Lawler, Matusky & Skelly Engineers LLP
Environmental Science & Engineering Consultants

February 20, 2001
Project No. 446-173
CIN 00650036

Mr. John LaBarge
Acting Director, Consultant Management Bureau
NYS Dept. of Transportation
1220 Washington Avenue
Albany, NY 12232

ATTN: Mr. Greg Menard

Re: **D008873, PIN 8007.31.301**
Harrison Petroleum Spill – Remediation Design
Town of Harrison, Westchester County, New York
Office Building Odor Survey and
Septic Tank Wastewater Disposal

Dear Mr. Menard:

Lawler, Matusky & Skelly Engineers LLP (LMS) is pleased to submit this summary report of the subject activities. The New York State Department of Transportation (DOT) requested that LMS perform this work as part of the operation and maintenance of the existing air sparging/soil vapor extraction (AS/SVE) remediation system.

Office Building Odor Survey

An odor was reportedly encountered in the subresidency office on the morning of Monday, November 6, 2000. LMS deployed a reconnaissance team to investigate the odor and determine if a source could be identified. The presence of vapors was confirmed using an H-Nu PI-101 photo-ionization detector (PID). PID readings collected inside the door of the office were between 30 and 40 ppm, calibrated to benzene. These findings were reported to DOT on the same day. A work plan to conduct further investigation and delineation of the odor was developed and implemented over subsequent days.

On Wednesday, November 8, 2000, further investigation of the odor was conducted. The office had been ventilated by DOT in the interim and the odor seemed to be less evident. PID readings were collected at various locations throughout the office and the vapors were tentatively identified to be entering the office through a joint in the floor underneath the radiator. PID readings under the radiator fluctuated between 5 and 30 ppm. Three potential factors seemed to affect the severity of the problem: (1) the operation of the hot-water radiator, (2) the operation of the air sparge system, and (3) possibly the SVE system operation.

A tedlar bag air sample was collected from the air space underneath the radiator and above the suspect floor joint and was sent to EAS Laboratories in Watertown, CT for volatile

organic compounds (VOC) analysis. An air sample was similarly collected from the soil vapor extraction (SVE) blower exhaust and analyzed for VOCs for comparative purposes.

Laboratory results were received via fax on Friday, November 10, 2000 (Table 1). The sample collected from the office contained m/p-xylene at 1.8 µg/L by volume, which corresponds to approximately 0.41 ppm. The odor threshold for xylene is about 1.1 ppm; therefore, the measured concentration did not appear to be sufficient to produce the odor detected in the office. The measure concentration of m/p-xylene was deemed to be an unlikely source of the odor and further analysis was deemed necessary. The SVE air sample produced expected results identifying gasoline derivatives such as toluene, xylene and ethylbenzene. The results also showed tentatively identified compounds (TIC's). The TIC analysis indicated the presence of petroleum distillates in both samples suggesting the presence of gasoline. However, the characterization of the odors detected in the office was not consistent with petroleum distillates or gasoline. The nature of the odor (semi-sweet and solvent-like) suggested that the source might be either old, anaerobically digested heavy petroleum, such as fuel oil, or a solvent-based constituent. Nevertheless, the source of the odor was yet to be determined.

Additional testing was conducted during the second and third weeks of November 2000 to determine if the AS/SVE system had an effect on the odor and to determine if the heat from the radiator exacerbated the odors. The testing was conducted using various modes of operations of the air sparging, SVE, and radiator systems. Each system was alternatively turned off and on while PID readings were taken to determine if there were any notable changes in the air quality. Two additional air samples were collected from the office on November 22, 2000 and sent to Air Toxics Ltd. Laboratories to be analyzed for VOCs. The results from these analyses (the VOCs and TICs) are presented in Table 2. The results of these investigations suggest that when the air sparge system was operating the likelihood of an odor in the office was increased and the gradient of heated air produced by the radiator appeared to exacerbate the odor. However, the results were not completely definitive and suggested additional action to further delineate the source of the odor.

It was postulated that the implementation of the air sparge and soil vapor extraction systems might have disrupted the subsurface causing the release of the odor. A potential pathway along the septic tank effluent pipe that runs from the office building to the septic tank was initially identified. The pipeline exits the building directly beneath the suspect floor joint. The line transects the area of the site impacted by the gasoline spill and may be a pathway from the yard to the office building. On November 27, 2000, a test hole was excavated to determine if this septic effluent pipe trench was a possible pathway for the odor. The septic pipe line bedding material was thought to be the probable transport pathway since the bedding typically "separates" from the pipe creating a thin annular space between the pipe and the surrounding material, which would promote preferential air flow. Also, the bedding material itself is porous, which may have produced a preferential pathway of air.

PID readings were collected throughout the excavation and were slightly above background levels until the bedding material was encountered. The PID readings in the bedding material were noticeably higher than the readings in the overburden soils. Bedding material soil

samples were therefore collected and sent to Toxicon Laboratories for VOC/SVOC analysis to determine the composition of the material present.

The bedding material sample results did not indicate the presence of VOC/SVOC's in the material; the results are presented in Table 3. However, a TIC, identified as an "unknown aldol," had a concentration of 14,000 µg/kg. The hazard summary of the chemical aldol states that this chemical can irritate your eyes, nose, throat, and lungs. Exposure can cause dizziness, lightheadedness, and passing out. The known uses of the chemical aldol are in the manufacturing of rubber vulanizers, accelerators, resisters, perfumes, fungicides, engraving, and ore flotation.

It should be noted that the laboratory provided LMS with information that this "unknown aldol" is reported as a tentatively identified compound and is usually an aldol-condensation reaction product formed as a result of heating the acetone used to extract a soil sample. The presence of aldol is likely due to the soil sample preparation described herein, but does not rule out the possibility of acetone being present in the soil. However, acetone was not detected in the soil sample collected on November 22, 2000, but was detected in the air sample collected on the same date at a concentration of 18 µg/m³ (which is approximately six orders of magnitude lower than the odor threshold of 2 ppm). The symptoms exhibited by the exposure to aldol and/or acetone are coincidentally similar to those encountered at the site (e.g., strong, pleasant fragrance resulting in dizziness and lightheadedness). Thus, it can be concluded that the unknown aldol may either be a laboratory derivative of acetone that was introduced during sample preparation or it could be a contaminant found at the site. Analytical data thus far has suggested that acetone and the unknown aldol are not contributing components to the odor in question, however, more data must be collected before a final conclusion can be drawn. While the field data gathered suggested that the bedding material is impacted, the laboratory data did not conclusively identify the source. The pipe penetration through the building was also originally considered to be a possible pathway, however, the area of this penetration was sealed fairly well. It was determined that the bedding material is located just under the building foundation bottom and it appears that the odors may be entering the building from underneath the foundation, not through the pipe penetration.

After consulting with the NYSDOT, the excavated test hole near the sewer line was fitted with a ¾-in. PVC passive vent line located 3-ft 8-in. below grade surface (within the bedding material) and packed in about 1 foot of ¾-in. of stone. Hay was used as a boundary material between the stone and native backfill. The backfill was compacted in 6-in. lifts (manual compaction) and the hole was brought up to grade. The attached Figure 1 and in-place photograph to the right show the installation of this passive vent line.

Since the installation of this passive vent, there has been a significant decrease in the presence of the odor in this building. There is no evidence that firmly suggests that the passive vent was a successful corrective measure, but the SVE and air sparging systems have been in continuous operation since November 27, 2000 and there has not been an appreciable odor problem. This may be more likely due to natural attenuation of the odors than effects of the passive vent. Ambient PID readings are collected approximately once a week when the AS/SVE system is serviced and, to date, no appreciable odors have been detected in the breathing zone along the building or property perimeter. If necessary, the passive vent could be connected to the active vapor extraction system so that any potential vapors could be collected.

Septic Tank Wastewater Disposal

While investigating other possible sources of the odor, the septic tank was opened and a visual inspection was conducted of its interior and contents. A thin sheen was observed on the wastewater in the tank. Septic tank aqueous samples were collected and sent to Toxicon Laboratories for VOC/SVOC analysis to determine the composition of material present. The septic tank supernatant was clear with a thin sheen, the lower sludge level was black and about 1 to 2 foot thick; the overall depth of the tank appeared to be 5 to 6 feet. The estimated maximum volume of the tank was 1,500 to 2,000 gallons and was assumed to contain 80% liquid and 20% solids (2 to 4% solids). A composite septic tank water sample was collected on November 27, 2000, (approximately 3-ft, 6-in. deep) and analyzed for EPA SW8270C (volatiles and semi-volatiles). Two compounds were detected above detection limits: trichloroethylene (TCE) at 0.5 ppm and tetrachloroethylene (PCE) at 2.7 ppm. A sludge layer was observed at the bottom of the tank (approximately one-foot thick) but was not analyzed. The analytical data is attached in Table 3. Based on this analysis, the NYSDOT requested that LMS arrange for the removal and disposal of the septic tank waste.

The maximum concentration for the characteristic of toxicity for TCE is 0.5 ppm and 0.7 ppm for PCE. Since the concentration of PCE exceeded its toxicity limit, the entire contents of the tank were considered hazardous. It was decided that handling the waste as hazardous would be a conservative and a cost effective approach for disposal of the wastewater. This approach would eliminate the need to perform additional sampling and would eliminate potential issues relating to separating the liquid from the sludge. Since, logistically, it was easier to pump out the solids with the rest of the liquid in the tank, the entire contents of the tank was considered hazardous.

At least ten (10) venders were called for quotations on the work, which included a mix of septic tank disposal firms and hazardous/non-hazardous haulers. LMS solicited bids from four (4) hazardous waste disposal firms based on qualifications. The bids were based on the conservative assumptions outlined above, e.g., the material in the tank was considered hazardous and the material was removed from the tank.

On Tuesday, January 30, 2001, a total of 560 gallons of wastewater was removed from the septic tank and assigned State Manifest Document Number MAM691443. The manifest identifies the waste as hazardous wastewater for tetrachloroethylene (D039) and trichloroethylene (D040). There were some solids remaining on the bottom of the tank that

remained as residual wastes. This remaining sludge material in the tank may require additional characterization prior to removal and disposal, or as part of a more comprehensive remediation effort for the septic tank.

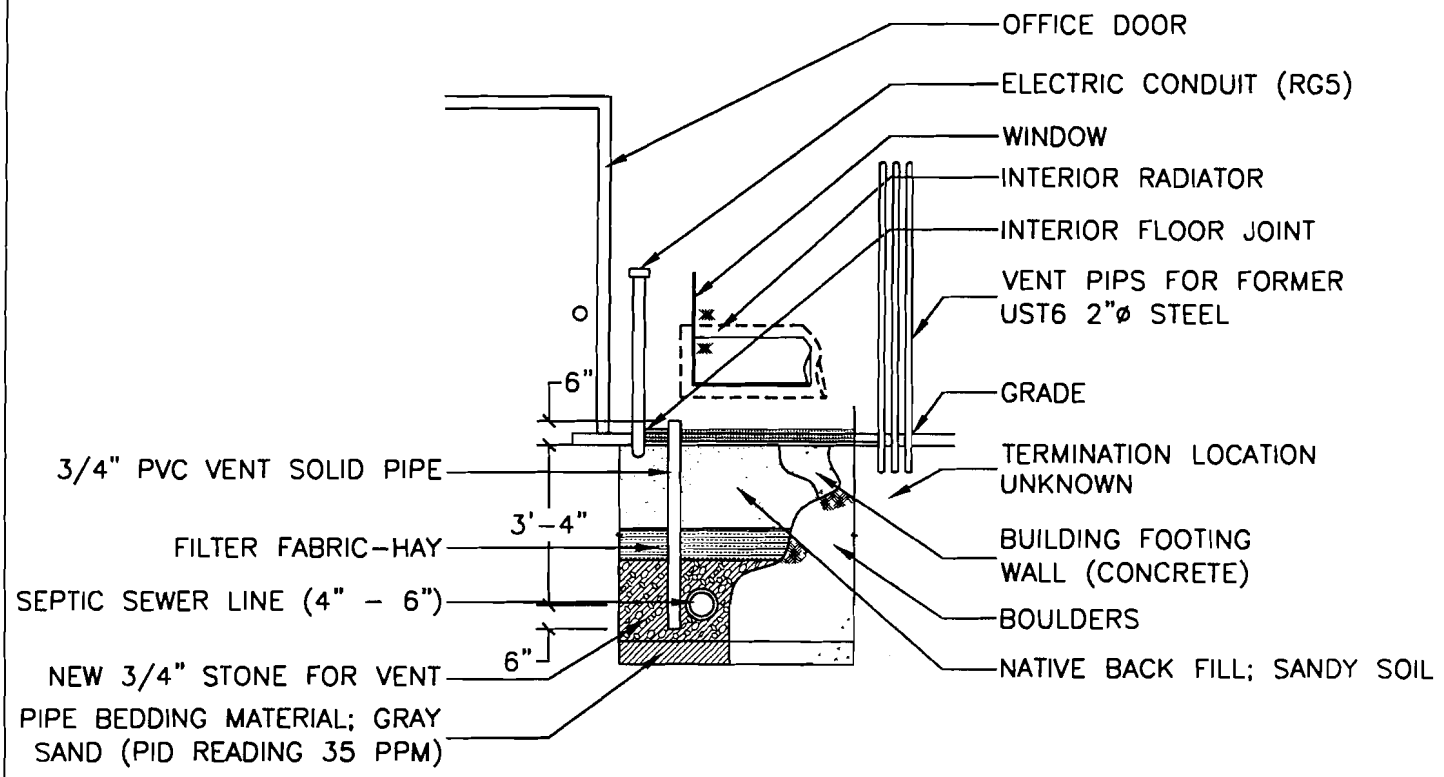
If you have any questions, please call me at 845-735-8300.

Very truly yours,

Robert DeGiorgio, P.E.

Attachments

FIGURES



PASSIVE VENT (SEPTIC)

SCALE: N.T.S.

Lawler, Matusky & Skelly Engineers LLP
Environmental Science & Engineering Consultants
LMS One Blue Hill Plaza. PO Box 1509 Fax: 914.735.7466
Pearl River, New York 10965-8509 Phone: 914.735.8300

HARRISON SUBRESIDENCY

FIG 1
PASSIVE VENT

Drawn by: ____
Dsgn. by: ____
Chkd. by: ____

Sheet / of

Rev.

TABLES

TABLE 1 (Page 1 of 2)

SVE and Office Samples
(November 8, 2000)

Harrison Subresidency

EAS LABORATORIES

Location Collected	SVE	OFFICE
LMS Sample ID	AB13459	AB13460
Lab Sample ID	00110156-01	00110156-02
Date Sampled	11/8/2000	11/8/2000
	(ug/L)	(ug/L)
Volatile Organic Compounds (ug/L)		
Dichlorodifluoromethane	ND	ND
Chloromethane	ND	ND
Vinyl Chloride	ND	ND
Bromomethane	ND	ND
Chloroethane	ND	ND
Trichlorofluoromethane	ND	ND
Acetone	ND	ND
1,1-Dichloroethene	ND	ND
Methylene Chloride	ND	ND
trans-1,2-Dichloroethene	ND	ND
MTBE	ND	ND
1,1-Dichloroethane	ND	ND
2-Butanone	ND	ND
cis-1,2-Dichloroethene	ND	ND
2,2-Dichloropropane	ND	ND
Chloroform	ND	ND
Bromochloromethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1-Dichloropropene	ND	ND
1,2-Dichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Benzene	ND	ND
Trichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
Dibromomethane	ND	ND
Bromodichloromethane	ND	ND
trans-1,3-Dichloropropene	ND	ND
4-Methyl-2-Pentanone	ND	ND
cis-1,3-Dichloropropene	ND	ND
Toluene	0.60	ND
trans-1,3-Dichloropropene	ND	ND
1,1,2-Trichloroethane	ND	ND
2-Hexanone	ND	ND
1,3-Dichloropropane	ND	ND
Dibromochloromethane	ND	ND
Tetrachloroethylene	ND	ND
1,2-Dibromoethane	ND	ND
Chlorobenzene	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND

TABLE 1 (Page 2 of 2)

SVE and Office Samples
(November 8, 2000)

Harrison Subresidency

EAS LABORATORIES

Location Collected	SVE	OFFICE
LMS Sample ID	AB13459	AB13460
Lab Sample ID	00110156-01	00110156-02
Date Sampled	11/8/2000	11/8/2000
	(ug/L)	(ug/L)
Ethylbenzene	1.4	ND
m/p-Xylene	3.4	1.8
Styrene	ND	ND
O-Xylene	0.77	ND
Bromoform	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Isopropylbenzene	ND	ND
1,2,3-Trichloropropane	ND	ND
Bromobenzene	ND	ND
n-Propylbenzene	ND	ND
2-Chlorotoluene	ND	ND
4-Chlorotoluene	ND	ND
1,3,5-Trimethylbenzene	1.5	ND
tert-Butylbenzene	ND	ND
1,2,4-Trimethylbenzene	4.2	ND
sec-Butylbenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
p-Isopropylbenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
n-Butylbenzene	ND	ND
1,2-Dibromo-3-Chloropropane	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Naphthalene	ND	ND
Hexachlorobutadiene	ND	ND
1,2,3-Trichlorobenzene	ND	ND
Total VOCs:	11.87	1.8

Tentively Identified Compounds, TIC (µg/L)

	SVE		OFFICE
2-Methyl-Butane	38.0	2-Methyl-Butane	46.1
Pentane	33.6	Pentane	32.7
2-Methyl-Pentane	46.9	2-Methyl-Pentane	84.2
Hexane	49.8	2-Methyl-1-Butanol	48.3
Methyl Cyclopentane	34.3	2,2-Dimethylheptane	45.1
2-Methyl-Hexane	34.7	Methyl Cyclopentane	36.8
3-Methyl-Hexane	32.0	3-Methyl-Hexane	37
Heptane	29.4	3-Methyl-Hexane	35
Methyl-Cyclohexane	35.9	Methyl-Cyclohexane	32.7
1,5-Dimethylcyclopentene	33.5		

ND - Not detected at analytical reporting limit.

TABLE 2 (Page 1 of 2)
Two Office Samples
(November 22, 2000)
Harrison Subresidency
AIR TOXICS LTD. LABORATORIES

Location Collected LMS Sample ID Lab Sample ID Date Sampled	OFFICE 0011476-01A 11/22/2000 (ppbv)	OFFICE 0011476-01A 11/22/2000 (ug/m^3)
Volatile Organic Compounds (ug/L)		
Freon 12	ND	ND
Freon 114	ND	ND
Chloromethane	ND	ND
Vinyl Chloride	ND	ND
Bromomethane	ND	ND
Chloroethane	ND	ND
Freon 11	ND	ND
1,1-Dichloroethene	ND	ND
cis-1,2-Dichloroethene	ND	ND
Chloroform	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Benzene	ND	ND
1,2-Dichloroethane	ND	ND
Trichloroethane	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
Toluene	6.2	24
trans-1,3-Dichloropropene	ND	ND
1,1,2-Trichloroethane	ND	ND
Tetrachloroethene	ND	ND
Ethylene Dibromide	ND	ND
Chlorobenzene	ND	ND
Ethyl Benzene	2	8.8
m/p-Xylene	28	120
O-Xylene	29	130
Styrene	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
1,3,5-Trimethylbenzene	24	120
1,2,4-Trimethylbenzene	3.4	17
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Chlorotoluene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Hexachlorobutadiene	ND	ND
Propylene	ND	ND
1,3-Butadiene	ND	ND
Acetone	7.4	18
Carbon disulfide	ND	ND

TABLE 2 (Page 2 of 2)
Two Office Samples
(November 22, 2000)
Harrison Subresidency
AIR TOXICS LTD. LABORATORIES

Location Collected LMS Sample ID Lab Sample ID Date Sampled	OFFICE 0011476-01A 11/22/2000 (ppbv)	OFFICE 0011476-01A 11/22/2000 (ug/m^3)
2-Propanol	ND	ND
trans-1,2-Dichloroethene	ND	ND
Vinyl Acetate	ND	ND
2-Butanone	ND	ND
Hexane	320	1200
Tetrahydrofuran	ND	ND
Cyclohexane	130	450
1,4-Dioxane	ND	ND
Bromodichloromethane	ND	ND
4-Methyl-2-pentanone	ND	ND
2-Hexanone	ND	ND
Dibromochloromethane	ND	ND
Bromoform	ND	ND
4-Ethyltoluene	ND	ND
Ethanol	ND	ND
Methyl tert-Butyl Ether	ND	ND
Heptane	150	640
Total VOCs:	700	2727.8
Tentively Identified Compounds, TIC (ppbv)		
2-Methyl-butane	610	
Pentane	430	
2-Methyl-pentane	1000	
3-Methyl-pentane	530	
Isooctanol	240	
Methyl-cyclopentane	430	
2-Methyl-Hexane	420	
Unknown	900	
Unknown	720	
Methyl-cyclohexane	750	
Unknown	290	
Unknown	700	
3,4-Dimethyl-octane	340	
1,2-Dimethyl-trans-cyclohexane	320	
Unknown	320	
1,4-Dimethyl-cyclohexane	360	
Ethyl-cyclohexane	390	
4,7-Dimethyl-undecane	250	
5-Methyl-,(Z)-2-Decene	250	
2-Butyl-1-octanol	250	

ND - Not detected at analytical reporting limit.

TABLE 3 (Page 1 of 2)
Bedding Material and Septic Tank Samples
(November 27, 2000)
Harrison Subresidency
TOXICON LABORATORIES

Location Collected	Soil	Water
LMS Sample ID	Bedding Material	Septic Tank
Lab Sample ID	SS-01	ST-01
Date Sampled	0011462-01A	0011462-03A
	11/27/2000	11/27/2000
	(ug/Kg)	(ug/L)
Volatile Organic Compounds		
1,1,1,2-Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
1,1-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloropropene	ND	ND
1,2,3-Trichlorobenzene	ND	ND
1,2,3-Trichloropropane	ND	ND
1,2,4-Trichlorobenzene	ND	ND
1,2,4-Trimethylbenzene	ND	ND
1,2-Dibromo-3-Chloropropane	ND	ND
1,2-Dibromoethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,2-Dichloroethane	ND	ND
1,2-Dichloropropane	ND	ND
1,3,5-Trimethylbenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,3-Dichloropropane	ND	ND
1,4-Dichlorobenzene	ND	ND
2,2-Dichloropropane	ND	ND
2-Butanone	ND	ND
2-Chlorotoluene	ND	ND
2-Hexanone	ND	ND
4-Chlorotoluene	ND	ND
4-Methyl-2-Pentanone	ND	ND
Acetone	ND	ND
Benzene	ND	ND
Bromobenzene	ND	ND
Bromochloromethane	ND	ND
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
cis-1,2-Dichloroethene	ND	ND
cis-1,3-Dichloropropene	ND	ND
Dibromochloromethane	ND	ND
Dibromomethane	ND	ND
Dichlorodifluoromethane	ND	ND
Ethylbenzene	ND	ND
Hexachlorobutadiene	ND	ND
Isopropylbenzene	ND	ND

TABLE 3 (Page 2 of 2)
Bedding Material and Septic Tank Samples
(November 27, 2000)
Harrison Subresidency
TOXICON LABORATORIES

Location Collected LMS Sample ID Lab Sample ID Date Sampled	Soil Bedding Material SS-01 0011482-01A 11/27/2000 (ug/Kg)	Water Septic Tank ST-01 0011482-05A 11/27/2000 (ug/L)
m/p-Xylene	ND	ND
Methylene Chloride	ND	ND
MTBE	ND	ND
Naphthalene	ND	ND
n-Butylbenzene	ND	ND
n-Propylbenzene	ND	ND
O-Xylene	ND	ND
p-Isopropylbenzene	ND	ND
sec-Butylbenzene	ND	ND
Styrene	ND	ND
tert-Butylbenzene	ND	ND
Tetrachloroethylene	ND	2700
Toluene	ND	ND
trans-1,2-Dichloroethene	ND	ND
trans-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	510
Trichlorofluoromethane	ND	ND
Vinyl Chloride	ND	ND
Total VOCs:	0	

Tentively Identified Compounds, TIC

	SOIL (ug/Kg)		WATER (ug/L)
unknown aldol	14000.0	1,4-Methanoazulene	12.61
unknown (2)	870.0	4-(1,1,3,3-t)Phenol	15.23
unknown (3)	160.0	unknown (3)	16.43
Hexadecanoic acid	280.0	unknown (4)	16.57
		nonyl-phenol	16.69
		unknown (6)	17.08
		unknown (7)	17.19
		unknown (8)	17.31
		Hexadecanoic acid	19.73
		Triclosan	21.61
		9-Hexadecenoic acid	21.76
		Heptadecanoic acid	22.02
		gamma-Tocopherol	30.6
		Cholestanol	30.95
		Cholesterol	31.29
		unknown (16)	31.65
		unknown (17)	31.78
		unknown (18)	32.05
		unknown (19)	32.34
		unknown (20)	32.56
		unknown (21)	32.97
		unknown (22)	33.49

ND - Not detected at analytical reporting limit.

ATTACHMENTS

(Waste Manifest, Job Completion Log, Land Disposal Notification, Waste Profile)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
CALLSTATEDEP	691443		

3. Generator's Name and Mailing Address
New York State Of
1230 Washington Avenue Building 7 &
Albany, NY 12226
4. Generator's Phone (518) 485-5038

A. State Manifest Document Number: MA M 691443
B. State Gen ID: King Street
Harrison, NY 10528

5. Transporter 1 Company Name	6. US EPA ID Number	C. State Trans. ID	
Clean Harbors Env Services Inc	MAD039322250		
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone (781 849-1800	
		E. State Trans. ID	

9. Designated Facility Name and Site Address	10. US EPA ID Number	F. Transporter's Phone ( )	
Clean Harbors of Braintree Inc 1 Hill Avenue Braintree, MA 02184	MAD053452637	G. State Facility's ID	NOT REQUIRED
		H. Facility's Phone (781 849-1807	

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE LIQUID, N.O.S. (WASTEWATER), 9, NA3082, III	001	TT	560	G	D039 D040
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above *(include physical state and hazard code.)*
a. c.
b. d.

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
IN EMERGENCY, CALL CHES 1-800-645-8265
WO# NN301454

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
John Thornton for NYSDOT		01 30 01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Joseph Heron JR	Joseph Heron Jr	01 30 01

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)

In case of emergency or spill, immediately call the National Response Center (800) 424-8802.

Form approved OMB No. 2050-0039.
EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Clean Harbors has appropriate permits for & will accept the waste the generator is shipping.
COPY>6: GENERATOR MAILS TO DESTINATION STATE

JOB # NN 301454
DAY & DATE 1/30/01
QUOTE / TASK #
SHIFT TIME
CLIENT LMS Engineers

BILLING ADDRESS
1 Blue Plaza
Red River NY

CleanHarbors
(24 HOUR SERVICE)

P.O. #
T & M ☐
CONTRACT ☐
CHANGE ORDER ☐

JOB LOCATION
King STREET
HARRISON NY

CONTACT:

LABOR:

NAME	TITLE	ST	OT	DT
	SUPERVISOR			
	FOREMAN			
	EQ. OPERATOR			
JOE Heron	EQ. OPERATOR			
	FIELD TECH			
	FIELD TECH			
	FIELD TECH			

JOB DESCRIPTION:
VAC OUT Septic TANK in ground ON SITE 8:30 TO 9:30

JOB/TASK COMPLETED ☐ YES ☐ NO

DISPOSAL:

DESTINATION	AMOUNT	MANIFEST #
LIQUID (BULK)	560 GALS.	MAM 691443
SOLID (BULK)	TONS/YDS.	
LIQUID (DRUMS)	# OF DRUMS 3 AMT. 3 GAL.	
SOLID (DRUMS)	# OF DRUMS AMT. GAL.	

EQUIPMENT:

QTY.	TYPE	FLEET #	# OF HRS	DAILY RATE
	PICK-UP TRUCK			
	VACUUM TRAILER			
	TRACTOR			
1	VACUUM ST. TRUCK	413		
	BOX TRUCK			
	VACTOR			
	COMPRESSOR			
	BACKHOE			
	BOBCAT			
	RACK TRUCK			
	METER TYPE:			
	COMMS PACKAGE			

MATERIAL:

QTY.	DESCRIPTION	QTY.	DESCRIPTION
	SPEEDI DRI		PPE LEVEL:
	DRUM TYPE:		CARTRIDGE TYPE:
	DRUM TYPE:		RESP. TYPE:
	RAIN GEAR		SUITE TYPE:
	POLY SHEETING ROLL	1	GLOVE TYPE: PVC
	POLY BAG ROLL		OVERBOOT TYPE:
	SORBENT PADS BL.		
	SORBENT BOOM EA.		
	SORBENT BOOM BL.		
	SORBENT SWEEP BL.		
	SORBENT SNARE (ON ROPE) BL.		
	ROPE TYPE:		
	DEGREASER TYPE:		
	5 GAL BUCKET		
	DUCT TAPE		
	SSH&SP		
	POLY LINER (ROLL OFF)		

ANALYSIS:

QTY.	TYPE	DESTINATION

SUBCONTRACTORS:

NAME OF COMPANY	DESCRIPTION

Customer: LMS for NYSDOT (Company Name)
By: (Signature)
John Thornton (Print Name)
(Title)
Date: 1-30-01

SIGNATURE: (CLEAN HARBORS REPRESENTATIVE)
Date: 1/30/01

CHI 115 Rev. 11/00

IMPORTANT – PAYMENT TERMS ON BACK

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION NOTIFICATION FORM LDR-1 Manifest No. MAM691443

THE HAZARDOUS WASTES IDENTIFIED ON THE HAZARDOUS WASTE MANIFEST IDENTIFIED ABOVE AND BEARING THE EPA HAZARDOUS WASTE CODES LISTED BELOW ARE RESTRICTED WASTES WHICH ARE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT UNDER THE LAND DISPOSAL RESTRICTIONS, 40 CFR PART 268 AND RCRA SECTION 3004(D). IN ACCORDANCE WITH 40 CFR 268.7(a)(2), THE EPA WASTE CODE, WASTE SUBCATEGORY, AND TREATABILITY GROUPS, AS APPLICABLE, ARE INCLUDED BELOW.

INSTRUCTIONS -- COMPLETE ALL SECTIONS. REFER TO PAGE 3 OF THIS FORM FOR KEY TERMS/DEFINITIONS.
Column 1 - Line Item: Enter the manifest line item number (e.g., 11a) that corresponds to the waste code(s).
Column 2 - Waste Codes/Subcategory: Check off all applicable waste codes. For D001 through D043, also check applicable subcategory; for F001 through F005, check applicable constituents.
Column 3 - Wastewater/Non-wastewater: Check off "WW" for wastewater and "Non-WW" for non-wastewaters.
Column 4 - LDR Handling Code: Circle the appropriate handling code, as follows:

1 = The waste is a characteristic hazardous waste D001, D002, D003, D004-D011, or D018-43 which is intended for treatment/disposal in a CWA system, CWA-equivalent system, or Class I SDWA system. Underlying Hazardous Constituents (UHC's) are NOT required to be identified.

1A = The waste is a characteristic hazardous waste D001 High TOC Ignitable Liquids Subcategory (i.e., greater than or equal to 10% TOC). Pursuant to 40 CFR 268.40, the waste must be treated using organic recovery (RORGS) or combustion (CMBST) technology. UHC's are NOT required to be identified.

2 = The waste is a characteristic hazardous waste D001 (other than High TOC Ignitable Liquids), D002, D003 Explosive, Water Reactive or Other Reactive subcategory, D004-D011, D012-17 non-wastewater, or D018-43 which is intended for treatment/disposal in a non-CWA system, non-CWA-equivalent system, or non-Class I SDWA system located in the United States. All UHC's which are reasonably expected to be present must be identified, except for D001 waste that is intended to be treated using organic recovery (RORGS) or combustion (CMBST) technologies. Identify UHC's by completing Sections I and IV of CHI Form LDR-1 Addendum and attach completed Addendum to this form.

3 = The waste is a characteristic (i.e., D-code) or listed (i.e., F-, K-, U-, or P-code) hazardous waste which is intended for export and treatment/disposal at a facility located outside the United States. LDR treatment standards do not apply to hazardous waste treated/disposed in a foreign country, and per USEPA guidance, the identification of UHC's (if applicable) is not required for hazardous waste that is intended to be exported. Note however that if the exported waste is subsequently returned for treatment/disposal in the United States, all applicable LDR regulations would apply and a revised LDR notification would be required.

4 = The waste meets the definition of hazardous debris pursuant to 40 CFR 268.2(h) and is intended for treatment/disposal in compliance with the alternate debris treatment technologies of 40 CFR 268.45. In accordance with the requirements of 40 CFR 268.7(a)(2): the contaminants subject to treatment (CSTT's) must be identified as part of this notification. Identify CSTT's by completing Sections III and IV of CHI Form LDR-1 Addendum and attach completed Addendum to this form. These constituents are being treated to comply with 40 CFR 268.45.

5 = The waste is a characteristic waste D003 Reactive Sulfide, Reactive Cyanide, or Unexploded Ordnance subcategory, a characteristic waste D012-17 wastewater, or a listed (i.e., F-, K-, U-, or P-code) hazardous waste. UHC's are NOT required to be identified.

6 = The waste is a lab pack that is intended for incineration using the alternative lab pack treatment standard under 40 CFR 268.42(c). UHC's are NOT required to be identified; however, the generator must complete and attach the lab pack certification statement on CHI Form LDR-LP. Note that in accordance with 40 CFR Part 268 Appendix IV, lab packs which contain waste codes D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151 are not eligible for alternative lab pack treatment standard.

*** NOTE: IF THE WASTE IS A SOIL CONTAMINATED WITH A LISTED OR CHARACTERISTIC WASTE AND THE GENERATOR WANTS TO USE THE ALTERNATE TREATMENT STANDARD FOR SOILS, CONTACT CORPORATE COMPLIANCE FOR THE APPROPRIATE LDR NOTIFICATION FORM.

SECTION I. CHARACTERISTIC WASTES D001 THROUGH D043

COLUMN 1: LINE ITEM SEE MANIFEST		COLUMN 2: WASTE CODE / SUBCATEGORY		COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	[ ]	D001	Ignitables, except High TOC subcategory	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ]	D001	High TOC Ignitable Liquids Subcategory (Greater than or equal to 10% TOC)	[ ] Non-WW only	1A 3 6
_____	[ ]	D002	Corrosives	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ]	D003			
	[ ]		Reactive Sulfide, per 261.23(a)(5)	[ ] WW [ ] Non-WW	1 3 4 5 6
	[ ]		Reactive Cyanide, per 261.23(a)(5)	[ ] WW [ ] Non-WW	1 3 4 5 6
	[ ]		Explosive, per 261.23(a)(6), (7) & (8)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]		Water Reactive, per 261.23(a)(2), (3) & (4)	[ ] Non-WW only	1 2 3 4 6
	[ ]		Other Reactive, per 261.23(a)(1)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]		Unexploded Ordnance, Emergency Response	[ ] WW [ ] Non-WW	1 3 4 5 6
_____	[ ]	D004	Arsenic	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ]	D005	Barium	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ]	D006			
	[ ]		Cadmium	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]		Cadmium Containing Batteries	[ ] Non-WW only	2 3 6
_____	[ ]	D007	Chromium	[ ] WW [ ] Non-WW	1 2 3 4 6
_____	[ ]	D008			
	[ ]		Lead	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]		Lead Acid Batteries	[ ] Non-WW only	2 3 6

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION NOTIFICATION FORM LDR-1

Manifest No. MAM691443

SECTION I. CHARACTERISTIC WASTES D001-43 (CONTINUED)

COLUMN 1: LINE ITEM SEE MANIFEST		COLUMN 2: WASTE CODE / NAME	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
	[ ]	D009		
	[ ]	Low Mercury, less than 260 mg/kg Mercury	[ ] WW [ ] Non-WW	1 2 3 4
	[ ]	High Mercury Organic Subcategory	[ ] Non-WW only	2 3 4
	[ ]	High Mercury Inorganic Subcategory	[ ] Non-WW only	2 3 4
	[ ]	D010 Selenium	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D011 Silver	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D012 Endrin	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D013 Lindane	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D014 Methoxychlor	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D015 Toxaphene	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D016 2,4-D	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D017 2,4,5-TP (Silvex)	[ ] WW [ ] Non-WW	2 3 4 5 6
	[ ]	D018 Benzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D019 Carbon tetrachloride	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D020 Chlordane	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D021 Chlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D022 Chloroform	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D023 o-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D024 m-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D025 p-Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D026 Cresol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D027 1,4-Dichlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D028 1,2-Dichloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D029 1,1-Dichloroethylene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D030 2,4-Dinitrotoluene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D031 Heptachlor (and its epoxide)	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D032 Hexachlorobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D033 Hexachlorobutadiene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D034 Hexachloroethane	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D035 Methyl ethyl ketone	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D036 Nitrobenzene	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D037 Pentachlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D038 Pyridine	[ ] WW [ ] Non-WW	1 2 3 4 6
11a	[X]	D039 Tetrachloroethylene	[X] WW [ ] Non-WW	(1) 2 3 4 6
11a	[X]	D040 Trichloroethylene	[X] WW [ ] Non-WW	(1) 2 3 4 6
	[ ]	D041 2,4,5-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D042 2,4,6-Trichlorophenol	[ ] WW [ ] Non-WW	1 2 3 4 6
	[ ]	D043 Vinyl Chloride	[ ] WW [ ] Non-WW	1 2 3 4 6

SECTION II. SPENT SOLVENT WASTES F001 THROUGH F005

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / CONSTITUENTS	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
	[ ] F001 [ ] F002 [ ] F003 [ ] F004 [ ] F005	[ ] WW [ ] Non-WW	3 4 5 6

[ ]	1. ALL F001-F005	[ ]	12. Cyclohexanone	[ ]	25. Pyridine
[ ]	2. Acetone	[ ]	13. o-Dichlorobenzene	[ ]	26. Tetrachloroethylene
[ ]	3. Benzene	[ ]	14. 2-Ethoxyethanol (F005 only)	[ ]	27. Toluene
[ ]	4. n-Butyl alcohol	[ ]	15. Ethyl acetate	[ ]	28. 1,1,1-Trichloroethane
[ ]	5. Carbon disulfide	[ ]	16. Ethyl benzene	[ ]	29. 1,1,2-Trichloroethane
[ ]	6. Carbon tetrachloride	[ ]	17. Ethyl ether	[ ]	30. Trichloroethylene
[ ]	7. Chlorobenzene	[ ]	18. Isobutyl alcohol	[ ]	31. 1,1,2-Trichloro-1,2,2-trifluoroethane
[ ]	8. o-Cresol	[ ]	19. Methanol	[ ]	32. Trichloromonofluoromethane
[ ]	9. m-Cresol (difficult to distinguish from p-cresol)	[ ]	20. Methylene chloride	[ ]	33. Xylene - mixed isomers (sum of o-, m-, and p-xylene)
[ ]	10. p-Cresol (difficult to distinguish from m-cresol)	[ ]	21. Methyl ethyl ketone		
[ ]	11. Cresol - mixed isomers (sum of o-, m- and p-cresol)	[ ]	22. Methyl isobutyl ketone		
		[ ]	23. Nitrobenzene		
		[ ]	24. 2-Nitropropane (F005 only)		

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
LAND DISPOSAL RESTRICTION NOTIFICATION FORM LDR-1

Manifest No. MAM691443

SECTION III. CALIFORNIA LIST WASTES

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	Hazardous waste containing one or more of the following California List constituents:	[ ] WW [ ] Non-WW	1 2 3 4 5 6

[ ] ALL CALIFORNIA LIST CONSTITUENTS
[ ] Liquids with nickel greater than or equal to 134 mg/l
[ ] Liquids with thallium greater than or equal to 130 mg/l
[ ] Liquids with PCB's > or = 50 ppm
[ ] Waste containing HOC's > or = 1,000 mg/kg

SECTION IV. OTHER LISTED WASTES (F006-12, F019-F028, F037-38, F039, K-, U-, AND P-CODES)

COLUMN 1: LINE ITEM SEE MANIFEST	COLUMN 2: WASTE CODE / SUBCATEGORY	COLUMN 3: WASTEWATER/ NON-WASTEWATER	COLUMN 4: HANDLING CODE
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6
_____	_____	[ ] WW [ ] Non-WW	3 4 5 6

[ ] CHECK HERE IF ADDITIONAL LISTED WASTE CODES ARE PRESENT. COMPLETE AND ATTACH LDR-1 CONTINUATION SHEET.
[ ] CHECK HERE IF WASTE CODE F039 (MULTISOURCE LEACHATE) IS PRESENT. IDENTIFY F039 CONSTITUENTS BY COMPLETING SECTIONS II AND IV OF CHI FORM LDR-1 ADDENDUM AND ATTACH COMPLETED ADDENDUM TO THIS FORM.

SECTION V. CONTACT NAME AND DATE

Print Name: _____ Date: _____

KEY TERMS/DEFINITIONS

CLASS I SDWA SYSTEM means a Class I deep well facility regulated under the Safe Drinking Water Act (SDWA).

CWA SYSTEM means a centralized wastewater treatment facility discharging under a Clean Water Act (CWA) permit. For example, a CWA facility would treat organic or inorganic aqueous wastes and discharge the treated effluent to the local sewer system. Examples of CWA treatment systems owned and operated by Clean Harbors include the wastewater treatment operations at Baltimore (including the CES system), Bristol, Chicago, Cincinnati and Cleveland.

CWA-EQUIVALENT SYSTEM means a "zero discharge system" that engages in "CWA-equivalent" treatment before land disposal. Zero-discharge facilities treat hazardous wastes using "CWA-equivalent" treatment methods, but do not discharge the treatment effluent to a sewer or water body (e.g., spray irrigation land farm). "CWA-equivalent" treatment methods means biological treatment for organics, alkaline chlorination, or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

HIGH TOC IGNITABLE LIQUIDS SUBCATEGORY means an ignitable liquid hazardous waste (waste code D001) which contains greater than or equal to 10% total organic carbon (TOC). Pursuant to 40 CFR 268.40, such wastes must be treated using organic recovery (RORGS) or combustion (CMBST) technology. Examples of RORGS technologies include the CES unit at Clean Harbors of Baltimore. Examples of CMBST technologies include hazardous waste fuel blending and subsequent reuse at a cement kiln, or destruction at a RCRA incinerator.

WASTEWATERS are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS). [See 40 CFR 268.2(f)]

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. PAGE 1 OF 3
WASTE MATERIAL PROFILE SHEET
PROFILE NUMBER: CH9909

A. GENERAL INFORMATION
GENERATOR EPA ID# CALLSTATEDEP
GENERATOR CODE (Assigned by Clean Harbors) NEW757 GENERATOR NAME: New York State Of
ADDRESS 1220 Washington Avenue Buildin CITY Albany, NY 12226
GENERATOR TECHNICAL CONTACT: Greg Menard PHONE: (518)457-0191
CUSTOMER CODE (Assigned by Clean Harbors) LM0106 CUSTOMER NAME: LMS Engineers
ADDRESS 1 Blue Hill Plaza CITY Pearl River, NY 10965

B. WASTE DESCRIPTION
COMMON NAME OF WASTE: SEPTIC WASTEWATER
PROCESS GENERATING WASTE: CLEANING MAINTENANCE GARAGE
SOURCE OF WASTE: PLANNED SITE REMEDIATION
OTHER PROCESS INFORMATION:
CLEANING

C. PHYSICAL PROPERTIES (at 25°C or 77°F)

PHYSICAL STATE	NUMBER OF PHASES/LAYERS	VISCOSITY(If liquid present)	COLOR
[ ]SOLID WITHOUT FREE LIQUID [ ]POWDER [ ]MONOLITHIC SOLID [ ]LIQUID WITH NO SOLIDS [X]LIQUID/SOLID MIXTURE %FREE LIQUID 90-95 %SETTLED SOLID1-5 %TOTAL SUSPENDED SOLID_____ [ ]GAS/AEROSOL	[X]1 [ ]2 [ ]3 % BY VOLUME (APPROX) TOP 0 MID 0 BOT 0	[X]LOW (e.g. WATER) [ ]MEDIUM (e.g. MOTOR OIL) [ ]HIGH (e.g. MOLASSES)	VARIES

ODOR	BOILING POINT	MELTING POINT
No odor present	[ ]<= 100°F [X]> 100°F	[ ]< 140°F [ ]140-200°F [X]> 200°F

FLASH POINT	pH	SPECIFIC GRAVITY	TOTAL ORGANIC CARBON	BTU/LB
[ ]<73°F	[ ]<=2	[ ]<0.8	[ ]<1%	[X]<2,000
[ ]73-100°F	[ ]2.1-6.9	[ ]0.8-1.0	[ ]1-9%	[ ]2,000-5,000
[ ]101-140°F	[X]7(neutral)	[X]1.0	[ ]>10%	[ ]5,000-10,000
[ ]141-200°F	[ ]7.1-12.4	[ ]1.0-1.2	N/A	[ ]>10,000
[X]>200°F	[ ]>=12.5	[ ]>1.2		

VAPOR PRESSURE 0 mm Hg

D. COMPOSITION

BLEACH	0.50-1.00	%
SEWAGE	0.50-1.00	%
WATER	95.00-99.00	%

[ ]Check if MSDS attached.

E. CONSTITUENTS - Attach any available analysis. Enter values or ranges where known. For TCLP values, BRL signifies below regulatory level. None, unknown, and present are also acceptable answers.

Are these values based on [ ]Knowledge or [X]Testing?

WASTE COMPOUND NO		REGULATORY LEVEL(PPM)	CONCENTRATION (PPM) REPORTED AS [X]TCLP	[ ]TOTAL
RCRA REGULATED METALS				
D004	ARSENIC	5.000	BRL	
D005	BARIUM	100.000	BRL	
D006	CADMIUM	1.000	BRL	
D007	CHROMIUM	5.000	BRL	
D007	CHROMIUM +6	0.000	BRL	
D008	LEAD	5.000	BRL	
D009	MERCURY	0.200	BRL	
D010	SELENIUM	1.000	BRL	
D011	SILVER	5.000	BRL	

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. PAGE 2 OF 3
WASTE MATERIAL PROFILE SHEET
PROFILE NUMBER: CH9909

E. CONSTITUENTS

WASTE COMPOUND NO		REGULATORY LEVEL (PPM)		CONCENTRATION (PPM) REPORTED AS [X] TCLP	[X] TOTAL
VOLATILE ORGANIC COMPOUNDS					
D029	1,1-DICHLOROETHYLENE	0.700		BRL	
D028	1,2-DICHLOROETHANE	0.500		BRL	
D018	BENZENE	0.500		BRL	
D019	CARBON TETRACHLORIDE	0.500		BRL	
D021	CHLOROBENZENE	100.000		BRL	
D022	CHLOROFORM	6.000		BRL	
D035	METHYL ETHYL KETONE	200.000		BRL	
D039	TETRACHLOROETHYLENE	0.700	PPM	>2.700	0.000-0.000
D040	TRICHLOROETHYLENE	0.500	PPM	>0.509	0.000-0.000
D043	VINYL CHLORIDE	0.200		BRL	
SEMI-VOLATILE ORGANIC COMPOUNDS				[X] TCLP	[ ] TOTAL
D023	O-CRESOL	200.000		BRL	
D027	1,4-DICHLOROBENZENE	7.500		BRL	
D041	2,4,5-TRICHLOROPHENOL	400.000		BRL	
D042	2,4,6-TRICHLOROPHENOL	2.000		BRL	
D030	2,4-DINITROTOLUENE	0.130		BRL	
D026	CRESOL (TOTAL)	200.000		BRL	
D032	HEXACHLOROBENZENE	0.130		BRL	
D033	HEXACHLOROBUTADIENE	0.500		BRL	
D034	HEXACHLOROETHANE	3.000		BRL	
D024	M-CRESOL	200.000		BRL	
D036	NITROBENZENE	2.000		BRL	
D025	P-CRESOL	200.000		BRL	
D037	PENTACHLOROPHENOL	100.000		BRL	
D038	PYRIDINE	5.000		BRL	
PESTICIDES AND HERBICIDES				[X] TCLP	[ ] TOTAL
D017	2,4,5-TP (SILVEX)	1.000		BRL	
D016	2,4-D	10.000		BRL	
D020	CHLORDANE	0.030		BRL	
D012	ENDRIN	0.020		BRL	
D031	HEPTACHLOR	0.008		BRL	
D013	LINDANE	0.400		BRL	
D014	METHOXYCHLOR	10.000		BRL	
D015	TOXAPHENE	0.500		BRL	

OTHER METALS

ALUMINUM	0.000	AMENABLE CYANI	0.000
AMMONIA	0.000	ANTIMONY	0.000
BERYLLIUM	0.000	BROMINE	0.000
CALCIUM	0.000	CHLORINE	0.000
COBALT	0.000	COPPER	0.000
CYANIDE REACTI	0.000	FLUORINE	0.000
IODINE	0.000	IRON	0.000
LITHIUM	0.000	MAGNESIUM	0.000
MOLYBDENUM	0.000	NICKEL	0.000
PHOSPHOROUS	0.000	POTASSIUM	0.000
REACTIVE SULFI	0.000	SILICON	0.000
SODIUM	0.000	SULFUR	0.000
THALLIUM	0.000	TIN	0.000
TITANIUM	0.000	TOTAL CYANIDE	0.000
VANADIUM	0.000	ZINC	0.000

OTHER HAZARDS	YES		YES		YES
WATER REACTIVE	[ ]	PESTICIDE	[ ]	SHOCK SENSITIVE	[ ]
RADIOACTIVE	[ ]	HERBICIDE	[ ]	THERMALLY SENSITIVE	[ ]
DIOXIN	[ ]	EXPLOSIVE	[ ]	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT	[ ]
OSHA REGULATED CARCINOGENS	[ ]	SPONTANEOUSLY IGNITES WITH AIR	[ ]	ASBESTOS	[ ]
				DEA REGULATED SUBST	[ ]
				OXIDIZER	[ ]
				REDUCING AGENT	[ ]
				NONE OF THE ABOVE	[X]

IF PCB'S ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761? [ ]YES [X]NO
DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED? [ ]YES [X]NO
IF YES, EXPLAIN: _____

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. PAGE 3 OF 3
WASTE MATERIAL PROFILE SHEET
PROFILE NUMBER: CH9909

F. REGULATORY STATUS

Y N
[X] [ ] USEPA HAZARDOUS WASTE? D039,D040

[X] [ ] STATE HAZARDOUS WASTE?
LIST ANY WASTE CODES WHICH MAY VARY FROM SHIPMENT TO SHIPMENT: _____

WILL THE DECISION TO VARY THESE WST CODES BE BASED ON [ ] KNOWLEDGE OR [ ] TESTING
DESCRIBE BASIS OF KNOWLEDGE:
[ ] [X] IS WASTE PROHIBITED FROM LAND DISPOSAL W/O FURTHER TREATMENT PER 40 CFR PART 268?
THIS WASTE IS A [ ] WASTEWATER [X] NON-WASTEWATER PER USEPA DEFINITION IN 40 CFR 268.2?
[ ] [X] IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D011, D012-D017 NON-WASTEWATERS, OR D018-D043 APPLY, ARE THERE ANY UNDERLYING HAZARDOUS CONSTITUENTS (UHC'S) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?
[ ] [X] DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?
[ ] [X] IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?
IF YES SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401: _____
[ ] [X] IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES?
[ ] [X] DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >= 500 PPM?
[ ] [X] DOES THIS WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3 KPa (.044psia)?
[ ] [X] DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IS IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2psia)?

G. D.O.T. INFORMATION
D.O.T. SHIPPING NAME: HAZARDOUS WASTE LIQUID, N.O.S. (WASTEWATER)
D.O.T. HAZARD CLASS OR DIVISION: 9
UN/NA #: NA3082 PACKING GROUP: III HAZARD ZONE: _____ RQ: _____
WILL THIS SHIPPING NAME VARY? [ ] Y [X] N
IF YES, WILL ASSIGNMENT OF PROPER SHIPPING NAME BE BASED ON [ ] KNOWLEDGE OR [ ] TESTING?
IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE: _____

H. TRANSPORTATION REQUIREMENTS
GENERATION FREQUENCY: [ ] ONE TIME [ ] BATCH [ ] CONTINUOUS
ESTIMATED SHIPMENT FREQUENCY: [ ] WEEKLY [ ] SEMI-MONTHLY [ ] MONTHLY [ ] QUARTERLY
[ ] YEARLY [X] OTHER ONE
ESTIMATED SHIPMENT QUANTITY: 800.00-1500.00
[X] BULK LIQUID [ ] BULK SOLID [ ] DRUM(SIZES) _____ [ ] OTHER(SPECIFY) _____
STORAGE CAPACITY: 3000
VEHICLE TYPE: VAC
COMPATIBLE STORAGE MATERIAL: STEEL

I. SAMPLE STATUS
A REPRESENTATIVE SAMPLE HAS BEEN SUPPLIED [ ] YES [X] NO
SAMPLED BY _____ DATE SAMPLED _____

J. SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS

K. BIENNIAL/ANNUAL REPORTING INFORMATION.
SIC CODE 8100 SOURCE CODE A59 FORM CODE B219 ORIGIN CODE 2

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors Environmental Services, Inc. (CHESI) discovers a discrepancy during the approval process, Generator grants CHESI the authority to amend the profile, as CHESI deems necessary, to reflect the discrepancy.

Gregory Menard C.E.II 1/30/01
AUTHORIZED SIGNATURE NAME (PRINT) TITLE 25-Jan-2001 DATE

FOR CLEAN HARBORS USE ONLY

CHI REPRESENTATIVE COMPLETING PROFILE: Alice E Clark