



NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.
16 STATE STREET, MONTPELIER, VERMONT 05602
802/223-7220 FAX 802/223-7128

December 26, 1997

Mr. John Cotton
NH Department of Environmental Services
Waste Management Division
6 Hazen Drive
Concord, NH 03301



RE: North Country Environmental Services, Inc. (NCES) - Bethlehem, NH
NHDES-WMD Gray Water Report Dated May 31, 1996
NHDES-WMD Letter Dated January 3, 1997
NHDES-WMD Letter Dated August 22, 1997
NCES Response Letter Dated September 4, 1997

Dear Mr. Cotton:

As you are aware the NHDES issued a Gray Water Report on May 31, 1996 and a follow-up letter on January 3, 1997 which required NCES to: (1) analyze detention pond 2 for total and fecal coliform bacteria; (2) install a monitoring well near the outlet of detention pond 2 and follow the sampling requirements of the release detection wells as described in GWP-870433-B-002; (3) implement a monitoring program for each of the stormwater detention ponds and submit a summary report of the data; and (4) prepare and submit an application for a National Pollutant Discharge Elimination System (NPDES) Stormwater Multi-Sector General Permit.

In response to the requirements of the above referenced letter, we have enclosed a summary report as prepared by Sanborn, Head and Associates, Inc. As you are aware, monitoring well MW-701 was installed near detention pond no. 2 and followed the release detection well sampling schedule. Finally, NCES has submitted a Notice of Intent application to the USEPA for recertification of the NPDES permit.

We believe the information provided satisfies all the requirements of the NHDES January 3, 1997 letter. Should you have any questions please do not hesitate to contact me or Larry Lackey at (802) 223-7220.

Sincerely,

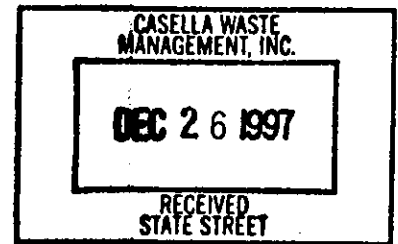
NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.


Karen G. Flanders, Staff Engineer (E.I.)
Permits, Compliance and Engineering

Encl.

c: James Berg, State of New Hampshire DES
Town of Bethlehem Select Board
John W. Casella, NEWS (w/o encl.)
James W. Bohlig, NCES (w/o encl.)
Larry B. Lackey, NCES
William T. Clifton, NCES
Robert A. Watts, NCES
R. Scott Shillaber, Sanborn, Head and Associates, Inc.

SHA
Sanborn, Head & Associates
Consulting Engineers & Scientists



December 24, 1997
File No. 1003.2

Mr. Larry B. Lackey
North Country Environmental Services, Inc.
16 State Street
Montpelier, VT 05602

Re: Summary Report
Water Quality Monitoring Results Detention Pond Nos. 1 through 3
North Country Environmental Services, Inc. (NCES)
Bethlehem, New Hampshire

Dear Mr. Lackey:

At your request Sanborn, Head & Associates, Inc. (SHA) has prepared this letter transmitting the results of water quality analyses on samples obtained from the three detention ponds at the site in November 1997 and providing a summary of the detention pond monitoring data obtained in 1997. The detention pond sampling was required in a January 3, 1997 letter from the New Hampshire Department of Environmental Services (NHDES) to NCES. NHDES' letter required that the detention pond monitoring take place in April, July and November and include:

- Sampling Detention Pond No. 2 for analysis for total and fecal coliform; and
- Sampling the three detention ponds for analysis for volatile organic compounds (VOCs) and Safe Drinking Water Act (SDWA) metals.

SHA obtained samples from the detention ponds in April, July and November for analysis for the parameters identified above. Results of the April and July monitoring were summarized in letters from SHA to NCES dated July 17 and September 3, 1997, respectively.

The November sampling was performed on November 11 and 12, 1997. Following collection, the samples were transported in coolers to Scitest Laboratory Services (Scitest) in Randolph, Vermont for analysis. Scitest's laboratory report for the November monitoring is attached. The November results are discussed below in context of the results from the April and July monitoring.

Coliform Results for Samples from Detention Pond No. 2

Samples were collected from Detention Pond No. 2 for analysis for total and fecal coliform. The analyses were performed using the membrane-filter technique. The November results for total and fecal coliform analyses indicate 200 and 230 colony forming units (CFU)/100ml, respectively.

*Paul M. Sanborn ■ Charles L. Head ■ R. Scott Shillaber
Charles A. Crocetti ■ Mathew A. DiPilato ■ Daniel B. Carr ■ Duncan W. Wood*

Sanborn, Head & Associates, Inc.
6 Garvins Falls Road ■ Concord, New Hampshire 03301
Fax (603) 229-1919 ■ Phone (603) 229-1900

The results of the coliform analyses are consistent with results from the April and July monitoring in that the measured concentrations are within the range of concentrations which NHDES has indicated in their January 3, 1997 letter are normal for inland streams subject to agricultural drainage or wildlife. These concentrations are also consistent with background data for coliform in surface water as summarized in the "Summary Report, Durham Urban Runoff Program," prepared by the New Hampshire Water Supply and Pollution Control Division in June 1983. Given that the coliform concentrations have been consistent with typical background data, SHA does not believe that further monitoring for coliform is warranted.

Analytical Testing of Detention Pond Samples

SHA sampled Detention Ponds Nos. 1, 2 and 3 for analysis for VOCs and SDWA metals. No VOCs were detected in any of the detention pond samples collected during the November sampling round. VOCs were detected in the samples collected from Detention Pond Nos. 2 and 3 in April 1997 and from Detention Pond No. 3 in July 1997; no VOCs were detected in samples collected from Detention Pond No. 1. A summary of the VOC analyses for Detention Ponds Nos. 2 and 3 is tabulated below. ND in the table indicates the particular VOC was not detected during that monitoring round.

VOCs DETECTED IN DETENTION POND SAMPLES ($\mu\text{g/l}$)

VOC	Pond No. 2			Pond No. 3		
	4/97	7/97	11/97	4/97	7/97	11/97
2-Butanone (MEK)	103	ND	ND	ND	47	ND
Acetone	123	ND	ND	28	37	ND
2-Hexanone	11	ND	ND	ND	ND	ND
Toluene	1	ND	ND	ND	ND	ND

The VOCs detected in the detention pond samples were attributed to leachate breaking out of the landfill slopes which was carried with storm water runoff to the detention ponds. Geomembrane cap was constructed on the slopes shortly after the July samples were collected, and henceforth, should eliminate these leachate breakouts. The November monitoring was the first monitoring round following completion of the cap construction over the majority of Stage I and appears to confirm this premise.

Analyses were performed for total metals on non-filtered samples for arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver and are summarized on Tables 1 through 8, respectively. Arsenic barium, mercury, selenium and silver were not detected in any of the detention pond samples collected in November.

Silver and selenium were not detected in any of the detention pond samples collected in 1997. Barium, arsenic and cadmium were detected in at least one sample at low concentrations near the analytical detection limit. Chromium and lead were detected during the three 1997 sampling rounds. As indicated on Table 4, chromium was detected at concentrations of 0.008 milligrams per liter (mg/l) or less except in the April sample from Pond No. 2 where it was detected at a concentration of 0.029 mg/l. Lead was detected at concentrations varying from 0.003 to 0.021 mg/l (Table 5). All concentrations of chromium and lead are below their surface water quality criteria of 0.050 mg/l established on the basis of protection of human health.

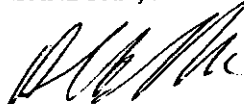
The detention ponds are designed to allow for sedimentation of suspended soil particles and have relatively high levels of turbidity. The aforementioned leachate breakouts, as well as vehicle emissions may have further contributed to the detected metals concentrations in the detention pond samples.

As indicated above, VOCs were detected in samples from Detention Pond Nos. 2 and 3 earlier this year. The VOCs were attributed to leachate breaking out of the Stage I slopes and carried with storm water runoff to the ponds. Following the July monitoring, the majority of the Stage I landfill was capped. The VOC analyses of pond samples collected in November after cap construction did not detect the presence of VOCs indicating that the likely source of the VOCs, namely leachate breakouts from the Stage I slopes, has been mitigated.

The Groundwater Permit for the facility was revised and renewed on November 10, 1997. In the application for renewal, NCES proposed to continue monitoring the detention ponds to provide confirmatory data regarding the effectiveness of the cap. The renewed permit incorporated detention pond monitoring. SHA believes the monitoring will be sufficient to confirm the effectiveness of the closure.

We thank you for the opportunity to be of service. Should you have any questions or if we may be of further assistance, please do not hesitate to call.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.



R. Scott Shillaber, P.E.
Principal

RSS:pmm/las
Attachments

cc: Bill Clifton, NCES

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Water Quality Summary - Table 1

Arsenic (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	<0.002	<0.002	<0.002
2	07-8,15-97	<0.002	<0.002	0.004
3	11-11,12-97	<0.005	<0.005	<0.005

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 2

Barium (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	<0.2	<0.2	<0.2
2	078,15-97	<0.2	<0.2	0.3
3	11-11,12-97	<0.2	<0.2	<0.2

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 3

Cadmium (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-7,8,9-97	<0.0002	<0.0002	<0.0002
2	07-8,15-97	<0.0002	<0.0002	0.0003
3	11-11,12-97	0.0003	0.0004	0.0003

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Chromium (mg/L)

Water Quality Summary - Table 4

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	0.003	0.029	0.003
2	07-8,15-97	0.003	<0.002	0.008
3	11-11,12-97	0.008	0.008	0.005

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 5

Lead (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	0.003	0.008	0.006
2	07-8,15-97	0.007	0.003	0.021
3	11-11,12-97	0.017	0.021	0.011

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 6

Mercury (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	<0.0002	<0.0002	<0.0002
2	07-8,15-97	<0.0002	<0.0002	<0.0002
3	11-11,12-97	<0.0002	<0.0002	<0.0002

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 7

Selenium (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	<0.002	<0.002	<0.002
2	07-8,15-97	<0.002	<0.002	<0.002
3	11-11,12-97	<0.002	<0.002	<0.002

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.

Water Quality Summary - Table 8

Silver (mg/L)

Round No.	Sampling Date	Detention Ponds		
		No. 1 (South)	No. 2 (West)	No. 3 (North)
1	04-09-97	<0.02	<0.02	<0.02
2	07-8,15-97	<0.02	<0.02	<0.02
3	11-11,12-97	<0.02	<0.02	<0.02

- Indicates no testing performed.

< Indicates result is less than the detection limit shown.



ANALYTICAL REPORT

P.O. Box 339
Randolph, Vermont 05060-0339
(802) 728-6313

Casella Waste Management Inc.
16 State Street
Montpelier, VT 05601

Karen Flanders

Work Order No.: 9711-03660

Project Name: Detention Pond #2 - Bacterial Analysis
Customer Nos.: 070338

Date Received: 11/11/97
Date Reported: 11/24/97

Sample Desc.: Detention Pond #2		Sample Date: 11/11/97			
Sample Nos: 1		Collection Time: 10:45			
Test Performed	Method	Results	Units	Analyst	Analysis Date
Total Coliform	SM18 9222FMT	200	CFU/100mL	RJL	11/11/97
Fecal Coliform	SM18 9222FMT	230	CFU/100mL	RJL	11/11/97

Authorized by: *Jean S Wood*

ANALYTICAL REPORT

Project Name: NCES Landfill - Surface Waters - November
 Project No.: 070338

Work Order No.: 9711-03657

Sample Desc.: South Detention Pond #1	Sample Date:	11/12/97			
Sample Nos: 6	Collection Time:	12:00			
Test Performed	Method	Results	Units	Analyst	Analysis Date
Arsenic, Acid Soluble	SM18 3113	< 0.005	mg/L	JSW	11/20/97
Barium, Acid Soluble	SM18 3111	< 0.2	mg/L	PAA	11/17/97
Cadmium, Acid Soluble	SM18 3113	0.0003	mg/L	JSW	11/21/97
Chromium, Acid Soluble	SM18 3113	0.008	mg/L	JSW	11/17/97
Lead, Acid Soluble	SM18 3113	0.017	mg/L	JSW	11/20/97
Mercury, Acid Soluble	SM18 3112B	< 0.0002	mg/L	ALH	11/21/97
Selenium, Acid Soluble	SM18 3113	< 0.002	mg/L	JSW	11/17/97
Silver, Acid Soluble	SM18 3111	< 0.02	mg/L	JSW	11/14/97
Volatiles	EPA 8260			RJS	11/15/97
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Benzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chloroform	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromoform	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Acetone	EPA 8260	< 20	ug/L	RJS	11/15/97
2-Butanone (MEK)	EPA 8260	< 20	ug/L	RJS	11/15/97



ANALYTICAL REPORT

Project Name: NCES Landfill - Surface Waters - November
 Project No.: 070338

Work Order No.: 9711-03657

Sample Desc.: South Detention Pond #1				Sample Date:	11/12/97
Sample Nos: 6				Collection Time:	12:00
Test Performed	Method	Results	Units	Analyst	Analysis Date
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	11/15/97
2-Hexanone	EPA 8260	< 10	ug/L	RJS	11/15/97
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	11/15/97
Styrene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	11/15/97
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Toluene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Methyl tertiary Butyl Ether	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Surrogate:					
***Dibromofluoromethane		103	% Recovery	RJS	11/15/97
***Toluene-d8		83	% Recovery	RJS	11/15/97
***Bromofluorobenzene		93	% Recovery	RJS	11/15/97

Sample Desc.: West Detention Pond #2				Sample Date:	11/11/97
Sample Nos: 7				Collection Time:	10:45
Test Performed	Method	Results	Units	Analyst	Analysis Date
Arsenic, Acid Soluble	SM18 3113	< 0.005	mg/L	JSW	11/20/97
Barium, Acid Soluble	SM18 3111	< 0.2	mg/L	PAA	11/17/97
Cadmium, Acid Soluble	SM18 3113	0.0004	mg/L	JSW	11/21/97
Chromium, Acid Soluble	SM18 3113	0.008	mg/L	JSW	11/17/97
Lead, Acid Soluble	SM18 3113	0.021	mg/L	JSW	11/20/97
Mercury, Acid Soluble	SM18 3112B	< 0.0002	mg/L	ALH	11/21/97
Selenium, Acid Soluble	SM18 3113	< 0.002	mg/L	JSW	11/17/97
Silver, Acid Soluble	SM18 3111	< 0.02	mg/L	JSW	11/14/97
Volatiles	EPA 8260			RJS	11/12/97
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Benzene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/12/97



ANALYTICAL REPORT

Project Name: NCES Landfill - Surface Waters - November
Project No.: 070338

Work Order No.: 9711-03657

Sample Desc.: West Detention Pond #2	Sample Date: 11/11/97				
Sample Nos: 7	Collection Time: 10:45				
Test Performed	Method	Results	Units	Analyst	Analysis Date
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Chloroform	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Bromoform	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	11/12/97
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	11/12/97
Acetone	EPA 8260	< 20	ug/L	RJS	11/12/97
2-Butanone (MEK)	EPA 8260	< 20	ug/L	RJS	11/12/97
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	11/12/97
2-Hexanone	EPA 8260	< 10	ug/L	RJS	11/12/97
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	11/12/97
Styrene	EPA 8260	< 2.0	ug/L	RJS	11/12/97
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/12/97
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	11/12/97
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	11/12/97
cis-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	11/12/97
Toluene	EPA 8260	< 1.0	ug/L	RJS	11/12/97
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/12/97

ANALYTICAL REPORT

Project Name: NCES Landfill - Surface Waters - November
Project No.: 070338

Work Order No.: 9711-03657

Sample Desc.: West Detention Pond #2				Sample Date:	11/11/97
Sample Nos: 7				Collection Time:	10:45
Test Performed	Method	Results	Units	Analyst	Analysis Date
Methyl tertiary Butyl Ether Surrogate:	EPA 8260	< 1.0	ug/L	RJS	11/12/97
***Dibromofluoromethane		104	% Recovery	RJS	11/12/97
***Toluene-d8		87	% Recovery	RJS	11/12/97
***Bromofluorobenzene		92	% Recovery	RJS	11/12/97

Sample Desc.: North Detention Pond #3				Sample Date:	11/12/97
Sample Nos: 8				Collection Time:	12:10
Test Performed	Method	Results	Units	Analyst	Analysis Date
Arsenic, Acid Soluble	SM18 3113	< 0.005	mg/L	JSW	11/20/97
Barium, Acid Soluble	SM18 3111	< 0.2	mg/L	PAA	11/17/97
Cadmium, Acid Soluble	SM18 3113	0.0003	mg/L	JSW	11/21/97
Chromium, Acid Soluble	SM18 3113	0.005	mg/L	JSW	11/17/97
Lead, Acid Soluble	SM18 3113	0.011	mg/L	JSW	11/20/97
Mercury, Acid Soluble	SM18 3112B	< 0.0002	mg/L	ALH	11/21/97
Selenium, Acid Soluble	SM18 3113	< 0.002	mg/L	JSW	11/17/97
Silver, Acid Soluble	SM18 3111	< 0.02	mg/L	JSW	11/14/97
Volatiles	EPA 8260			RJS	11/15/97
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Benzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chloroform	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromoform	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	11/15/97



ANALYTICAL REPORT

Project Name: NCES Landfill - Surface Waters - November
 Project No.: 070338

Work Order No.: 9711-03657

Sample Desc.: North Detention Pond #3	Sample Date: 11/12/97				
Sample Nos: 8	Collection Time: 12:10				
Test Performed	Method	Results	Units	Analyst	Analysis Date
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Acetone	EPA 8260	< 20	ug/L	RJS	11/15/97
2-Butanone (MEK)	EPA 8260	< 20	ug/L	RJS	11/15/97
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	11/15/97
2-Hexanone	EPA 8260	< 10	ug/L	RJS	11/15/97
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	11/15/97
Styrene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	11/15/97
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	11/15/97
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	11/15/97
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	11/15/97
Toluene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Methyl tertiary Butyl Ether	EPA 8260	< 1.0	ug/L	RJS	11/15/97
Surrogate:					
***Dibromofluoromethane		102	% Recovery	RJS	11/15/97
***Toluene-d8		94	% Recovery	RJS	11/15/97
***Bromofluorobenzene		95	% Recovery	RJS	11/15/97

Authorized by: *David Samette*

