other:_____

V.1 2/24/04

Concentration CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B			
pH (S.U.)	7.3		8.1			
Temperature °C	25.9		24.7			
Dissolved Oxygen mg/L	7.2		8.1			
Conductivity µmhos mmhos	(A) 190 ~~89.5~~		215			
(initials) Measured by:	SD		DN			
(initials) Recorded by:	JD		DN			

Comments: (A) 8 hour Conductivity meter failed - rewated to YSI 35 meter. MF 7/28/04

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B			
pH (S.U.)	7.1		8.3			
Temperature °C	25.9		24.6			
Dissolved Oxygen mg/L	7.3		8.2			
Conductivity µmhos mmhos	(A) 625 ~~335~~		670			
(initials) Measured by:	SD		DN			
(initials) Recorded by:	SD		DN			

Comments: (A) See Comment at left

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

V.1 2/24/04

Bioassay Parameters

LIMS Sample #: 770277 **Test #:** 2 of 2

TEST SOP: TA07_ 02 Test Species: ~~Ceriodaphnia dubia~~ Cyprinella leedsi, Pimephales promelas Americamysis bahia Menidia beryllina Other:_____

V.1 2/24/04

Concentration Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.1	7.9	8.3			
Temperature °C	25.9	25.1	24.5			
Dissolved Oxygen mg/L	7.0	7.2	7.8			
Conductivity ~~µmhos~~ mmhos (C)	~~145~~ 270	280	280			
(initials) Measured by:	~~JD~~	MF	VN			
(initials) Recorded by:	~~JD~~	MF	VN			

Comments: (C) Conductivity meter failure at 0 hours. Reverted to YSI 35, MF 7/28/04

Concentration 100 %	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.0	7.8	8.1			
Temperature °C	~~25.9~~	25.0	24.4			
Dissolved Oxygen mg/L	7.1	7.0	7.8			
Conductivity ~~µmhos~~ mmhos (D)	~~335~~ 635	630	610			
(initials) Measured by:	JD	MF	VN			
(initials) Recorded by:	JD	MF	VN			

Comments: (D) See comment at 10 ft.

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	~~72 Hr.~~	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity ~~µmhos~~ mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	~~72 Hr.~~	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity ~~µmhos~~ mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

V.1 2/24/04

Appendix 2. Chemical Analyses performed on the effluent from the Reed Minerals Division, Harsco Corporation Outfall D001, sampled on July 27, 2004.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/27/2004 10:10	30580	Bio-AGP/LimNut	Algal Growth Potential	4.84	mg DryWt/L		0.1	0.3
7/27/2004 10:10	30580	Bio-BOD	Biochemical Oxygen Demand-5 Day	3.8	mg/L	A		
7/27/2004 10:10	30580	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.8	mg/L			
7/27/2004 10:10	30580	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
7/27/2004 10:10	30580	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
7/27/2004 9:40	30581	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
7/27/2004 9:40	30581	BNA-Water	2,4-Dinitrophenol	14	ug/L	UJ	14	58
7/27/2004 9:40	30581	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
7/27/2004 9:40	30581	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
7/27/2004 9:40	30581	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
7/27/2004 9:40	30581	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Benzidine	96	ug/L	U	96	380
7/27/2004 9:40	30581	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
7/27/2004 9:40	30581	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
7/27/2004 9:40	30581	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
7/27/2004 9:40	30581	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
7/27/2004 9:40	30581	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
7/27/2004 9:40	30581	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
7/27/2004 9:40	30581	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
7/27/2004 9:40	30581	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8

7/27/2004 9:40	30581	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12
7/27/2004 9:40	30581	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
7/27/2004 9:40	30581	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
7/27/2004 9:40	30581	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
7/27/2004 9:40	30581	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
7/27/2004 9:40	30581	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 9:40	30581	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
7/27/2004 10:10	30580	BNA-Water	2,4-Dinitrophenol	14	ug/L	UJ	14	58
7/27/2004 10:10	30580	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
7/27/2004 10:10	30580	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
7/27/2004 10:10	30580	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
7/27/2004 10:10	30580	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Benzidine	96	ug/L	U	96	380
7/27/2004 10:10	30580	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
7/27/2004 10:10	30580	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
7/27/2004 10:10	30580	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
7/27/2004 10:10	30580	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8

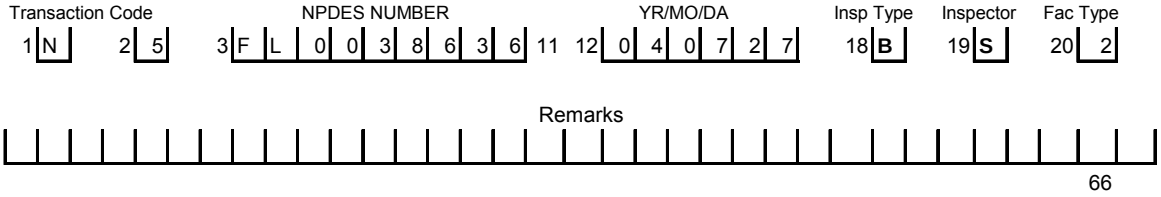
7/27/2004 10:10	30580	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
7/27/2004 10:10	30580	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
7/27/2004 10:10	30580	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
7/27/2004 10:10	30580	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
7/27/2004 10:10	30580	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12
7/27/2004 10:10	30580	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
7/27/2004 10:10	30580	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
7/27/2004 10:10	30580	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
7/27/2004 10:10	30580	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
7/27/2004 10:10	30580	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
7/27/2004 10:10	30580	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 10:10	30580	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
7/27/2004 9:40	30581	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.4
7/27/2004 9:40	30581	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Atrazine	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.78
7/27/2004 9:40	30581	GC-Water	Butylate	0.2	ug/L	U	0.2	0.78
7/27/2004 9:40	30581	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Chlorpyrifos Methyl	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Diazinon	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Ethoprop	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.78
7/27/2004 9:40	30581	GC-Water	Fonofos	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Hexazinone	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Malathion	0.15	ug/L	U	0.15	0.59
7/27/2004 9:40	30581	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	0.98
7/27/2004 9:40	30581	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
7/27/2004 9:40	30581	GC-Water	Metribuzin	0.098	ug/L	UJ	0.098	0.392
7/27/2004 9:40	30581	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.78
7/27/2004 9:40	30581	GC-Water	Naled	0.78	ug/L	UJ	0.784	3.14
7/27/2004 9:40	30581	GC-Water	Norflurazon	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.59
7/27/2004 9:40	30581	GC-Water	Parathion Methyl	0.098	ug/L	U	0.098	0.39
7/27/2004 9:40	30581	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
7/27/2004 9:40	30581	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.59
7/27/2004 9:40	30581	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
7/27/2004 10:10	30580	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.3
7/27/2004 10:10	30580	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
7/27/2004 10:10	30580	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
7/27/2004 10:10	30580	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19

7/27/2004 10:10	30580	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
7/27/2004 10:10	30580	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Malathion	0.14	ug/L	U	0.14	0.57
7/27/2004 10:10	30580	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.95
7/27/2004 10:10	30580	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
7/27/2004 10:10	30580	GC-Water	Metribuzin	0.095	ug/L	UJ	0.095	0.381
7/27/2004 10:10	30580	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
7/27/2004 10:10	30580	GC-Water	Naled	0.76	ug/L	UJ	0.7619	3.05
7/27/2004 10:10	30580	GC-Water	Norflurazon	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.57
7/27/2004 10:10	30580	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
7/27/2004 10:10	30580	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
7/27/2004 10:10	30580	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.57
7/27/2004 10:10	30580	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
7/27/2004 9:40	30581	Metals-Water	Aluminum	5	ug/L	U	5	20
7/27/2004 9:40	30581	Metals-Water	Arsenic	6	ug/L	U	6	24
7/27/2004 9:40	30581	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
7/27/2004 9:40	30581	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
7/27/2004 9:40	30581	Metals-Water	Chromium	2	ug/L	U	2	8
7/27/2004 9:40	30581	Metals-Water	Copper	1	ug/L	U	1	4
7/27/2004 9:40	30581	Metals-Water	Iron	10	ug/L	U	10	40
7/27/2004 9:40	30581	Metals-Water	Lead	0.05	ug/L	U	0.05	0.2
7/27/2004 9:40	30581	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
7/27/2004 9:40	30581	Metals-Water	Nickel	2	ug/L	U	2	8
7/27/2004 9:40	30581	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
7/27/2004 9:40	30581	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
7/27/2004 9:40	30581	Metals-Water	Zinc	3	ug/L	U	3	12
7/27/2004 10:10	30580	Metals-Water	Aluminum	115	ug/L	A	5	20
7/27/2004 10:10	30580	Metals-Water	Arsenic	6	ug/L	U	6	24
7/27/2004 10:10	30580	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
7/27/2004 10:10	30580	Metals-Water	Calcium	71.8	mg/L		0.05	0.2
7/27/2004 10:10	30580	Metals-Water	Chromium	2	ug/L	U	2	8
7/27/2004 10:10	30580	Metals-Water	Copper	1.7	ug/L	I	1	4
7/27/2004 10:10	30580	Metals-Water	Iron	639	ug/L		10	40
7/27/2004 10:10	30580	Metals-Water	Lead	0.2	ug/L	I	0.05	0.2
7/27/2004 10:10	30580	Metals-Water	Magnesium	9.4	mg/L		0.02	0.08
7/27/2004 10:10	30580	Metals-Water	Nickel	43.2	ug/L		2	8
7/27/2004 10:10	30580	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
7/27/2004 10:10	30580	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
7/27/2004 10:10	30580	Metals-Water	Zinc	4.8	ug/L	I	3	12
7/27/2004 9:40	30581	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
7/27/2004 9:40	30581	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
7/27/2004 9:40	30581	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
7/27/2004 9:40	30581	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
7/27/2004 9:40	30581	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
7/27/2004 10:10	30580	Nutrients-Liquid	Ammonia-N	0.066	mg N/L		0.01	0.02
7/27/2004 10:10	30580	Nutrients-Liquid	Kjeldahl Nitrogen	0.96	mg N/L		0.06	0.2
7/27/2004 10:10	30580	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
7/27/2004 10:10	30580	Nutrients-Liquid	O-Phosphate-P	0.093	mg P/L		0.004	0.01
7/27/2004 10:10	30580	Nutrients-Liquid	TSS	8	mg/L	I	4	16
7/27/2004 10:10	30580	Nutrients-Liquid	Total-P	0.14	mg P/L		0.02	0.06
7/27/2004 10:10	30580	Nutrients-Liquid	Turbidity	5.6	NTU	A	0.05	0.05
7/27/2004 9:40	30581	Overflow	Alpha, Total	0.7	pCi/L	U		
7/27/2004 9:40	30581	Overflow	Alpha-Counting Error	0.4	pCi/L			
7/27/2004 9:40	30581	Overflow	Radium 226	0.1	pCi/L	U		
7/27/2004 9:40	30581	Overflow	Radium 226-Counting Error	0.1	pCi/L			
7/27/2004 9:40	30581	Overflow	Radium 228	0.9	pCi/L	U		

7/27/2004 9:40	30581	Overflow	Radium 228-Counting Error	0.6	pCi/L	
7/27/2004 10:10	30580	Overflow	Alpha, Total	1.3	pCi/L	U
7/27/2004 10:10	30580	Overflow	Alpha-Counting Error	0.9	pCi/L	
7/27/2004 10:10	30580	Overflow	Radium 226	0.2	pCi/L	
7/27/2004 10:10	30580	Overflow	Radium 226-Counting Error	0.1	pCi/L	
7/27/2004 10:10	30580	Overflow	Radium 228	1	pCi/L	
7/27/2004 10:10	30580	Overflow	Radium 228-Counting Error	0.6	pCi/L	

The Bioassay of Reed Minerals Division, Harsco Corporation effluent sampled on July 27, 2004, NPDES #FL0038636.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)



The Priority Pollutants Analysis for Bioassay of Reed Minerals Division, Harsco Corporation effluent sampled on July 27, 2004, NPDES #FL0038636.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

