DIVISION OF WATER QUALITY

GROUNDWATER SECTION

March 12, 2001

RECEIVED
MAR 13 2001
SUPERFUND SECTION

MEMORANDUM

TO: Mr. Tony Duque
NC Superfund - Brownsfield Sites
400 Oberlin Road
Raleigh, NC 26705

FROM: Bruce Parris BRP

SUBJECT: Former Flemington Landfill
GW Incident # 177
New Hanover Co.
1998 Groundwater Sampling Data

Attached is the data you requested from the last sampling (1998) event at the Former Flemington Landfill. I understand that you will likely be requesting additional information in the near future regarding other information in our files regarding this site.

During our phone conversation we discussed the mining operation located immediately adjacent to the landfill. The Regional Land Quality Section contact person is Mr. Dan Sams. His phone number is the same as mine. If you any questions, please contact me at (910) 395-3900.

attachments

cc: WiRO-GWS Files

S:\GWS\PARRIS\INCIDENT\FLEMINGTONDUQUEMEM.MAR 3/6/01

DIVISION OF WATER QUALITY

Chemistry Laboratory Report / Water Quality

COUNTY : NEW HANOVER
RIVER BASIN :
REPORT TO : WIRO Regional Office
Other :
COLLECTOR(S) : WILLIAMS
Estimated BOD Range:
Seal: Chlorinated:

PRIORITY: [ ] AMBIENT [ ] QA [X] COMPLIANCE [ ] CHAIN OF CUSTODY [ ] EMERGENCY
VISIT ID

[W] SAMPLE TYPE: [X] STREAM [ ] EFFLUENT [ ] LAKE [ ] INFLUENT [ ] ESTUARY

LFI

Station Location: UT TO CAPE FEAR RIVER
Remarks:

Lab Number : IW0362
Date Received : 1/12/2001
Time Received : 9.00 AM
Received By : HBW
02/13/01
Data Released : AR
Date Reported : 2/13/2001

Station #	Date Begin (yy/mm/dd)	Date End (yy/mm/dd)	Time Begin	Time End	Depth - DIT, DB, DBM	Value Type - A, H, L	Composite-T, S, B	Sample Type
LFI	20010111		1215		SURFACE			

X	BOD 310	4.5	mg/L
	COD High 340		mg/L
	COD Low 335		mg/L
	Coliform: MF Fecal 31616		/100 ml
	Coliform: MF Total 31504		/100 ml
	Coliform: tube Fecal 31615		/100 ml
	Coliform: Fecal Strep 31673		/100 ml
	Residue: Total 500		mg/L
	Volatile 505		mg/L
	Fixed 510		mg/L
	Residue: Suspended 530		mg/L
	Volatile 535		mg/L
	Fixed 540		mg/L
X	pH 403	6.3	units
	Acidity to pH 4.5 436		mg/L
	Acidity to pH 8.3 435		mg/L
	Alkalinity to pH 8.3 415		mg/L
	Alkalinity to pH 4.5 410		mg/L
	TOC 680		mg/L
	Turbidity 56		NTU
	Coliform Total Tube		/100 ml

	Chloride 940		mg/L
	Chl a: Tri 32217		ug/L
	Chl a: Corr 32209		ug/L
	Pheopigmin a 32213		ug/L
	Color: Time 80		c.u.
	Color: (pH) 83 pH=		c.u.
	Color: pH 7.6 82		c.u.
	Cyanide 720		mg/L
	Fluoride 951		mg/L
	Formaldehyde 71880		mg/L
X	Grease and Oils 556	<1	mg/L
	Hardness Total 900		mg/L
	Specific Cond. 95		umhos/cm2
	MBAS 35260		mg/L
	Phenols 32730		ug/L
	Sulfate 945		mg/L
	Sulfide 745		mg/L
	Boron		
	Tannin & Lignin		ug/L
	Hexavalent Chromium		ug/L

X	NH3 as N 610	18	mg/L
X	TKN as N 625	18	mg/L
X	NO2 plus NO3 as N 630	0.15	mg/L
X	P: Total as P 665	0.04	mg/L
	PO4 as P 70507		mg/L
	P: Dissolved as P 666		mg/L
	K-Potassium		mg/L
X	Cd- Cadmium 1027	<2.0	ug/L
X	Cr-Chromium Total 1034	<25	ug/L
X	Cu- Copper 1042	<2.0	ug/L
X	NI-Nickel 1067	<10	ug/L
X	Pb- Lead 1051	<10	ug/L
X	Zn- Zinc 1092	22	ug/L
X	V-Vanadium	<25	ug/L
X	Ag- Silver 1077	<5.0	ug/L
X	Al- Aluminum 1105	99	ug/L
X	Be- Beryllium 1012	<10	ug/L
X	Ca- Calcium 916	59	mg/L
X	Co-Cobalt 1037	<50	ug/L
X	Fe- Iron 1045	34000	ug/L

N	Li-Lithium 1132	<25	ug/L
N	Mg- Magnesium 927	5.9	mg/L
X	Mn-Manganese 105	330	ug/L
X	Na- Sodium 929	17	mg/L
X	Arsenic Total 1002	<10	ug/L
X	Se-Selenium 1147	<5.0	ug/L
	Hg- Mercury 71900	<0.2	ug/L
	Ba_Barium		ug/L
	Organochlorine Pesticides		
	Organophosphorus Pesticides		
	Acid Herbicides		
X	Base/Neutral/Acid Extractable Organics		
	TPH Diesel Range		
X	Purgeable Organics (VOA bottle req'd)		
	TPH Gasoline Range		
	TPH/BTEX Gasoline Range		
	Phytoplankton		

COMMENTS:

Post-it® Fax Note 7671

To Larry Rose	Date 2/22/01 # of pages ▶ 5
Co./Dept. SWU RCO	From J.C.
Phone # 919 733 0662	Co. WIRO
Fax # 919 733 4810	Phone # 910 395-3900
	Fax #

DIVISION OF WATER QUALITY
Chemistry Laboratory Report / Water Quality

County: New Hanover
River Basin: CPF
Report To: WiRO
Shipped by: COURIER
Other:
Collector(s): WILLIAMS
Estimated BOD Range: 0-25
Seed:
Chlorinated: No

PRIORITY: [ ] AMBIENT [ ] QA [✓] COMPLIANCE [ ] CHAIN OF CUSTODY [ ] EMERGENCY

W SAMPLE TYPE: [✓] STREAM [ ] EFFLUENT [ ] LAKE [ ] INFLUENT [ ] ESTUARY

LF1

Station Location: U.T. TO CAPE FEAR RIVER
Remarks: ≈ .5 MI. SSE OF FLEMMINGTO

Lab Number: W0362
Date Received: 010112
Time Received: 0900

Mark Poindexter Does not know what or where this is taken from.

Station #	Date Begin (yr/mm/dd)	Date End (yr/mm/dd)	Time Begin	Time End	Depth - DB1, DB, DBAS	Value Type - A, H, L
LF1	01/01/11		1215	—	SURFACE	

✓	BOD 310	mg/L
	COD High 340	mg/L
	COD Low 335	mg/L
	Coliform: MF Fecal 31616	#/100 mls
	Coliform: MF Total 31504	#/100 mls
	Coliform: Tube Fecal 31615	#/100 mls
	Coliform: Fecal Strep 31673	#/100 mls
	Residue: Total 500	mg/L
	Volatile 505	mg/L
	Fixed 510	mg/L
	Residue: Suspended 530	mg/L
	Volatile 535	mg/L
	Fixed 540	mg/L
✓	pH 403	units
	Acidity to pH 4.5 436	mg/L
	Acidity to pH 8.3 435	mg/L
	Alkalinity to pH 8.3 415	mg/L
	Alkalinity to pH 4.5 410	mg/L
	TOC 680	mg/L
	Turbidity 82079	NTU
	Coliform Total Tube 31501	#/100 mls

	Chloride 940	mg/L
	Chl a: Tri 32217	µg/L
	Chl a: Corr 32209	µg/L
	Pheophytin a 32213	µg/L
	Color: True 80	c.u.
	Color: (pH) 83 P	c.u.
	Color: pH 7.6 82	c.u.
	Cyanide 720	mg/L
	Fluoride 951	mg/L
	Formaldehyde 71880	mg/L
✓	Grease and Oils 556	mg/L
	Hardness Total 900	mg/L
	Specific Cond. 95	µmhos/cm2
	MBAS 38260	mg/L
	Phenols 32730	µg/L
	Sulfate 945	mg/L
	Sulfide 745	mg/L
	Boron: Total 1022	µg/L
	Tannin & Lignin 32230	µg/L
	Hexavalent Chromium 1032	µg/L

✓	NH3 as N 610	mg/L
✓	TKN as N 625	mg/L
✓	NO2 plus NO3 as N 630	mg/L
✓	P: Total as P 665	mg/L
	PO4 as P 70507	mg/L
	P: Dissolved as P 666	mg/L
	K-Potassium 937	mg/L
✓	Cd- Cadmium 1027	µg/L
✓	Cr-Chromium:Total 1034	µg/L
✓	Cu- Copper 1042	µg/L
✓	Ni-Nickel 1067	µg/L
✓	Pb- Lead 1051	µg/L
✓	Zn- Zinc 1092	µg/L
✓	V-Vanadium 1087	µg/L
✓	Ag- Silver 1077	µg/L
✓	Al- Aluminum 1105	µg/L
✓	Be- Beryllium 1012	µg/L
✓	Ca- Calcium 916	mg/L
✓	Co- Cobalt 1037	µg/L
✓	Fe- Iron 1045	µg/L

		µg/L
		mg/L
✓	Manganese 1055	µg/L
✓	Na- Sodium 929	mg/L
✓	Arsenic:Total 1002	µg/L
✓	Se- Selenium 1147	µg/L
	Hg- Mercury 71900	µg/L
	Ba_Barium 1007	µg/L
	Organochlorine Pesticides	
	Organophosphorus Pesticides	
	Acid Herbicides	
✓	Base/Neutral&Acid Extractable Org	
	TPH Diesel Range	
✓	Purgeable Org (VOA bottle req'd)	
	TPH Gasoline Range	
	TPH BTEX Gasoline Range	
	Phytoplankton	

COMMENTS: VERY ORANGE — SUSPECT IRON BACTERIA

SVV

Sample Point % (2)	Conductance (94)	Water Temp-°C(10)	D.O. (300)	pH (400)	8.3 Alkalinity (82244)	4.5 Alkalinity (431)	4.5 Acidity (82243)	8.3 Acidity (3224)	Air Temp-C (20)
	625 uS	7.5	1.07						
	Salinity % (480)	Precipit-in/day (45)	Cloud Cover % (32)	Wind Dir-Deg (	Strm Flow Sev (1351)	Turbidity Severity (1350)	Wind Velocity-mph (35)	Mean Strm Depth-ft (64)	Strm Width-ft (4)
	0.3	0	0						

FEB.22.2001 3:40PM NCDENR WiRO NO.698 P.2

ENR/DWQ LABORATORY
VOLATILE ANALYTICAL REPORT

LAB NO. 1W0362

ENTERED BY AB/AP
CHECKED BY
REVIEWED BY

SUPERVISOR REK
DATE 2/7/01

ENTERED BY A.R.
DATE 2-7-01

SAMPLE TYPE: WATER

ANALYSIS RESULTS

CASN	VOA TARGET COMPOUND	TQL ug/L	DETECTED ug/L	
75-35-4	1,1-Dichloroethene	0.50		U
75-09-2	Methylene Chloride	10		U
156-60-5	trans-1,2-Dichloroethene	0.50		U
75-34-3	1,1-Dichloroethane	0.25		U
590-20-7	2,2-Dichloropropane	0.25		U
156-59-4	cis-1,2-Dichloroethene	0.25		U
67-66-3	Chloroform	0.25		U
74-97-5	Bromochloromethane	0.50		U
71-55-6	1,1,1-Trichloroethane	0.25		U
563-58-6	1,1-Dichloropropene	0.25		U
56-23-5	Carbon Tetrachloride	0.50		U
107-06-2	1,2-Dichloroethane	0.25		U
79-01-6	Trichloroethene	0.25		U
78-87-5	1,2-Dichloropropane	0.25		U
75-27-4	Bromodichloromethane	0.25		U
74-95-3	Dibromomethane	0.50		U
10061-01-5	cis-1,3-Dichloropropene	0.25		U
10061-02-6	trans-1,3-Dichloropropene	0.25		U
79-00-5	1,1,2-Trichloroethane	0.25		U
127-18-4	Tetrachloroethene	0.25		U
142-28-9	1,3-Dichloropropane	0.25		U
124-48-1	Dibromochloromethane	0.50		U
106-93-4	1,2-Dibromoethane	0.50		U
108-90-7	Chlorobenzene	1	3.7 M	
630-20-6	1,1,1,2-Tetrachloroethane	0.25		U
75-25-2	Bromoform	0.50		U
79-34-5	1,1,2,2-Tetrachloroethane	0.25		U

CASN	VOA TARGET COMPOUND	TQL ug/L	DETECTED ug/L	
96-18-4	1,2,3-Trichloropropane	0.25		U
108-86-1	Bromobenzene	0.50		U
95-49-8	2-Chlorotoluene	0.25		U
106-43-4	4-Chlorotoluene	0.25		U
541-73-1	1,3-Dichlorobenzene	0.25		U
106-46-7	1,4-Dichlorobenzene	1	1.7 M	
95-50-1	1,2-Dichlorobenzene	0.25	0.57 T	
96-12-8	1,2-Dibromo-3-Chloropropane	0.50		U
120-82-1	1,2,4-Trichlorobenzene	0.25		U
87-68-3	Hexachlorobutadiene	0.25		U
87-61-6	1,2,3-Trichlorobenzene	0.60		U
1634-04-4	Methyl-tert-butyl ether	5		U
71-43-2	Benzene	1	1.2 M	
108-88-3	Toluene	1		U
100-41-4	Ethyl benzene	1		U
108-38-3	m,p-Xylenes	2		U
95-47-6	o-Xylene	1		U
100-42-5	Styrene	1		U
98-82-8	Isopropylbenzene	1	0.T	
103-65-1	n-Propylbenzene	1		U
108-67-8	1,3,5-Trimethylbenzene	1		U
98-06-6	tert-Butylbenzene	1		U
95-63-6	1,2,4-Trimethylbenzene	1		U
135-98-8	sec-Butylbenzene	1		U
99-87-6	p-Isopropyltoluene	1		U
104-51-8	n-Butylbenzene	1		U
91-20-3	Naphthalene	1	1.3 M	

TQL- Target Quantitation Limit- Subject to change due to instrument sensitivity
T- Tentatively identified, not confirmed
E- Estimated Value
U- Samples analyzed for this compound but not detected
N- Sample not analyzed for this compound
D- Detected below quantitation limit
M- GC/MS Analysis performed

	mg/L	mg/L	
Gasoline Range Estimated Total Petroleum Hydrocarbon	0.20		N

Other purgeables detected (up to 10 highest peaks)

Detected ug/L

SEVERAL UNIDENTIFIED PEAKS DETECTED BY GC/PID.

COMMENTS:

ENR/DWQ LABORATORY
SEMI-VOLATILE ANALYTICAL REPORT

LAB NO. 1W0362

REPORTED BY RC
CHECKED BY
REVIEWED BY

SUPERVISOR RGK
DATE 1/29/01

ENTERED BY A.R.
DATE 1-29-01

SAMPLE TYPE: WATER

ANALYSIS RESULTS

CASE	SEMIVOLATILES TARGET COMPOUND	TOL ug/L	DETECTED ug/L	CASE	SEMIVOLATILES TARGET COMPOUND	TOL ug/L	DETECTED ug/L
62-53-3	ANILINE	10	U	606-20-2	2,6-DINITROTOLUENE	10	U
108-95-2	PHENOL	10	U	99-09-2	3-NITROANILINE	50	U
111-44-4	BIS(2-CHLOROETHYL) ETHER	10	U	83-32-9	ACENAPHTHENE	10	U
95-57-8	2-CHLOROPHENOL	10	U	51-28-5	2,4-DINITRO PHENOL	50	U
541-73-1	1,3-DICHLOROBENZENE	10	U	100-02-7	4-NITRO PHENOL	50	U
106-46-7	1,4-DICHLOROBENZENE	10	U	132-64-9	DIBENZOFURAN	10	U
100-51-6	BENZYL ALCOHOL	20	U	121-14-2	2,4-DINITROTOLUENE	10	U
95-50-1	1,2-DICHLOROBENZENE	10	U	84-66-2	DIETHYL PHTHALATE	10	U
95-48-7	2-METHYL PHENOL	10	U	7005-72-3	4-CHLOROPHENYL PHENYL ETHER	10	U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	10	U	86-73-7	FLUORENE	10	U
106 44-5	4-METHYL PHENOL	10	U	100-01-6	4-NITROANILINE	50	U
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	10	U	534-52-1	4,6-DINITRO-2-METHYL PHENOL	50	U
67-72-1	HEXACHLOROETHANE	10	U	86-30-6	N-NITROSODIPHENYLAMINE	10	U
98-95-3	NITROBENZENE	10	U	101-55-3	4-BROMOPHENYL PHENYL ETHER	10	U
78-59-1	ISOPHORONE	10	U	118-74-1	HEXACHLOROBENZENE	10	U
88-75-5	2-NITRO PHENOL	10	U	87-86-5	PENTACHLORO PHENOL	50	U
105-67-9	2,4-DIMETHYL PHENOL	10	U	85-01-8	PHENANTHRENE	10	U
65-85-0	BENZOIC ACID	50	U	120-12-7	ANTHRACENE	10	U
111-91-1	BIS(2-CHLOROETHOXY) METHANE	10	U	84-74-2	DI-N-BUTYL PHTHALATE	10	U
120-83-2	2,4-DICHLORO PHENOL	10	U	206-44-0	FLUORANTHENE	10	U
120-82-1	1,2,4-TRICHLOROBENZENE	10	U	129-00-0	PYRENE	10	U
91-20-3	NAPHTHALENE	10	U	85-68-7	BUTYLBENZYL PHTHALATE	10	U
106-47-8	4-CHLOROANILINE	20	U	91-94-1	3,3'-DICHLOROBENZIDINE	20	U
87-68-3	HEXACHLOROBUTADIENE	10	U	56-55-3	BENZO(A)ANTHRACENE	10	U
59-50-7	4-CHLORO-3-METHYL PHENOL	20	U	218-01-9	CHRYSENE	10	U
91-57-6	2-METHYL NAPHTHALENE	10	U	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	10	U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10	U	117-84-0	DI-N-OCTYL PHTHALATE	10	U
88-06-2	2,4,6-TRICHLORO PHENOL	10	U	205-99-2	BENZO(B)FLUORANTHENE	10	U
95-95-4	2,4,5-TRICHLORO PHENOL	10	U	207-08-9	BENZO(K)FLUORANTHENE	10	U
91-58-7	2-CHLORO NAPHTHALENE	10	U	50-32-8	BENZO(A)PYRENE	10	U
88-74-4	2-NITROANILINE	50	U	193-39-5	INDENO(1,2,3-CD)PYRENE	10	U
131-11-3	DIMETHYL PHTHALATE	10	U	53-70-3	DIBENZO(A,H)ANTHRACENE	10	U
208-96-8	ACENAPHTHYLENE	10	U	191-24-2	BENZO(G,H,I)PERYLENE	10	U

SEMIVOLATILE ORGANICS REPORT - DWQ LAB PAGE 2

LAB NO. 1W0362

Other Semi Volatile compounds detected (Up to 20 highest peaks)	Detected ug/l	
DIETHYLTOLUAMIDE C12H17NO (DEET)	9	T
ETHYL TOLUENESULFONAMIDE C9H13NO2S	6	T
BENZOTHIAZOLONE C7H5NOS	5	T
BENZENESULFONAMIDE, ETHYL METHYL C9H13NO2S	3	T
UNIDENTIFIED	4	E

TQL- Target Quantitation Limit- Subject to change due to instrument sensitivity
T- Tentatively Identified, estimated concentration
E- Estimated Value
U- Samples analyzed for this compound but not detected
N- Sample not analyzed for this compound
D- Detected below quantitation limit
H- Holding time exceeded

COMMENTS: