SITE INVESTIGATION RESULTS REPORT

VOLUME V OF VI

FORMER THYPIN STEEL, INC. FACILITY
MANORHAVEN, NEW YORK

November 16, 2001

Prepared for:

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Prepared by:

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ROUX

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Data Usibility Summary Report

Data Validation Services

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August 17, 2001

Scott Glash
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1377 Motor Parkway
Islandia, NY 11788

RE: **D**ata **U**sability **S**ummary **R**eport for Former Thypin Site Data Packages
Severn Trent Laboratories-CT SDG Nos. A2404, B2404, A2407, A2633, A2736, A2987, A0483, A0819, A0853, A0915, A0927, A0942, A0972, A0999, A1000, A1009, A1052, A1056, A1072, A1064, A1099, A1127, A1499, B1499, C1499, D1499, E1499, A1593, A1629, A1738, A1743, A1757, and A1829

Dear Mr. Glash:

Review has been completed for the data packages generated by Severn Trent Laboratories (STL), pertaining to soil samples collected 10/19/00 through 7/19/01 at the Former Thypin Steel, Inc. site in Manorhaven, NY. Aqueous and soil samples were analyzed for combinations of TCL VOA, chlorinated VOA, TCL BNA or BN, PCBs, metals (total and filtered), iron and chromium, TCLP volatiles, TCLP semivolatiles, TCLP PCB, TCLP metals, mercury, hexavalent chromium, cyanide, DRO, TOC, TDS, chloride, or ten natural attenuation parameters. Field blanks and trip blanks, and matrix spikes were also processed. Methodologies utilized are those of the USEPA SW846.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the summary form information, with limited review of sample raw data, and some review of associated QC raw data. Full validation has not been performed. However, the reported summary tables have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs

Only those items listed above which show deficiency are discussed within the text of this narrative All other items were determined to be acceptable for the DUSR level review.

In summary, most sample analyte values/reporting limits are usable, but many are qualified as estimated ("J" qualifier) due to typical matrix or processing effects. One sample submitted for TCLP analysis has no usable volatile analyte data due to temperature at sample receipt. There are no usable benzoic acid results for the semivolatiles. These issues, as well as others of interest, are noted in the narrative below.

Copies of the laboratory case narratives and analytical requirement summaries are attached to this text, and should be reviewed in conjunction with this report. Some of the analytical requirement summaries do not accurately reflect required analyses. Qualifications and edits to values which are noted below have been provided to the client.

General/Sample Receipt

Discrepancies in custody requirements and bottle identifications were resolved at sample receipt. Writeovers and crossouts on the custodies should have been initialed and dated. One date entry (COC#05767Y) was incorrect.

The sample TP16/GSO, submitted for TCLP VOA, TCLP SVOA, TCLP Metals, DRO, and PCB in soil, was received at elevated temperature (17 degrees C) after overnight shipment. Appropriate qualifications are discussed in the analytical sections below.

Samples submitted with the "TP6" prefix on the custodies were noted on the client tables as "TP16...".

Field Duplicates

Field duplicates correlations were generally within validation guidelines. They were evaluated for the full analytes list for groundwater samples MW-33D, MW-33I, and MW-2, and for BNA and total and filtered metals on aqueous sample SB-74/31-33, and were acceptable. The correlation for volatiles on aqueous sample SB-73/11-13 showed on outlier (bromoform was detected in one, but not the other).

Soil sample correlations of TPH on SB-5/20-22 and BNA on SB-8/6-8 were acceptable. The duplicates for soil sample SB-28/0-2 showed values within range for chlorinated volatiles and cyanide, but elevated correlations for mercury (100%RPD) and lead (114%RPD). Results for those two analytes in that sample and its duplicate are therefore qualified estimated ("J"). Volatile correlations for Surface#10 were acceptable, but those for selenium (>2X+-CRDL), mercury (>2X+-CRDL), chromium (107%RPD), copper (134%RPD), and iron (1135RPD) indicate that the results for those five elements in the sample Surface#10 and its duplicate be qualified estimated ("J").

TCL VOA or Chlorinated Volatile Analyses by EPA 8260B

The laboratory reported detections for some samples at concentrations that fall below the Instrument Detection Limits (IDLs) reported by the laboratory, and may reflect instrument noise. All values below 1 ppb at the instrument level are below the reported IDLs, and should be edited to

nondetection. For the purposes of this DUSR, the laboratory was not contacted for resubmission of report forms to reflect the edits.

The reporting limits for vinyl chloride and benzene in the groundwater samples collected in June and July were not supported by the raw data (too low, below IDL). The limits should be raised to reflect 5 ug/L.

Some of the sample analyses from October 2000 were resubmitted by the laboratory to correct the target analyte lists reported. Only the resubmitted data results are validated.

Sample TP33/MB was received at the laboratory the day after collection at an elevated temperature of 15 degrees C. It had been packed on ice, and was processed only ten hours after laboratory receipt. Because the sample was not at an elevated temperature for a prolonged timeframe, and because the analysis method requires that samples be warmed to ambient temperature just prior to analysis (indicating that warming does not necessitate losses), no serious losses of target analytes are anticipated. Results for that sample should be qualified estimated ("J" and "UJ"), with a possible low bias.

The following samples exhibited matrix effect on surrogate and/or internal standard recovery, and all volatile reported detections and reporting limits are considered estimated ("J" and "UJ"), with a possible low bias: Surface #4, Surface #5, Surface #6, Surface #8, Surface #11, Surface #12, and TP23/MHPN. The initial analysis results are preferred over the reanalyses.

The reanalysis results for TP31/SS should be used, and results for analytes associated with internal standard d5chlorobenzene are qualified estimated.

Results for detected analytes in TP-15 CRADLE 2 BOT, TP-12 CLOTH, and TP16/PET are qualified estimated due to elevated surrogate recoveries. The initial analyses should be used.

Results for detected analytes and those associated with internal standard d5chlorobenzene in TP16-3WP, TP23/MHPW, and GS-2 soil are qualified estimated due to low internal standard and elevated surrogate recoveries. The reanalysis should be used.

The initial analysis results for SB35/2-4 can be used without qualification (a surrogate was one percentage point low; there is no significant effect on the usability of the data). Similarly, the reanalysis of GS-1 can be used without qualification (one surrogate one percentage point high).

Due to copresence in the associated blanks, detected results for methylene chloride and acetone in the project samples are to be considered contamination, and results edited to nondetection. The exception are the acetone result for TP31/SS, and the acetone and methylene choride results in ST-1, which are above the action level, (one of which is qualified estimated due to response above the calibrated level).

Detected results for carbon disulfide in samples in SDG A0483 and TP31/SS, and detected results for ketones in samples in SDG A0853, are also edited to nondetection due to presence in associated field or method blanks. Similarly, detected result for 2-butanone in LP-C is so edited.

Matrix spikes of MW26, MW-23, MW31I, and MW27 showed acceptable accuracy and precision for the target analytes. Those for SB28/0-2, TP15/6-8C1, and MW33I, and some of the associated QC checks showed generally acceptable recoveries, with a few showing elevated recoveries for nondetected analytes, or slightly low recoveries not affecting sample reported results.

Matrix spikes of Surface #10 showed no recovery for vinyl acetate and the result for this analyte in the sample itself is rejected ("R"), and not usable.

Matrix spikes of SB18/8-10 showed very poor recoveries (<10%) for vinyl acetate and 1,1,2,2-tetrachloroethane, and results for those two analytes in the sample itself are rejected ("R"),and not usable.

Matrix spikes of MW25 showed four outlying recoveries not of great concern, but the duplicate correlations of about 20 analytes were elevated. This variance is not reflected in the surrogate recoveries of the spikes, and is therefore likely a function of the spiking procedure. Sample results are not affected.

Vinyl acetate results in the samples in SDG A1000 are rejected "R" due to lack of recovery in the associated QC check standared.

Carbon tetrachloride results in SB36/10-12 and SB37/10-12 are qualified estimated due to low recovery (20%) in the associated QC check standard. Acetone results in TP16/PET, TP16/12-13, TP16-2/CLAY PIPE are qualified estimated due to low QC check recovery (55%).

Due to poor responses of 2-hexanone in most low concentration initial calibration standards, reporting limits for that analyte in the soil samples in the project should be raised to be 20 ug/kg (prior to dilution factors or solids corrections).

Chloromethane results in SB35/2-4, chloromethane and tetrachloroethene results in SB36/10-12 and SB37/10-12, and 2-hexanone results in TP35/CS, are qualified estimated due to continuing calibration standard results (29%D to 82%D).

Results for carbon disulfide in samples TP6-PE NORTH, TB6-PE BOTTOM, TP6-PIPE NORTH, and SB67/0-2 are estimated due to low (36%D and 38%D) results in the associated calibration standards.

Results for acetone and 2-butanone in MW25, MW2, MW24, and REP1 are qualified estimated due to associated continuing calibration standard responses.

Results for the ketones in MW31D are qualified estimated due to associated continuing calibration standard responses.

Results for acetone and 2-hexanone in the trip blank of 12/12/00 are qualified estimated due to associated initial calibration standard responses.

Tentatively Identified Compounds (TICs) reported with the "B" flag or as "siloxanes" should be disregarded as sample components. Not all TICs present in associated blanks were properly flagged by the laboratory as "B" in the samples. Full validation would require additional laboratory submission and evaluation on this issue.

TCL BNA or BN Analyses by EPA 8270C

The laboratory reported detections for some samples at concentrations that fall below the Instrument Detection Limits (IDLs) reported by the laboratory, and may reflect instrument noise. All values below 1 ppb at the instrument level are below the reported IDLs, and should be edited to nondetection. For the purposes of this DUSR, the laboratory was not contacted for resubmissions.

Some of the project samples exhibited outlying responses for one or more internal standards. This matrix effect was verified by reanalysis. The samples exhibiting a matrix effect, and subsequent qualification of reported results (which are noted on the enclosed client results tables) are the following:

TP16-4CB use initial analysis, and all associated with d12-chrysene and d12-perylene are qualified estimated. Some of those are of borderline usability due to matrix interferences. There may be a significant bias to the reported results.

TP16-3WP use the reanalysis and all associated with d12-chrysene are qualified estimated.

TP19-2 use the reanalysis without qualification

TP23/MHPW results for those associated with d12chrysene are qualified estimated

TP31/SS results for those associated with d10phenanthrene, d12chrysene, and d12perylene are qualified estimated

LP-EB use reanalysis, and qualify estimated those associated with d10acenaphthene and d10phenanthrene

LP-WB use reanalysis, and qualify estimated those associated with d10phenanthrene

LP-C use initial analysis only, and qualify estimated those associated with d12chrysene

Some of the surface soil samples in SDG A1743 showed little or no recovery for acid surrogates, and were reextracted beyond holding time. However, only base/neutral analytes were requested for these samples. The initial extraction results can be used without qualification.

Results for analytes initially reported with the "E" qualifier should be derived from the dilution analysis of the sample. All other results can be used from the initial analysis.

Sample MW-26R produced elevated surrogate recoveries on the initial extraction. The reextraction was performed beyond the allowable holding time. The initial extract results can be used without qualification because the sample showed no detections.

Due to copresence in the associated method and/or field blanks, detections of di-n-butylphthalate and bis(2-ethylhexyl)phthalate in the project samples are considered external contamination, and results are to be edited to nondetection. The exception are the detections of the latter in SB74/31-33, TP16-3WP, TP23/MHPN, TP23/MHPW, DUPLICATE, and TP23/MHPS, which are above validation action levels.

Matrix spikes of SB-9/6-8, MW-26, MW25, MW33I, and batch QC showed acceptable accuracy and precision, or with the exceptions of elevated recoveries for nondetected analytes, or slightly low recoveries or elevated correlations not affecting sample reported results.

QC check samples consistently showed little or no recovery for benzoic acid, indicating that the results reporting nondetection for this analyte be rejected ("R") in the project samples (all matrices). Detected results are estimated ("J").

Pentachlorophenol showed poor recoveries in some QC spikes, indicating that the results for this analyte in samples in SDG A2404 be rejected ("R"), and in samples in SDG A2407 be estimated ("J")..

The QC check standard associated with the field blanks in SDG A2407 showed no recovery for pentachlorophenol, and results for that analyte in those blanks are rejected. Sample reported results are unaffected.

Due to low recovery (65%) in the associated QC check standards, the results for 2,4,5-trichlorophenol in the groundwater samples collected in June and July are qualified estimated. Additionally, the results for 2,4dinitrophenol in MW30/S, MW22 and REP2 are similarly qualified (48% and 50% recovery).

Other QC checks showed generally acceptable recoveries, with a few showing elevated recoveries for nondetected analytes, or slightly low recoveries not affecting sample reported results.

Due to poor spectral quality, the results for phenol in TP-19-2 and soil GS-2 are edited to nondetection.

The result for 4-methylphenol in TP16-3WP is qualified as tentative in identification and estimated in value ("NJ"), due to spectral quality/interferences.

Due to poor responses of pentachlorophenol and 2,4-dinitrophenol in the associated low concentration initial calibration standards, reporting limits for those analytes in the aqueous samples in SDG A0999 are raised to be 50 ug/L.

Results for benzyl alcohol are qualified estimated in all samples in SDG A0927 except TP15/8-10C2 and TP23/GSP due to low continuing calibration standard response (47%D). Similarly, the results for hexachlorocyclopentadiene in samples SB71/10-12, SB72/10-12, TP31/SS, SB73/10-12, TP23/MHPW, TP23/MHPS, samples in SDGs A1056 and A1743, MW21, MW1, MW23, MW35I, MW35S, MW30I, MW26D, MW31I, are also qualified as estimated (38%RSD to 43%D).

TICs reported with the "A" (and/or identified as "aldol condensates") and/or "B" flag should be disregarded as sample components.

PCBs by EPA 8082

Reporting limits reported for Aroclors 1254 and 1260 in the groundwater samples collected in June and July were below the IDLs, and should be edited as follows:
Aroclor 1254 reporting limit to 0.033 ug/L
Aroclor 1260 reporting limit to 0.056 ug/L
All detections reported below these levels may be system background, and should be edited to nondetection at those limits noted above.

The field duplicate REP3 showed excessive background prohibiting evaluation of all mixtures **except** Aroclor 1260, and results for those are rejected ("R"). The duplicated sample did not show the same background, and project results are therefore not adversely affected.

Due to poor response at background level, the reported detections of Aroclor 1260 in MW27 and MW28 are edited to nondetection at the IDL.

Matrix spikes of 1016 and/or 1260 in MW25, MW33I, MW31I, showed acceptable accuracy and precision. Matrix spiked blanks of Aroclors 1016, 1242, and/or 1260 were acceptable.

Sample TP16/BWP reported detections of multiple Aroclor mixtures. There may be an inherent

high bias in reported values for these detections, due to cross-contribution of common congeners. The Aroclor 1260 result for this sample is qualified estimated due to poor dual column correlation (148%D).

TAL Metals

Results for the soil samples GS-1 and GS-2 were corrected and resubmitted on request, and are fivefold higher than originally reported. Please see the attached revised forms, which should replace those initially provided.

The zinc value reported for TP23/GSP was from a determination where the response exceeded calibration range. The result should be edited to 11,036 mg/kg (as calculated from the serial dilution analysis).

Matrix spikes and duplicates of MW-23, SB73/11-13-filtrate, TP23/MHPN, MW1, MW31I, MW35 (mercury only), and batch QC produced accuracy and precision determinations within validation guidelines.

Silver produced a recovery below the allowable lower soil limit in an LCS in SDGs A0853 and A1064. Silver results for the associated samples are therefore estimated, possibly biased low: TP16/PET, TP16/12-13, TP16-2/CLAY PIPE, TP16-3WP, TP16-4CB, LP-C and ST-1.

Aqueous LCSs showed consistently low recoveries for silver (26%, 32%). Therefore, results for that element in samples in SDG A0999, aqueous samples in SDG A1056, and the groundwaters collected in June and July (SDGs A1499 through A1829). and the field blank of 4/24/01, are considered estimated, possibly biased low. There is no minimum recovery requirement for silver in aqueous LCSs.

The matrix spike recoveries and duplicate correlations for the surface soil samples collected 12/21/00 produced numerous outliers and resultant qualifications. Some of the duplicate correlations fell well outside recommended criteria. The data package did not flag all outliers present. Reported results for the following elements in all samples in SDG A2987 (Surface #1 through #12 and REPLICATE) are to be qualified estimated:

Element	Outlying Recovery	Outlying Duplicate Correlation
antimony		>200%RPD (values 1.4 and 2665 ppm)
arsenic		187
cadmium	68%	
chromium	-68	113
copper		128
lead		<200 (values 75 and 13,400 ppm)
manganese	53	
mercury	482	
nickel	50	113
zinc	3	

The following additional recoveries or correlations were observed, indicating the denoted qualification of reported results as estimated:

Sample ID Spiked	Element	Recovery/Correlation	Qualification
SB18-8-10	selenium	183%	All detections in SDGs A2404 and A2407
SB28/0-2	mercury	139	All detections in SDG B2404
	selenium	135	All detections in SDG B2404
batch QC	manganese	184	All detections in SDG A0853
batch QC	antimony	73	TP21-1, TP21/PE/SE, and TP21/PE/NW
	calcium	104%RPD	"
	arsenic	73%	"
	cadmium	72	"
	chromium	-35	"
	selenium	70	"
TP23/GSP	arsenic	143	All detections in SDG A0927
batch QC	arsenic		SB71/10-12 and SB72/10-12
	cadmium		"
	manganese		"
	zinc		"
	magnesium	107%RPD	"
batch QC	antimony	39%	Samples in SDG A1009
batch QC	antimony	61	Soil samples in SDG A1056
	selenium	140	All soil detections in SDG A1056
	iron	133%RPD	Aqueous samples in SDG A1056
LP-C	mercury	-136%	LP-C and ST-1
batch QC	antimony	40	TP35/CS
	selenium	65	"
	cyanide	63	"
MW25-F	silver	73	MW25, MW24, MW2, REP1, -filtrates
MW33I- T & F	selenium	72, 74	Samples in SDG A1629 total and filtrates

The QC summary forms in SDG A0819 do not correctly notate the outlying matrix spike recoveries, including the failure of cadmium to recover in the spike. These are determined from nonproject samples, and no qualification to the results is performed. QC summary forms in several other SDGs also do not reflect all QC failures.

Due to copresence in the associated field blanks, detected values for the following analytes are considered contamination, and results edited to nondetection ("U"):
calcium in SB22/8-10, SB14/6-8, SB19/0-2, SB16/6-8, SB27/0-2 COMP, SB27/4-6 COMP, SB24/8-10, SB12/6-8, SB11/8-10, and SB18/8-10
mercury in SB17/0-2, SB15/0-2, SB19/0-2, SB16/6-8,

Arsenic and lead results in TP32/WP, and arsenic in MW2D, are qualified estimated, with a possible high bias, due to elevated CRI recoveries.

Due to elevated associated CRI standard recoveries (133% to 140%), detections of selenium in the samples MW21 and MW23 are qualified estimated, with a possible high bias.

The results for thallium in MW30/S, and zinc in MW26, MW26I, MW22, MW32S, MW26D, MW31I, MW33D, REP3, MW31D, MW29D, MW34D, and MW35D are estimated, possibly biased low due to CRI recoveries (48% to 79%).

ICP serial dilution correlations for SB23/0-2, SB40/48-50 (iron and chromium only), TP16/PET, TP23/GSP, SB72/10-12, TP23/MHPN, TP32/WP, LP-WB, LP-C, GS-2 (using corrected values), MW27, and MW29I were acceptable.

The serial dilutions for TP21-1 and MW31 showed an elevated correlation for potassium. Results of the samples TP21-1, TP21/PE/SE, TP21/PE/NW, MW31D, MW29D, MW34D, and MW35D are therefore qualified estimated.

The serial dilution of MW32S showed elevated correlations for potassium, sodium, and zinc that were not properly flagged by the laboratory. Results for these analytes in the sample are therefore qualified estimated.

The serial dilutions for TP35/CS, MW1, MW30/S showed elevated correlations for potassium, not flagged by the laboratory. The results of potassium in the samples TP35/CS, MW21, MW1, MW23, MW30/S are therefore qualified estimated.

Total and filtered fractions produced acceptable relative concentrations, with the following exceptions, which indicate that the specific elements be qualified estimated in the denoted samples:

LP-C	selenium was detected in the filtrate, but not the total fraction
MW24	calcium, chromium, potassium, and sodium
MW32S	sodium
MW33I	sodium
MW29S	calcium and sodium
MW23I	potassium
MW2I	potassium

Some of the Interference Check Standard recoveries fell outside protocol limits. There is not a significant effect on associated sample results. Theoretical values for some elements in the CRI standard are incorrectly noted on the summary forms. The actual recovery was reviewed during validation.

The groundwater samples collected in June and July 2001 were processed as fast turnarounds. Some of the QC summary forms do not show the correct laboratory flags; sample results are unaffected. Some of the calibration standards or LCSs produced noncompliant responses, but analysis was not repeated due to time restraint. These responses were reviewed for significant effect on reported values, and none was found.

TCLP Analyses

Some of the samples were processed for the TCL volatile list on the TCLP extract.

Detected volatile analytes below 1 ug/L may be system background, and are edited to nondetection.

The TCLP volatiles results for TP16/GSO all reported nondetection, but volatile results are not

usable ("R") due to elevated temperature at sample receipt. The TCLP semivolatile results are qualified estimated, possibly biased low.

Samples TP21-1 and TP-23/GSP were leached for volatiles beyond the allowable holding time, and the volatile results are therefore considered estimated.

The silver result for the LCSs associated with the leachates of TP16/GSO, TP16/BWP, TP21-1, TP23/GSP, GS-1, and GS-2 recovered at only 19% to 39%. Those element results are therefore qualified estimated, with a low bias.

Matrix spikes of TP6-16GS, TP16/BWP and aqueous batch QC were acceptable. Mercury produced low recovery in the spike of TP21-1, and results for that element in samples TP21-1 and TP23/GSP are considered estimated.

Do to copresence in the associated method and/or field blanks, detections of di-n-butylphthalate and bis(2-ethylhexyl)phthalate in the project samples, methylene chloride, trichloroethene, and acetone in TP16/BWP, GS-1, and GS-2, and the ketones and methylene chloride in TP21-1 and TP23/GSP, are considered external contamination, and results are to be edited to nondetection.

The calcium and sodium detections in the leachates of GS-1 and GS-2 are not usable numbers due to the presence of those two elements at high concentrations in the leachate blank. These can be regarded as very elevated reporting limits.

Tentatively Identified Compounds (TICs) reported with the "B" flag or as "siloxanes" should be disregarded as sample components. The exception is the phthalic anhydride in the BNA leachate of TP6-16GS.

The ICP serial dilution on the leachates of TP16/GSO and TP16/BWP are acceptable.

Cyanide, DRO, Hexavalent Chromium, TOC, TPH, Chloride, Nat. Attent, TDS, Corros, R-CN, R-S, Ignitability

The DRO result for TP16/GSO is qualified estimated due to elevated temperature at sample receipt. Due to dilution, the reported value is at a concentration just above the reporting limit (close to system background), and the matrix matches very poorly to the standard.

The DRO result for TP6-PE-NORTH is qualified estimated due to elevated surrogate recovery (136%).

The DRO result for TP16/12-13 is qualified estimated, possibly biased low, due to the fact that the reported result reflects wet weight (due to lack of available sample for the solids determination).

The attached laboratory case narratives should be specifically referenced (i.e. SDGs A0853 and A0915) as regards the match of the sample patterns to the Pet ID/TPH standards.

Matrix spike and duplicates for the various analytes in SB18/8-10, MW-21, MW23, SB40/12-14,

MW-26, TP6-PE-NORTH, TP6-PE-BOTTOM, TP16-4CB, TP16/12-13, TP16/5-7/FSW, SB71/10-12, GS-1, GS-2, TP16/GSO, MW25, MW26I, MW22, MW34S, MW23I, MW31I, MW29D, and batch QC showed acceptable accuracy and precision.

The recoveries for cyanide in the spikes of SB28/0-2, MW-2D, MW30I were low (52% to 72%); results for that analyte in samples in SDGs B2404 and A1629 are therefore qualified estimated.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Soil

TABLE AS-1.0
7001-1127A
ROUX ASSOCIATES
TAL METALS

All values are mg/Kg dry weight basis.

Client Sample I.D.	GS-1	GS-2		
Lab Sample I.D.	011127A-01	011127A-02		
Aluminum	1110	1340		
Antimony	1340	1130		
Arsenic	16.7B	12.3B		
Barium	85.9B	309.		
Beryllium	0.65U	0.62U		
Cadmium	75.8	12.3B		
Calcium	15000	8550		
Chromium	33900	19000		
Cobalt	318.	30.8		
Copper	23.8B	13.9B		
Iron	2210	2970		
Lead	1760	141.		
Magnesium	7870	8050		
Manganese	74.0	57.3B		
Mercury	0.14	0.14		
Nickel	7.6B	32.0		
Potassium	12500	3480		
Selenium	6.4U	6.1U		
Silver	1.3U	1.2U		
Sodium	235.B	158.B		
Thallium	11.8U	11.3U		
Vanadium	48.2	27.5		
Zinc	33800	26000		

See Appendix for qualifier definitions

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-22/8-10	002404A-01	X	X			X	
SB-19/0-2	002404A-02	X	X			X	
SB-17/0-2	002404A-03	X	X			X	
SB-14/6-8	002404A-04	X	X			X	
SB-16/6-8	002404A-05	X	X			X	
SB-15/0-2	002404A-06	X	X			X	
FB101900	002404A-07	X	X			X	
TB101900	002404A-08	X					
SB-9/6-8	002404A-09		X				
SB-9/6-8	002404A-09MS		X				
SB-9/6-8	002404A-09MSB		X				
SB-9/6-8	002404A-09MSD		X				
SB-8/6-8	002404A-10		X				
REPLICATE-2	002404A-11		X				
SB-7/15-17	002404A-12					X	
FB102500	002404A-13	X	X			X	
TB102500	002404A-14	X					
SB-25/0-2 COMP	002404A-16	X				X	
SB-25/4-6 COMP	002404A-17	X				X	
SB-26/0-2 COMP	002404A-18	X				X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-26/4-6 COMP	002404A-19	X				X	
FB102600	002404A-20	X				X	
TB102600	002404A-21	X					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-27/0-2 COMP	002404B-01	X				X	
SB-27/4-6 COMP	002404B-02	X				X	
SB-24/8-10	002404B-03	X	X			X	
SB-12/6-8	002404B-04	X	X			X	
SB-23/0-2	002404B-05	X	X			X	
FB102700	002404B-06	X	X			X	
TB102700	002404B-07	X					
SB-30/0-2 COMP	002404B-08	X				X	
SB-30/4-6 COMP	002404B-09	X				X	
SB-29/0-2 COMP	002404B-10	X				X	
SB-29/4-6 COMP	002404B-11	X				X	
FB103100	002404B-12	X				X	
TB103100	002404B-13	X					
REPLICATE 103100	002404B-14	X				X	
SB-28/0-2 COMP	002404B-16	X				X	
SB-28/0-2 COMP	002404B-16D					X	
SB-28/0-2 COMP	002404B-16MS	X					
SB-28/0-2 COMP	002404B-16MSB	X					
SB-28/0-2 COMP	002404B-16MSD	X					
SB-28/0-2 COMP	002404B-16S					X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-28/4-6 COMP	002404B-17	X				X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-11/8-10	002407A-01	X	X			X	
SB-18/8-10	002407A-02	X	X			X	
SB-18/8-10	002407A-02D					X	
SB-18/8-10	002407A-02MS	X	X				
SB-18/8-10	002407A-02MSB	X	X				
SB-18/8-10	002407A-02MSD	X	X				
SB-18/8-10	002407A-02S					X	
SB-5/20-22	002407A-03			X			
REPLICATE-1	002407A-04			X			
SB-4/20-22	002407A-05			X			
FB102000	002407A-06	X	X	X		X	
TB102000	002407A-07	X					
SB-6/20-22	002407A-08			X			
SB-13/6-8	002407A-09	X	X			X	
SB-20/4-6	002407A-10	X	X			X	
SB-21/8-10	002407A-11	X	X			X	
SB-10/6-8	002407A-12		X				
FB102400	002407A-13	X	X			X	
TB102400	002407A-14	X					
SB-6/14-16	002407A-15			X			

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
GW-24/10-12	002633A-01	X					
GW-24/34-36	002633A-02	X					
GW-12/10-12	002633A-03	X					
GW-12/34-36	002633A-04	X					
GW-7/12-14	002633A-05	X					
GW-7/34-36	002633A-06	X					
FB110800	002633A-07	X					
FB110900	002633A-08	X					
TB110900	002633A-09	X					
GW-23/10-12	002633A-10	X					
GW-23/34-36	002633A-11	X					
FB111000	002633A-12	X					
TB111000	002633A-13	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-21	002736A-01	X				X	
MW-27	002736A-02	X					
MW-26	002736A-03	X	X			X	
MW-26	002736A-03MS		X				
MW-26	002736A-03MSB		X				
MW-26	002736A-03MSD		X				
MW-26/R	002736A-04		X				
TB112700	002736A-05	X					
MW-28	002736A-06	X				X	
MW-23	002736A-07	X				X	
MW-23	002736A-07D					X	
MW-23	002736A-07MS	X					
MW-23	002736A-07MSB	X					
MW-23	002736A-07MSD	X					
MW-23	002736A-07S					X	
MW-23R	002736A-08	X				X	
MW-24	002736A-09	X				X	
MW-1	002736A-10	X				X	
TB112800	002736A-11	X					
MW-22	002736A-12	X				X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-25	002736A-13	X				X	
MW-2	002736A-14	X				X	
TB112900	002736A-15	X					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
LP-EB	011056A-01	X	X			X	
LP-E	011056A-02	X	X				
LP-E/U	011056A-03					X	
LP-E/F	011056A-04					X	
LP-C	011056A-05	X	X				
LP-C/U	011056A-06					X	
LP-C/F	011056A-07					X	
LP-W	011056A-08	X	X				
LP-W/U	011056A-09					X	
LP-W/F	011056A-10					X	
LP-WB	011056A-11	X	X			X	
ST-1	011056A-12	X	X				
ST-1/U	011056A-13					X	
ST-1/F	011056A-14					X	
TRIP BLANK	011056A-15	X					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-35/CS	011206A-01	X	X			X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-75/21-23	011009A-01		X				
SB-75/21-23/F	011009A-02					X	
SB-75/21-23/U	011009A-03					X	
SB-75/31-33	011009A-04		X				
SB-75/31-33/F	011009A-05					X	
SB-75/31-33/U	011009A-06					X	
SB-76/11-13	011009A-07		X				
SB-76/11-13/F	011009A-08					X	
SB-76/11-13/U	011009A-09					X	
FIELD BLANK	011009A-10	X	X			X	
TP-32/WP	011009A-11	X	X	X		X	
SB-76/21-23	011009A-12		X				
SB-76/21-23/F	011009A-13					X	
SB-76/21-23/U	011009A-14					X	
SB-76/31-33	011009A-15		X				
SB-76/31-33/F	011009A-16					X	
SB-76/31-33/U	011009A-17					X	
TP-16/BWP	011009A-18	X	X	X	X	X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-33/MB	011072A-01	X					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-35/2-4	010483A-01	X					
SB-36/10-12	010483A-02	X					
SB-37/10-12	010483A-03	X					
SB-38/8-10	010483A-04	X					
SB-47 COMPOSITE	010483A-05		X				
SB-40/12-14	010483A-06					X	
SB-40/48-50	010483A-07					X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-16/GSO	010972A-01	X	X	X	X	X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-73/11-13	011052A-01	X					
DUP-1	011052A-02	X					

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SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-71/10-12	010942A-01	X	X			X	
SB-72/10-12	010942A-02	X	X			X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-15 CRADLE 2-3	010819A-01	X					
TP-15 CRADLE 2 BOT	010819A-02	X					
TP-12 PIPE WEST	010819A-03	X					
TP-12 CLOTH	010819A-04	X					
TP-15 DRUM	010819A-05	X					
TP-12 PIPE EAST	010819A-06	X					
TP-16 12-13	010819A-07			X			
TP-12 NE	010819A-08	X					
TP-12 SW	010819A-09	X					
TP6-PE-BOTTM	010819A-10	X		X		X	
TP6-PE-WEST	010819A-11	X		X		X	
TP6-PE-NORTH	010819A-12	X		X		X	
TP6-PE-BOTTOM	010819A-13	X		X		X	
TP6-16GS	010819A-14	X	X	X		X	
SB-41/101-103	010819A-15						
TP6-PIPE NORTH	010819A-16	X					
SB-67/0-2	010819A-17	X					
TP16 WOOD	010819A-18	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-21-1	010915A-01	X	X	X		X	
TP-21-PE/SE	010915A-02	X	X	X		X	
TP-21-PE/NW	010915A-03	X	X	X		X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-16/PET	010853A-01	X	X	X		X	
SB-69/2-4	010853A-02	X					
SB-44/0-2	010853A-03						
SB-44/4-6	010853A-04						
SB-44/8-10	010853A-05						
SB-70/0-2	010853A-06						
SB-70/4-6	010853A-07						
SB-70/8-10	010853A-08						
TP-16/12-13	010853A-09	X	X	X		X	
TP-16-2 CLAY PIPE	010853A-10	X	X	X		X	
SB-32/0-2	010853A-11						
SB-32/4-6	010853A-12						
SB-32/8-10	010853A-13						
SB-32/111-113	010853A-14						
TP-16-3WP	010853A-15	X	X	X		X	
TP-16-4CB	010853A-16	X	X	X		X	
SB40/101-103	010853A-17						
TP-19-2	010853A-18	X	X			X	
TP-19-1	010853A-19	X	X			X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SB-73/11-13	010999A-01		X				
SB-73/11-13/F	010999A-02					X	
SB-73/11-13/U	010999A-03					X	
SB-74/11-13	010999A-04	X	X				
SB-74/11-13/F	010999A-05					X	
SB-74/11-13/U	010999A-06					X	
SB-74/21-23	010999A-07	X	X				
SB-74/21-23/F	010999A-08					X	
SB-74/21-23/U	010999A-09					X	
SB-74/31-33	010999A-10	X	X				
SB-75/11-13	010999A-11		X				
SB-75/11-13/F	010999A-12					X	
SB-75/11-13/U	010999A-13					X	
TRIP BLANK	010999A-14	X					
SB-74/31-33/F	010999A-15					X	
SB-74/31-33/U	010999A-16					X	
DUP-1	010999A-17		X			X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
LP-C	011064A-01	X	X			X	
ST-1	011064A-02	X	X			X	

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-15/6-8/C1	010927A-01	X	X			X	
TP-15/8-10/C1	010927A-02	X	X			X	
TP-15/6-8/C2	010927A-03	X	X			X	
TP-15/8-10/C2	010927A-04	X	X			X	
TP-16/5-7/FNE	010927A-05	X	X			X	
TP-16/9-11/FNE	010927A-06	X	X			X	
TP-16/5-7/FSW	010927A-07	X	X			X	
TP-16/7-9/FSW	010927A-08	X	X			X	
TP-23/MER	010927A-09					X	
TP-23/GSP	010927A-10	X	X			X	

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Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-27	011499A-01	X	X		X	X	
MW-28	011499A-02	X	X		X	X	
TB061301	011499A-03	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
W-21	011499B-01	X	X		X	X	
MW-1	011499B-02	X	X		X	X	
W-23	011499B-03	X	X		X	X	
TB061401	011499B-04	X					

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ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-25	011499C-01	X	X		X	X	
MW-25	011499C-01D					X	
MW-25	011499C-01MS	X	X		X		
MW-25	011499C-01MSB	X	X		X		
MW-25	011499C-01MSD	X	X		X		
MW-25	011499C-01S					X	
MW-2	011499C-02	X	X		X	X	
MW-24	011499C-03	X	X		X	X	
REP-1	011499C-04	X	X		X	X	
TB061501	011499C-05	X					

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Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
W-30/S	011499D-01	X	X		X	X	
TB061801	011499D-02	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW26	011499E-01	X	X		X	X	
MW26I	011499E-02	X	X		X	X	
TB061901	011499E-03	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-22	011593A-01	X	X		X	X	
MW-32S	011593A-02	X	X		X	X	
TB062201	011593A-03	X					

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SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-33I	011629A-01	X	X		X	X	
MW-33I	011629A-01D					X	
MW-33I	011629A-01MS	X	X		X		
MW-33I	011629A-01MSB	X	X		X		
MW-33I	011629A-01MSD	X	X		X		
MW-33I	011629A-01S					X	
MW-33S	011629A-02	X	X		X	X	
REP-2	011629A-03	X	X		X	X	
TB062601	011629A-04	X					
MW-2D	011629A-05	X				X	
TB062801	011629A-06	X					
MW-35S	011629A-07	X	X		X	X	
MW-35I	011629A-08	X	X		X	X	
MW-30I	011629A-09	X	X		X	X	
MW-29S	011629A-10	X	X		X	X	
MW-31S	011629A-11	X	X		X	X	
MW-34S	011629A-12	X	X		X	X	

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Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
SURFACE #1	002987A-01	X				X	
SURFACE #2	002987A-02	X				X	
SURFACE #3	002987A-03	X				X	
SURFACE #4	002987A-04	X				X	
SURFACE #5	002987A-05	X				X	
SURFACE #6	002987A-06	X				X	
SURFACE #8	002987A-07	X				X	
SURFACE #9	002987A-08	X				X	
SURFACE #10	002987A-09	X				X	
SURFACE #10	002987A-09D					X	
SURFACE #10	002987A-09MS	X					
SURFACE #10	002987A-09MSB	X					
SURFACE #10	002987A-09MSD	X					
SURFACE #10	002987A-09S					X	
SURFACE #11	002987A-10	X				X	
SURFACE #12	002987A-11	X				X	
REPLICATE	002987A-12	X				X	
FIELD BLANK	002987A-13	X				X	
TRIP BLANK	002987A-14	X					
SURFACE #7	002987A-15	X				X	

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Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
GS-1	011127A-01	X	X			X	
GS-2	011127A-02	X	X			X	

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ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP-21-1	011099A-01	X				X	
TP-23/GSP	011099A-02	X				X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-29I	011738A-01	X	X		X	X	
MW-23I	011738A-02	X	X		X	X	
TB070201	011738A-03	X					
MW-2D	011738A-04		X		X		
MW-2I	011738A-05	X	X		X	X	
MW-34I	011738A-06	X	X		X	X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
RFACE #11/0-2	011743A-01		X				
SURFACE #12/0-2	011743A-02		X				
RFACE #8/0-2	011743A-03		X				
SURFACE #5/0-2	011743A-04		X				
RFACE #10/0-2	011743A-05		X				
SURFACE #3/0-2	011743A-06		X				
RFACE #1/0-2	011743A-07		X				
URFACE #4/0-2	011743A-08		X				

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-26D	011757A-01	X	X		X	X	
TB071001	011757A-02	X					
MW-31I	011757A-03	X	X		X	X	
MW-31I	011757A-03D					X	
MW-31I	011757A-03MS	X	X		X		
MW-31I	011757A-03MSB	X	X		X		
MW-31I	011757A-03MSD	X	X		X		
MW-31I	011757A-03S					X	
TB071101	011757A-04	X					
MW-33D	011757A-05	X	X		X	X	
REP-3	011757A-06	X	X		X	X	
TB071301	011757A-07	X					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
MW-31D	011829A-01	X	X		X	X	
TB071601	011829A-02	X					
MW-29D	011829A-03	X	X		X	X	
MW-34D	011829A-04	X	X		X	X	
MW-35D	011829A-05	X	X		X	X	
TB071901	011829A-06	X					

7000-2404A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

The last three CCV's of the field blank ICAP run recovered slightly above the lab criteria. The CCV's that bracketed the field blanks recovered within lab criteria so no corrective action was taken.

Selenium failed the controls for spike recovery analysis of sample SB-18/8-10 resulting in one "N" flag.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recoveries for the compounds, 2,4,5-trichlorophenol, 2,4-dinitrophenol and pentachlorophenol, were below recovery limits for SBLKKQFMS. The spike recovery for the compound, pentachlorophenol, was below recovery limits for SBLKFQFMS. The laboratory is in the process of investigating the cause of the poor pentachlorophenol recovery that is isolated to the FMS. Preliminary indications are that the problem is due to the FMS solution since the recoveries of pentachlorophenol in matrix spikes and matrix spike duplicates are within acceptance limits.

Sample Calculation:

Sample ID – SB-15/0-2
Compound – naphthalene

$$\frac{11958(40)1000}{542242(0.851)2(30.1)0.92} = 18.71 = 19 \text{ ug/kg}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using NYSDEC 8260B Protocols. The instrumentation used was a Tekmar Model 2000 Concentrator/Archon 51/4552 interfaced with a Hewlett-Packard Model 5971A/5972A GC/MS/DS.

The spike percent recovery for Chlorobenzene was above the laboratory generated guidelines in the 020ppb QCS (L3733).

Sample Calculation:

Sample ID – FB101900
Compound – Methylene Chloride

$$\frac{(25257)(250)(4)}{(296452)(1.755)(5)} = 2.4 = 2 \text{ ug/L}$$

Sample SB7/10-12/CVO was analyzed by the laboratory on 10/31/00. This sample was cancelled by the client on 11/07/00. This sample is not included in this data package.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for

Jeffrey C. Curran
Laboratory Manager

NOV 21, 2000
Date

7000-2404B
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recoveries for the compounds, 2,4,5-trichlorophenol and pentachlorophenol, were below recovery limits for SBLKRVFMS. The spike recovery for the compound, pentachlorophenol, was below recovery limits for SBLKVRFMS. The laboratory is in the process of investigating the cause of the poor pentachlorophenol recovery that is isolated to the FMS. Preliminary indications are that the problem is due to the FMS solution since the recoveries of pentachlorophenol in matrix spikes and matrix spike duplicates are within acceptance limits.

Sample Calculation:

Sample ID – SB-23/0-2
Compound – naphthalene

$$\frac{110177(40)1000}{7644135(0.980)2(30)0.94} = 10.43 = 10 \text{ ug/kg}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using NYSDEC 8260B Protocols. The instrumentation used was a Tekmar Model 2000 Concentrator/Archon 51/4552 interfaced with a Hewlett-Packard Model 5971A/5972A GC/MS/DS.

The spike percent recovery for methylene chloride was below the laboratory generated guidelines in the 020ppb QCS.

The spike percent recovery for methylene chloride was below laboratory limits for SB-28/0-2 COMPMSB, SB-28/0-2 COMPMS and SB-28/0-2 COMPMSD. Also, the spike percent recovery limits for chlorobenzene and styrene were below laboratory limits for SB-28/0-2 COMPMSD.

Sample Calculation:

Sample ID – FB102700
Compound – Methylene Chloride

$$\frac{(19556)(250)}{(274755)(1.755)(5)} = 2.03 = 2 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

Antimony, mercury and selenium failed the controls for spike recovery analysis of sample SB-28/0-2 COMP resulting in three "N" flags.

One "*" flag resulted from duplicate analysis of sample SB-28/0-2 COMP for calcium.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. The spike recovery for soil analysis was under criteria limits; therefore, a post-digestion spike was analyzed. No other analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jeffrey C. Curran
Laboratory Manager

NOV 22, 2000
Date

7000-2407A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Diesel Range Organics (DRO) - Diesel range organics samples were extracted and analyzed using guidance provided in SW846 Method 8015B. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with a Flame Ionization Detector. Integration was performed from Carbon range C10 to C28. The surrogate and any integrated peaks not included in this range were subtracted from the total area. All unresolved hydrocarbons were included in the integration.

All samples were extracted, concentrated and analyzed without any apparent problems.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID – PBLK90QC
Compound - #2 Fuel Oil

$$\frac{(800118\text{area})(10000\text{ul})}{(1274\text{area/ng})(30\text{g})(1\text{ul})} = 21000\ \text{ug/Kg}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using NYSDEC '95 Protocols. The instrumentation used was a Tekmar Model 2000/2016 Concentrator/Archon 4552 interfaced with a Hewlett-Packard Model 5970A/5971A GC/MS/DS.

Sample Calculation:

Sample ID – FB102000
Compound – Acetone

$$\frac{25723(250)}{291397(0.967)5} = 4.56 = 4\ \text{ug/L}$$

The following compounds were outside the laboratory generated QC windows in the FMS/FMSD: Methylene Chloride, 1,1-Dichloroethene,1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, 2-Hexanone, 1,1,2,2-Tetrachloroethane, Vinyl Acetate, and Trichloroethene.

The FMSB had only Methylene Chloride out of the QC windows.

The independent source QCS spike (20ppb_qcs) had the following compounds outside of the laboratory generated guidelines: Chlorobenzene, and Methylene Chloride,

No problems were encountered.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, pentachlorophenol, was below recovery limits for SBLKFQFMS and SBLKMQFMS. The spike recoveries for the compounds, 2,4,5-trichlorophenol and pentachlorophenol, were below recovery limits for SBLKSQFMS. The spike recoveries for the compounds, 2,4,5-trichlorophenol, 2,4-dinitrophenol and pentachlorophenol, were below recovery limits for SBLKKQFMS. The laboratory is in the process of investigating the cause of the poor pentachlorophenol recovery that is isolated to the FMS. Preliminary indications are that the problem is due to the FMS solution since the recoveries of pentachlorophenol in matrix spikes and matrix spike duplicates are within acceptance limits.

Sample SB-21/8-10 was run at a 1:4 dilution due to the presence of high levels of target compounds.

Sample Calculation:

Sample ID – SB-10/6-8
Compound - phenanthrene

$$\frac{17416(40)1000}{503344(0.817)2(30.2)0.91} = 30.82 = 31 \text{ ug/kg}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

The last three CCV's of the field blank ICAP run recovered slightly above the lab criteria. The CCV's that bracketed the field blanks recovered within lab criteria so no corrective action was taken.

Selenium failed the controls for spike recovery analysis of sample SB-18/8-10 resulting in one "N" flag.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

NOV 14, 2000
Date

7000-2633A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using NYSDEC '95 8260B Protocols. The instrumentation used was a Tekmar Model 2000 Concentrator/Archon 51 autosampler interfaced with a Hewlett-Packard Model 5971A GC/MS/DS.

The column is a 105 meter Restek capillary column RTX-624 with a 3.0u film thickness.

The trap is a Voacarb 3000 with Carbopack B/Carboxen 1000 & 1001.

Sample Calculation:

Sample ID – GW-12/10-12
Compound –Trichloroethene

$$\frac{(17584)(250)\ (1)}{(1514604)(0.411)(5)} = 1.4 = 1\text{ug/l}$$

The following dilutions were performed:

GW-24/10-12	1:2
GW-24/34-36	1:2
GW-7/12-14	1:10

No problems were encountered.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

Dec 12, 2000
Date

06

SEVERN TRENT SERVICES

STL Connecticut

7000-2736A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

The following analyses were subcontracted out to the indicated laboratories:

RSK-175 ***sent to*** **STL – Los Angeles, 1721 South Grand Ave. Santa Anna, CA 92705.**

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered.

Analyte	Method	Reference
Alkalinity	310.1	1
Ferrous Iron	3500	2
Chloride	300	1
Nitrite	300	1
Sulfate	300	1
Cyanide – Total	335.4	1
Dissolved Oxygen	4500	2
TDS	160.1	1

References:

1. Methods of Chemical Analysis of Water and Wastes, EPA 600, 1983.
2. Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample MW-26/R had the three base neutral surrogates above recovery criteria. The sample was re-extracted ten days out of NYSDEC hold and two days out of RCRA hold. The reextracted sample had all surrogates in criteria. Both sets of results have been reported with the re-extract designated with the suffix "RE".

The spike recovery for the compounds, indeno(1,2,3-cd)pyrene and bemzo(g,h,I)perylene, were outside recovery limits for SBLKFSFMS.

Sample Calculation:

Sample ID – MW-26MSB
Compound - Acenaphthene

$$\frac{(801229)(40)(1000)(1.0)}{(465325)(1.063)(2.0)(1000)} = 32 \text{ ug/l}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using NYSDEC '95 Protocols. The instrumentation used was a Tekmar Model 2000Concentrator/Archon 4552 autosampler interfaced with a Hewlett-Packard Model 5971A GC/MS/DS.

The column is a 60 meter Restek capillary column RTX-624 with a 1.4u film thickness.

The trap is a Voacarb 3000 with Carbopack B/Carboxen 1000 & 1001.

The spike percent recovery of bromomethane was above the laboratory generated guidelines in samples MW-23 FMS/FMSD/FMSB and MW-26 FMS/FMSD/FMSB.

The spike percent recoveries of bromomethane, acetone, trans-1,2-dichloroethene, chloroform, 1,2-dichloroethane, cis-1,3-dichloropropene, trichloroethene, and tetrachloroethene were above the laboratory generated guidelines in the 020ppb_QCS.

Sample Calculation:

Sample ID – MW-23R
Compound – Tetrachloroethene

$$\frac{(28467)(250)}{(1300822)(0.325)(5)} = 3.36 \text{ ug/L}$$

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jeffrey C. Curran
Laboratory Manager

Dec 26, 2000
Date

7001-1056A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5970A/5971A GC/MS/DS.

The spike percent recovery of bromomethane was below the laboratory generated guidelines in the 020ppb_QCS of 05/02/01 <L6672>. The spike percent recoveries of trichloroethene and ethylbenzene were below the laboratory generated guidelines in the 020ppb_QCS of 05/01/01 <M3918>.

All compounds in the independent source laboratory quality control sample of 05/02/01 <M3936> were within laboratory guidelines.

Sample Calculation:

Sample ID – LP-E
Compound – Trichloroethene

$$\frac{(344259)(250)}{(2093398)(0.443)(5)} = 18.5 = 18 \text{ ug/L}$$

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3541/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Samples LP-EB and LP-WB exhibited internal standard area suppression. The samples were re-analyzed with similar results confirming matrix interference. Both analyses are reported. The re-analyses are indicated by the suffix "RE".

The spike recoveries for the compounds, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 2,4-dimethylphenol, and 2,4,5-trichlorophenol were outside recovery limits for SBLKWQFMS.

Sample Calculation:

Sample ID – LP-W
Compound - naphthalene

$$\frac{(20222)(40)(1000)(1.0)}{(498375)(.856)(2)(980)} = .97 = 1 \text{ ug/l}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. The spike recovery for cyanide analysis did not meet criteria limits; therefore, a post-digestion spike was analyzed. No other analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

SEVERN TRENT SERVICES

STL Connecticut

7001-1206A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – TP-35/CS
Compound – Acetone

$$\frac{(1650905)(250)}{(1206536)(1.277)(0.87)(5)} = 61.6 = 62 \text{ UG/KG}$$

No problems were encountered.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems.

Sample Calculation:

Sample ID – TP-35/CS
Compound - fluorene

$$\frac{8024(40)1000}{246188(1.195)2(30)0.87} = 20.90 = 21 \text{ ug/kg}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. The spike recovery for cyanide analysis did not meet criteria limits; therefore, a post-digestion spike was analyzed. No other analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

Antimony and selenium failed the controls for spike recovery analysis of sample SS-5 resulting in two "N" flags.

Three "*" flags resulted from duplicate analysis of sample SS-5 for arsenic, lead, and manganese.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1000A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A/5971A GC/MS/DS.

Samples TP-23/MHPN and TP-23/MHPW were analyzed twice due to surrogate recoveries and internal standard areas being out of acceptable criteria limits. Both analyses exhibited similar results, therefore proving matrix interference. Both sets of results have been reported with the reanalyses designated by the suffix "RE".

Sample TP-31/SS was originally analyzed and exhibited surrogate recoveries slightly out of acceptable criteria limits. The sample was then reanalyzed and had surrogate recoveries within criteria limits but internal standard area concentrations out of criteria limits, proving matrix interference. Both analyses have been reported with the reanalysis designated by the suffix "RE". The "RE" had acetone just over the calibration curve; however, the original analysis was within the calibration range.

The spike percent recovery of 2-hexanone was above the laboratory generated guidelines in the 020ppb_QCS of 04/26/01 <N8471>.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) of 04/25/01 <K4565> were within laboratory guidelines.

Sample Calculation:

Sample ID – TP-23/MHPN
Compound – Tetrachloroethene

$$\frac{(1953346)(250)}{(1347635)(0.510)(5)(0.51)} = 280 \text{ UG/KG}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

Four "*" flags resulted from duplicate analysis of sample TP-23/MHPN for iron, lead, manganese, and zinc.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Samples TP-23/MHPN and TP-23/MHPW would not concentrate to a final volume of 1 ml, and so were brought to a final volume of 2 mls.

Samples TP-23/MHPW and TP-31/SS exhibited internal standard area suppression. The samples were re-analyzed with similar results confirming matrix interference. Both analyses are reported. The more dilute analyses are indicated by the suffix "DL".

Sample TP-23/MHPW had one surrogate out of recovery criteria, but within laboratory sample acceptance criteria.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits and the spike recovery for the compound, pentachlorophenol, was above recovery limits for SBLKL1FMS.

The spike recovery for the compound, pentachlorophenol, was above recovery limits for SBLKHQFMS.

The following samples were analyzed at a dilution due to the presence of high levels of target compounds:

Sample ID	Dilution
TP-23/MHPN	1:20
TP-23/MHPWDL	1:10
TP-31/SSDL	1:5

Sample Calculation:

Sample ID – SB-73/10-12
Compound - naphthalene

$$\frac{31087(40)1000}{795163(0.820)2(30.3)0.78} = 40.35 = 40 \text{ ug/kg}$$

7001-1009A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Samples SB-75 and SB-76 were extracted/digested and held as per the client's instructions.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Corrosivity	Chapter 7	1
Cyanide - R	Chapter 7	1
Ignitability	1030/1010	1
Sulfide - R	Chapter 7	1
TCLP-Prep	1311	1
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/5035A/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID –TP-32/WP
Compound –Acetone

$$\frac{(1159000)(250)}{(1263443)(.616)(5)(.84)} = 88.6 = 89 \text{ UG/KG.}$$

The spike compound percent recoveries were within the laboratory generated guidelines in the independent source quality control samples (020PPB_QCS).

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3541/3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample TP-32/WP had one surrogate out of recovery criteria, but within laboratory sample acceptance criteria.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits and the spike recovery for the compound, pentachlorophenol, was above recovery limits for SBLKQQFMS.

Sample Calculation:

Sample ID – TP-16/BWP
Compound - naphthalene

$$\frac{79561(40)1000}{839755(0.856)2(500)} = 4.43 = 4 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

Antimony and selenium failed the controls for spike recovery analysis of sample 01ZG05-S226 resulting in two "N" flags.

Aluminum failed the controls for duplicate analysis of sample 01ZG05-S226 resulting in one "*" flag.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3550B/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted and concentrated without any apparent problems.

Samples were acid cleaned up prior to analysis.

Sample TP-16/BWP required sulfur cleanup and reanalysis.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID –TP-16/BWP
Compound – Aroclor 1254 peak at retention time 17.32 on the RTX-35 column.
(120475area)(10000ul)(10) = 910ug/kg
(489180area/ng)(30.4)(.89)(1ul)

Diesel Range Organics (DRO) - Diesel range organics samples were extracted and analyzed using guidance provided in SW846 Method 8015B., The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with a Flame Ionization Detector. Integration was performed from Carbon range C10 to C28. The surrogate and any integrated peaks not included in this range were subtracted from the total area. All unresolved hydrocarbons were included in the integration.

The samples were spiked for surrogate with p-terphenyl instead of o-terphenyl by mistake. A separate p-terphenyl curve was analyzed in order to calculate surrogate recoveries. Raw data for this curve was included.

PBLK57QC was spiked with an alkane mix instead of the normal #2 Fuel oil. Recoveries were calculated based on the carbon range C10-C28.

The surrogate, p-terphenyl, had only a 4 point calibration curve.

The surrogate was diluted out of samples TP-16/BWP.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID - TP-32/WP
Compound - #2 Fuel Oil

(2304733area)(2000ul)(2) = 270000 ug/Kg
(1254area/ng)(30.2g)(1ul)(0.89)

7001-1072A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – The samples were received at 15°C. The client was notified, and the laboratory was instructed to proceed with the analyses.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – TP-33/MB
Compound – 2-Butanone

$$\frac{(72045)(250)}{(1661141)(1.394)(5)} = 1.56 = 2 \text{ ug/L}$$

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jeffrey D. Curran
Laboratory Manager

May 10, 2001
Date

7001-0483A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5035A/8260B. The instrumentation used was a Tekmar Model 2000Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID –SB-35/2-4
Compound –Methylene Chloride

$$\frac{(114445)(250)}{(619490)(2.847)(5.01)(.91)} = 3.56 = 4 \text{ UG/KG.}$$

Sample SB-35/2-4 was analyzed twice due to results having surrogate recoveries out of criteria. Both analyses were reported since matrix interference was proven.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
TOCD	9060	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems.

Sample Calculation:

Sample ID – SB-47 COMPOSITE
Compound - pyrene

$$\frac{27465(40)1000}{320662(1.231)2(30.5)0.88} = 51.84 = 52 \text{ ug/kg}$$

Metals – ICAP metals were determined using a JA61E trace ICAP following guidance provided in SW846 according to methods 3050B/6010B.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

March 28, 2001
Date

7001-0972A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – The samples were received at 17°C. The client was notified, and the laboratory was instructed to proceed with the analyses.

Polychlorinated Biphenyls (PCB's) - Pesticide/PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3550B/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

Sample TP-16/GSO was a hard, green, crayola-like substance. The sample was broken up prior to extraction and was filtered due to its consistency.

The client sent insufficient sample, so only 15grams of sample was extracted. The sample was brought to half the normal final volume, so the reporting limit was unaffected.

The sample was acid cleaned up prior to analysis.

The sample caused a lot of carryover, and it was necessary to run several solvent injections following it.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID – TP-16/GSO
Compound - Aroclor 1260, peak at retention time 19.61 on the RTX-35 column.
(120285area)(5000ul)(100) = 9616ug/kg
(623437area/ng)(15.2g)(.66)(1ul)

Extractable Total Petroleum Hydrocarbons (ETPH)- ETPH samples were extracted and analyzed using guidance provided in the State of Connecticut ETPH method using Methylene Chloride. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with a Flame Ionization Detector. Integration was performed from Carbon range C9 to C36. The surrogate and any integrated peaks not included in this range were subtracted from the total area. All unresolved hydrocarbons were included in the integration.

An alkane (C9-C36) solution was used as the calibration standard.

Sample TP-16/GSO was a hard, green, crayola-like substance. The sample was broken up prior to extraction and was filtered due to it's consistency.

Sample TP-16/GSO would not concentrate below a 3ml final volume.

Surrogates were diluted out of sample TP-16/GS0.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID - TP-16/GS0
Compound - #2 Fuel Oil

$$\frac{(655518\text{area})(3000\text{ul})(100)}{(1254\text{area/ng})(30.6\text{g})(0.66)(1\text{ul})} = 7800000 \text{ ug/Kg}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for all samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
TCLP-PREP	1311	1

References:

1. Test Methods for the Evaluation of Solid Waste, SW846, 3rd edition, 1986.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

Sample Calculation:

Sample ID –TP-16/GSO
Compound –Acetone

$$\frac{(556815)(250)(1)}{(1411002)(.536)(5)} = 36.9 = 37 \text{ UG/L.}$$

The sample matrix field of the Form 1A has been manually edited to reflect the sample matrix of "LEACHATE". The tabular results do not indicate the leachate matrix but accurately reflect the matrix as "AQUEOUS".

The spike compound percent recovery for the target compound, 2-hexanone, was outside the laboratory generated guidelines in the independent source quality control sample, 020PPB_QCS.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits and the spike recovery for the compound, pentachlorophenol, was above recovery limits for SBLKLQFMS.

The tabular results do not indicate the leachate matrix but report the matrix as "AQUEOUS".

Sample Calculation:

Sample ID – TP-16/GSO
Compound - phenol

$$\frac{14475(40)1000}{181765(1.638)2(500)} = 1.94 = 2 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

The tabular results do not indicate the TCLP leachate matrix, but accurately reflect the matrix as "aqueous".

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl Ann Cascella for
Jeffrey C. Curran
Laboratory Manager

May 3, 2001
Date

7001-1052A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID – SB-73/11-13
Compound – Acetone

$$\frac{(96174)(250)}{(1468718)(0.536)(5)} = 6.1 = 6 \text{ ug/L}$$

The spike percent recovery of 2-hexanone was above the laboratory generated guidelines in the 020ppb_QCS.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

May 3, 2001
Date

7001-0942A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
pH	9045	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – SB-71/10-12
Compound – Acetone

$$\frac{(210433)(250)}{(1062119)(0.616)(0.83)(5)} = 19.3 = 19 \text{ UG/KG}$$

No problems were encountered.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3541/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems.

Sample Calculation:

Sample ID – SB-72/10-12
Compound - naphthalene

$$\frac{48793(40)500}{1289415(0.809)2(15)0.86} = 36.26 = 36 \text{ ug/kg}$$

Metals – ICAP metals were determined by ICP using a TJA61E Trace ICAP according to the USEPA ILMO4.1 SOW. Mercury was digested using an Environmental Express Hotblock Digestor with approval from Tanya Mitchell of USEPA Headquarters and Roy F Weston, and analyzed using a Leeman Labs mercury analyzer following USEPA ILMO4.1 SOW.

Four "*" flags resulted from duplicate analysis of sample 01ZG05-S94 for aluminum, calcium, lead and magnesium. Sample homogeneity appears to be the cause.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-0819A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Insufficient sample was provided to perform all of the analyses requested on sample TP-16 12-13. The VOA analysis was cancelled on this sample.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/5035A/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A/5971A GC/MS/DS.

Sample Calculation:

Sample ID –TP-12 PIPE EAST
Compound –Methylene Chloride

$$\frac{(304091)(250)}{(1075201)(1.349)(5)(.86)} = 12.19 = 12 \text{ UG/KG.}$$

Sample TP6-16GS was analyzed at a 1:2 dilution as a medium level soil due to high target compound concentrations.

Samples TP-15 CRADLE 2-BOT and TP-12 CLOTH were analyzed twice due to results exhibiting suppression of internal standard areas and/or surrogate recoveries out of criteria. Both analyses have been reported since matrix interference was proven.

The spike compound percent recoveries for the target compounds were within the laboratory generated guidelines in the independent source quality control sample (020PPB_QCS).

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
TDS	160.1	2
Chloride	300	2

TCLP-Prep	1311	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.
2. Methods of Chemical Analysis of Water and Wastes, EPA 600, 1983.

Diesel Range Organics (DRO) - Diesel range organics samples were extracted and analyzed using guidance provided in SW846 Method 8015B. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with a Flame Ionization Detector. Integration was performed from Carbon range C10 to C28. The surrogate and any integrated peaks not included in this range were subtracted from the total area. All unresolved hydrocarbons were included in the integration.

The sample was extracted without any apparent problems.

Samples TP-6-PE-SOUTH, TP6-PE-WEST, TP6-PE-NORTH, and TP6-PE-BOTTOM were extracted outside of NYSDEC hold but within RCRA hold. These samples were added by the client after the NYSDEC holds had expired.

Sample TP-16 12-13 was extremely viscous during the concentration procedure. Sample was concentrated to an 8ml final volume.

%TS could not be performed for sample TP-16 12-13 due to insufficient sample volume. 100% solids were assumed.

The surrogate was diluted out of sample TP-16 12-13.

Surrogate recovery was above QC limits in TP6-PE-NORTH.

Sample Calculation:

Sample ID - TP-16 12-13
Compound – Diesel Range Organics

(1722452area)(8000ul)(50) = 21000000 ug/Kg
(1087area/ng)(30.3g)(1ul)

Petroleum Hydrocarbon Scan - The extract was injected into a Gas Chromatograph equipped with a capillary column and Flame Ionization Detector. Elution patterns were compared with those of gasoline, kerosene, #2 fuel oil, #4 fuel oil and #6 fuel oil.

Sample TP-6-16GS was difficult to extract. The sample was a fine, light material and required filtering several times. Filtering was difficult due to the fine material.

The elution pattern present in sample TP-6-16GS did not match any of the standards the laboratory analyzes for.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Due to a sample tracking error, sample TP6-16GS was extracted out of NYSDEC hold, but within RCRA hold.

Sample TP6-16GS was analyzed at a 1:200 dilution due to the presence of high levels of target compounds.

Sample Calculation:

Sample ID – TP6-16GS
Compound - naphthalene

$$\frac{34819(40)1000(200)}{3697869(0.947)2(30.1)0.62} = 2131 = 2100 \text{ ug/kg}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran

April 30, 2001
Date

7001-0915A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Petroleum Hydrocarbon Scan - The extract was injected into a Gas Chromatograph equipped with a capillary column and Flame Ionization Detector. Elution patterns were compared with those of gasoline, kerosene, #2 fuel oil, #4 fuel oil and #6 fuel oil.

The elution pattern present in sample TP-21-1 did not match any of the standards the laboratory analyzes for.

The earlier peaks in the elution pattern present in sample TP-21-PE/SE were a fair match for coal tar, possibly weathered. The later peaks do not match any of the standards the laboratory analyzes for.

Sample TP-21-PE/NW contains very low, later eluting peaks. These peaks do not match anything the laboratory routinely analyzes for.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000 Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID – TP-21-1
Compound – Trichloroethene

$$\frac{(920977)(250)}{(3086381)(0.566)(5.23)(0.53)} = 47.5 = 48 \text{ UG/KG}$$

No problems were encountered.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems.

Sample Calculation:

Sample ID – TP-21-1
Compound - naphthalene

$$\frac{122187(40)1000}{4417594(0.858)2(30)0.80} = 26.86 = 27 \text{ ug/kg}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

Antimony failed the controls for spike recovery analysis of batch QC sample SB052SB01S resulting in one "N" flag.

Six "*" flags resulted from duplicate analysis of batch QC sample SB052SB01S for aluminum, calcium, chromium, copper, iron, and manganese.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl Ann Cascella for
Jeffrey C. Curran
Laboratory Manager

April 27, 2001
Date

7001-0853A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Petroleum Hydrocarbon Scan - The extract was injected into a Gas Chromatograph equipped with a capillary column and Flame Ionization Detector. Elution patterns were compared with those of gasoline, kerosene, #2 fuel oil, #4 fuel oil and #6 fuel oil.

The elution patterns present in samples TP-16/PET, TP-16/12-13, and TP-16-2 CLAY PIPE were a close match for coal tar. This standard is not routinely analyzed. However, upon seeing the elution pattern present in the samples, this standard was analyzed for comparison.

The elution patterns present in samples TP-16-3WP and TP-16-4CB did not match any of the standards the laboratory analyzes for.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
TDS	160.1	2
Chloride	300	2
PH	9045	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.
2. Methods of Chemical Analysis of Water and Wastes, EPA 600, 1983.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3541/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Samples TP-16-3WP, TP-16-4CB and TP-19-2 exhibited internal standard area suppression. The samples were re-analyzed with similar results confirming matrix interference. Both analyses are reported. The re-analyses are indicated by the suffix "RE".

Sample TP-19-2 had one surrogate out of recovery criteria, but within laboratory sample acceptance criteria.

The spike recovery for the compound, pentachlorophenol, was above recovery limits for SBLKUPFMS.

Sample TP-16-4CB would not concentrate to a final volume of 0.5 ml, and so was brought to a final volume of 1 ml.

The following samples were analyzed at dilutions due to the presence of high levels of target compounds:

Sample ID	Dilution
TP-16/PET	1:50
TP-16/12-13	1:2
TP-16-2 CLAY PIPE	1:8

Sample Calculation:

Sample ID – TP-16-4CB
Compound - naphthalene

$$\frac{162437(40)1000}{3124027(0.858)2(15)0.68} = 118.82 = 120 \text{ ug/kg}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5970A/5971A GC/MS/DS.

Samples TP-16 PET and TP-16-3WP were analyzed twice due to having surrogates and/or internal standard areas out of criteria. Both sets of analyses exhibited similar results, therefore proving matrix interference. Both sets of analyses have been reported with the reanalyses designated by the suffix "RE".

A FMS/FMSD was run on sample SB-69/2-4; batch QC has been provided for the FMSB.

The spike percent recoveries of 2-butanone, 4-methyl-2-pentanone, 2-hexanone, and 1,1,2,2-tetrachloroethane were above the laboratory generated guidelines in sample SB-69/2-4 FMS.

The spike percent recoveries of 2-butanone, bromoform, 4-methyl-2-pentanone, 2-hexanone, and 1,1,2,2-tetrachloroethane were above the laboratory generated guidelines in sample SB-69/2-4 FMSD.

The spike percent recovery of cis-1,2-dichloroethene was below the laboratory generated guidelines in the 020ppb_QCS of 04/11/01 <K4323>.

All compounds in the independent source laboratory quality control samples (020ppb_QCS's) of 04/12/01 <K4341>, 04/13/01 <K4363>, and 04/17/01 <L6386> were within laboratory guidelines.

Sample Calculation:

Sample ID – TP-16/12-13
Compound – 2-Butanone

$$\frac{(358889)(250)}{(1227454)(0.546)(5)(0.83)} = 32 \text{ UG/KG}$$

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Cheryl A. Cascua for
Jeffrey C. Curran
Laboratory Manager

April 26, 2001
Date

7001-0483A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5035A/8260B. The instrumentation used was a Tekmar Model 2000Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID –SB-35/2-4
Compound –Methylene Chloride

$$\frac{(114445)(250)}{(619490)(2.847)(5.01)(.91)} = 3.56 = 4 \text{ UG/KG.}$$

Sample SB-35/2-4 was analyzed twice due to results having surrogate recoveries out of criteria. Both analyses were reported since matrix interference was proven.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

March 9, 2001
Date

7001-0999A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – The VOA vials for samples SB-73/11-13 and DUP-1 were received broken. The VOA analysis was cancelled for these samples. All other samples were received in good condition and at proper temperature.

The following analyses were subcontracted out to the indicated laboratories:

Semivolatile Organics sent to STL – Newburgh (NY), 315 Fullerton Ave., Newburgh, NY 12558.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID –SB-74/21-23
Compound –Bromoform

$\frac{(501196)(250)(1)}{(6125658)(.284)(5)} = 14.4 = 14$ UG/L.

The spike compound percent recovery for the target compound, 2-hexanone, was outside the laboratory generated guidelines in the independent source quality control samples (020PPB_QCS).

Samples SB-73/11-13 and DUP-1 were received by the laboratory broken and therefore analysis had to be cancelled.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1064A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5035A/8260B. The instrumentation used was a Tekmar Model 2000 Concentrator/Archon 51 autosampler interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

The spike percent recovery of bromomethane was below the laboratory generated guidelines in the independent quality control sample (020ppb_QCS), L6672. The spike percent recovery for acetone was above the laboratory generated guidelines in the 020PPB_QCS, L6712.

Sample ST-1 was analyzed at a 1:5 dilution due to high target compound concentrations.

Sample Calculation:

Sample – ST-1
Compound – Chlorobenzene

$$\frac{(11088887)(250)}{(2235611)(1.633)(1.04)(.29)} = 2517 = 2500 \text{ UG/KG.}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. The spike recovery for cyanide analysis did not meet criteria limits; therefore, a post-digestion spike was analyzed. No other analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3541/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample was analyzed at a 1:4 dilution and exhibited internal standard area suppression. The sample was re-analyzed without a dilution but with similar results confirming matrix interference. Both analyses are reported. The confirming analysis is indicated by the suffix "DL".

Samples would not concentrate to a final volume of 0.5 ml, and so were brought to a final volume of 1 ml.

Sample Calculation:

Sample ID – LP-C
Compound - naphthalene

$$\frac{(21969)(40)(1000)(1.0)}{(1237868)(.963)(2.0)(15.3)(.58)} = 42 \text{ ug/kg}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

Mercury failed the controls for spike recovery analysis of sample LP-C resulting in one "N" flag.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-0927A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
pH	9045	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3541/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample TP-15/8-10/C2 was analyzed at a 1:2 dilution and sample TP-23/GSP was analyzed at a 1:20 dilution due to the presence of high levels of target compounds.

Sample Calculation:

Sample ID – TP-15/8-10/C2
Compound - Naphthalene

$$\frac{(944945)(40)(500)(2)}{(4442994)(.947)(2)(15.0)(.82)} = 365 \text{ ug/kg} = 360 \text{ ug/kg}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

Sample Calculation:

Sample ID – TP-15/6-8/C1
Compound – Methylene Chloride

$$\frac{(181203)(250)}{(1251499)(1.394)(0.88)(5)} = 5.9 = 6 \text{ UG/KG}$$

All compounds in the independent source laboratory quality control samples (020ppb_QCS's) were within laboratory guidelines.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3050B/6010B; mercury-7471A.

Arsenic failed the controls for spike recovery analysis of QC sample TP-23/GSP resulting in one "N" flag.

Six "*" flags resulted from duplicate analysis of QC sample TP-23/GSP for chromium, iron, lead, and manganese.

Sample TP-23/MER consisted of soil with what appeared to be 100% mercury. The client requested that the lab analyze only the mercury portion of the sample. The analyst tried to separate the mercury, digested and analyzed the sample. The recovery was about 11.25% mercury. The client has requested the lab now analyze the sample for TAL metals. This will be done as a separate SDG.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1499A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

The spike recoveries for 2,4,5-trichlorophenol and pentachlorophenol were outside recovery limits for SBLKRQFMS.

Sample Calculation:

Sample ID – MW-27
Compound - naphthalene

$$\frac{(8144)(40)(1000)(1.0)}{(1122874)(1.014)(2.0)(1000)} = .14 \text{ ug/l}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 3000 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5972A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – MW-28
Compound – Trichloroethene

$$\frac{(102749)(250)}{(1788235)(0.422)(5)} = 6.8 = 7 \text{ ug/L}$$

No problems were encountered.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered.

Analyte	Method	Reference
Cyanide – Total	9012	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted, concentrated and analyzed without any apparent problems.

Results were reported to the MDL in order to meet client requested detection limits.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID – MW-27
Compound – Aroclor-1260 peak 22.52, DB-1701 column

$$\frac{(26379\text{area})(10000\text{ul})}{(1034629\text{area/ng})(1000\text{ml})(1\text{ul})} = 0.025\ \text{ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1499B
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted, concentrated and analyzed without any apparent problems.

Results were reported to the MDL in order to meet client requested detection limits.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID –
Compound – Aroclor-1260 peak

$$\frac{(699961\text{area})(10000\text{ul})}{(1425464\text{area/ng})(1000\text{ml})(1\text{ul})} = 4.9\ \text{ug/L}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered.

Analyte	Method	Reference
Cyanide – Total	9012	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKU1FMS.

Sample Calculation:

Sample ID – MW-1
Compound – bis(2-ethylhexyl)phthalate

$$\frac{2075158(40)1000}{1347580(0.898)2(1000)} = 34.39 = 34 \text{ ug/L}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 3000 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5972A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – MW-23
Compound – Methylene Chloride

$$\frac{(120857)(250)(1)}{(859743)(1.596)(5)} = 4.4 = 4 \text{ ug/L}$$

No problems were encountered.

7001-1499C
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – The samples were received at the proper temperature. The PCB bottles for sample MW-24 were received broken. The PCB analysis was performed from the extra BNA sample bottle. All other samples were received in good condition.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

The spike recovery for the compound, pentachlorophenol, was above recovery limits for MW-25MS, MW-25MSD and SBLKWQFMS.

The spike recovery for the compound, 2,4-dinitrotoluene, was above recovery limits for MW-25MSD.

Sample Calculation:

Sample ID – MW-24
Compound – anthracene

$$\frac{10221(40)1000}{1570063(1.076)2(940)} = 0.12 = 0.1 \text{ ug/L}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered.

Analyte	Method	Reference
Cyanide – Total	9012	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

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Jeffrey C. Curran
Laboratory Manager

June 27, 2001
Date

7001-1593A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted and concentrated without any apparent problems.

Results were reported to the MDL in order to meet client requested detection limits.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID – PBLK61QC2
Compound – Aroclor-1260 peak

$$\frac{(534640\text{area})(10000\text{ul})}{(1463970\text{area/ng})(1000\text{ml})(1\text{ul})} = 3.65 \text{ ug/L}$$

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Sample Calculation:

Sample ID – MW-32S
Compound – Tetrachloroethene

$$\frac{(87508)(250)(1)}{(2554610)(.347)(5)} = 4.93 = 5 \text{ UG/L}$$

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKJSFMS.

Sample Calculation:

Sample ID – MW-22
Compound – bis(2-ethylhexyl)phthalate

$$\frac{19475(40)1000}{370595(1.054)2(1000)} = 0.99 = 1 \text{ ug/L}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1629A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received at the proper temperature. Three of four 1L amber jars were received broken for sample MW-2D. At the request of the client, the BNA and PCB analyses were cancelled for this sample. All other samples were received in good condition.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 3000 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5972A GC/MS/DS.

Sample Calculation:

Sample ID –MW-35I
Compound –Trichloroethene

$$\frac{(1435789)(250)(50)}{(1434269)(.454)(5)} = 5512 = 5500 \text{ UG/L.}$$

Sample MW-35I was analyzed at a 1:50 dilution due to high target compound concentrations.

The spike compound percent recoveries for chloroethane were above the laboratory generated guidelines in the FMS/FMSD and FMSB samples. This compound was also above the guidelines in the independent source quality control sample (020PPB_QCS) file, T4307. The compound, bromomethane, was below the guidelines in file T4330.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKVQFMS.

The spike recovery for the compound, pentachlorophenol, was above recovery limits and the spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKBSFMS.

The spike recoveries for the compounds, benzyl alcohol and pentachlorophenol, were above recovery limits and the spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKYSFMS.

The spike recovery for the compound, benzyl alcohol, was above recovery limits and the spike recoveries for the compounds, 2,4,5-trichlorophenol and 2,4-dinitrophenol, were below recovery limits for SBLKSSFMS.

Sample Calculation:

Sample ID – MW-30I
Compound - pyrene

$$\frac{12411(40)1000}{1006505(1.307)2(1000)} = 0.19 = 0.2 \text{ ug/L}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. Post-digestion spikes were analyzed for samples MW-33I and MW-30I due to spike recoveries below criteria limits. No other analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide – Total	9012	1
Hexavalent Chromium	7196	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted, concentrated and analyzed without any apparent problems.

At the client's request, results were reported to the MDL .

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID - MW-33IMS
Compound – Aroclor-1260 peak 19.24

$$\frac{(162667\text{area})(10000\text{ul})}{(869504\text{area/ng})(940\text{ml})(1\text{ul})} = 2.0 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

Selenium failed the controls for spike recovery analysis of sample MW-33IS resulting in one "N" flag.

The post digestion spike recovered within the method control limits so a matrix effect is not suspected.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7000-2987A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – Sample "Surface #7" was received at 8°C. All other samples were received in good condition and at the proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B and 5035A/8260B. The instrumentation used was a Tekmar Model 2000/2016/3000 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5970A/5972A GC/MS/DS.

Sample Calculation:

Sample ID –SURFACE #4
Compound –Trichloroethene

$$\frac{(132447)(250)}{(1103439)(.419)(5.43)(.85)} = 15.5 = 16 \text{ UG/KG.}$$

The following samples were analyzed twice due to results having surrogate recoveries out of criteria: SURFACE #4, SURFACE #5, SURFACE #6, SURFACE #8, SURFACE #11 and SURFACE #12. Both analyses were reported since matrix interference was proven. Sample SURFACE #10FMS also had a surrogate recovery out of criteria.

The percent recovery for the spike compound, bromodichloromethane, was outside the laboratory generated guidelines in the 020PPB_QCS, T2263. The percent recovery for the spike compound, bromomethane, was outside the laboratory generated guidelines in the 020PPB_QCS, T2244.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A, 3050B/6010B; mercury-7470A, 7471A.

Cadmium and nickel failed the controls for spike recovery analysis of sample SURFACE #10 resulting in two "N" flags.

Nine "*" flags resulted from duplicate analysis of sample SURFACE #10 for antimony, arsenic, chromium, copper, iron, lead, manganese, nickel, and zinc. Because of the poor duplicate recovery, the sample was redigested and reanalyzed. The reanalysis still did not duplicate well. The result for the reanalysis is reported on Metals table page 2.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

Jan 25, 2001
Date

7001-1127A
ROUX ASSOCIATES

SEVERN TRENT SERVICES

STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/5035A/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

Sample Calculation:

Sample ID –GS-2
Compound –Trichloroethene

$$\frac{(1480909)(250)}{(2027135)(.474)(5)(.63)} = 122.3 = 120 \text{ UG/KG.}$$

The spike compound percent recoveries were within the laboratory generated guidelines in the independent source quality control sample (020PPB_QCS).

Sample GS-2 was analyzed twice due to results exhibiting suppression of internal standard areas and surrogate recoveries out of criteria. Both analyses were reported since matrix interference was proven.

Sample GS-1 was analyzed at a 1:2 dilution as a medium level soil due to high target compound concentrations. This sample was analyzed twice due to results having surrogate recoveries out of criteria. Both analyses were reported since matrix interference was proven.

The sample matrix field of the Form 1A has been manually edited to reflect the sample matrix of "LEACHATE". The tabular results do not indicate the leachate matrix but accurately reflect the matrix as "AQUEOUS".

The files, M4030, M4032 and M4033 are the SPLP files while M4026, M4027 and M4034 are associated with the TCLP samples.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

The spike recoveries for the compounds, phenol, 2,4,5-trichlorophenol, and 4-nitrophenol, were outside recovery limits for the TCLPBLKFMS.

The spike recoveries for the compounds, 2,4,5-trichlorophenol, 4-nitrophenol and pentachlorophenol were outside recovery limits for the SPLPBLKFMS.

The soil sample GS-1 would not concentrate to a final volume of 1 ml, and so was brought to a final volume of 2 mls. Sample GS-2 was brought to a final volume of 4 mls.

The soil samples, GS-1 and GS-2, were analyzed at a 1:200 dilution and 1:2 dilution respectively due to the presence of high levels of target compounds.

The TCLP and SPLP leachates for sample GS-1 were diluted 1:5 due to the presence of high levels of target compounds.

The target compounds 3-methylphenol and 4-methylphenol cannot be chromatographically separated. The isomers are reported as a total concentration of 4-methylphenol.

The tabular results do not indicate the leachate matrix but report the matrix as "AQUEOUS".

Sample Calculation:

Sample ID – GS-1
Compound - naphthalene

$$\frac{(12625)(40)(2000)(200)}{(1202418)(.963)(2)(30.0)(.59)} = 4928 = 4900 \text{ ug/kg}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Cyanide-Total	9012	1
Hexavalent Chromium	7196	1
TCLP-Prep	1311	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cascella for
Jeffrey C. Curran
Laboratory Manager

May 17, 2001
Date

7001-1099A
ROUX ASSOCIATES

SEVERN TRENT SERVICES
STL Connecticut

Case Narrative

Sample Receipt – All samples were received in good condition and at proper temperature.

The samples were relogged from STL job 7001-0915A-01 and 7001-0927A-10.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5971A GC/MS/DS.

Sample Calculation:

Sample ID – TP-23/GSP
Compound – 2-Butanone

$$\frac{(81296)(250)}{(1619302)(1.394)(5)} = 1.80 = 2 \text{ ug/L}$$

The sample matrix field of the Form 1A has been manually edited to reflect the sample matrix of "LEACHATE". The tabular results do not indicate the leachate matrix but accurately reflect the matrix as "AQUEOUS".

All compounds in the independent source laboratory quality control sample (020ppb_QCS) were within laboratory guidelines.

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

Mercury failed the controls for spike recovery analysis of sample TP-23/GSP resulting in one "N" flag.

The tabular results do not indicate the TCLP leachate matrix, but accurately reflect the matrix as "aqueous".

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for all samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
TCLP-PREP	1311	1

References:

1. Test Methods for the Evaluation of Solid Waste, SW846, 3rd edition, 1986.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Cheryl A. Cassella for
Jeffrey C. Curran
Laboratory Manager

May 14, 2001
Date

SEVERN TRENT SERVICES

STL Connecticut

7001-1738A
ROUX ASSCOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at the proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5972A GC/MS/DS.

Sample Calculation:

Sample ID –MW-23I
Compound –Acetone

$$\frac{(15228)(250)(1)}{(298644)(1.084)(5)} = 2.35 = 2 \text{ UG/L.}$$

Sample MW-24I was analyzed at a 1:2 dilution due to high target compound concentrations.

The spike compound percent recoveries were within the laboratory generated guidelines in the independent source quality control samples (020PPB_QCS) except for bromomethane, chloroethane, methylene chloride and acetone.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems.

Sample Calculation:

Sample ID – MW-2I
Compound – Di-n-butylphthalate

$$\frac{(131657)(40)(1000)(1.0)}{(997196)(1.494)(2)(1000)} = 1.76 = 2 \text{ ug/l}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted and concentrated without any apparent problems.

Surrogate recovery for Tetrachloro-m-xylene was above QC limits in MW-2I.

Results were reported to the MDL in order to meet client requested detection limits.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID - PBLK91QC2
Compound – Aroclor-1260 peak 18.33

$$\frac{(2002902\text{area})(10000\text{ul})}{(4266014\text{area/ng})(1000\text{ml})(1\text{ul})} = 4.7\ \text{ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1743A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at the proper temperature.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3550B/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Samples SURFACE #8/0-2, SURFACE #5/0-2, and SURFACE #1/0-2 had one surrogate out of recovery criteria. The samples were reextracted one day out of hold. The reanalyses of the samples exhibited acceptable surrogate recoveries. The reextracts have been designated with the suffix "RE".

The spike recovery for the compound, pentachlorophenol, was outside recovery limits for SURFACE #4/0-2MS/MSD.

The %RPD for the compound, pentachlorophenol, was outside recovery limits for the MS/MSD.

Sample SURFACE #5/0-2RE was analyzed at a 1:2 dilution due to the presence of high levels of target compounds.

Sample Calculation:

Sample ID – SURFACE #3/0-2
Compound - phenanthrene

$$\frac{(13601)(40)(500)(1.0)}{(892908)(.949)(2.0)(15.0)(.98)} = 10.92 = 11 \text{ ug/kg}$$

7001-1757A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at the proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016/3000 Concentrator/Archon 4552 autosampler interfaced with a Hewlett Packard Model 5971A/5972A GC/MS/DS.

Sample Calculation:

Sample ID –MW-31I
Compound –Trichloroethene

$\frac{(1126185)(250)(1)}{(2686258)(.380)(5)} = 55.16 = 55$ UG/L.

The spike compound percent recoveries were within the laboratory generated guidelines in the independent source quality control samples (020PPB_QCS) except for bromomethane, chloroethane and acetone in file, T4439.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted and concentrated without any apparent problems.

Results were reported to the MDL in order to meet client requested detection limits.

Surrogate recovery for Tetrachloro-m-xylene was above QC limits in PBLK16, PBLK16QC2, MW-33D and REP-3. Coelution with a contaminant peak was suspected, resulting in elevated recoveries.

The surrogate, Tetrachloro-m-xylene, was outside of retention time windows in PBLK16QC2 and MW-33D due to coelution with a contaminant peak on the DB-1701 column.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID - MW-31IMSD
Compound – Aroclor-1260 peak 18.33

$$\frac{(714168\text{area})(10000\text{ul})}{(4552075\text{area/ng})(1000\text{ml})(1\text{ul})} = 1.6 \text{ ug/L}$$

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, pyrene, was above recovery limits for MW-31IMSD.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKOQFMS, SBLKPQFMS and SBLKUPFMS. The spike recovery for the compound, 2,4-dinitrophenol, was below recovery limits for SBLKUPFMS.

Sample Calculation:

Sample ID – MW-26D
Compound - naphthalene

$$\frac{6109(40)1000}{724075(1.025)2(1000)} = 0.16 = 0.2 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

Selenium failed the controls for spike recovery analysis of total sample MW-31I resulting in one "N" flag.

Sodium recovered slightly above lab criteria for the LCS sample. No corrective action was taken because of the rush turn-around time.

No other problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

7001-1829A
ROUX ASSOCIATES

Case Narrative

Sample Receipt – All samples were received in good condition and at the proper temperature.

Volatile Organics – Volatile organics were determined by purge and trap GC/MS using guidance provided in Method 5030B/8260B. The instrumentation used was a Tekmar Model 2000/2016 Concentrator interfaced with a Hewlett Packard Model 5970A GC/MS/DS.

Sample Calculation:

Sample ID –MW-29D
Compound –Methylene Chloride

$\frac{(19438)(250)(1)}{(343677)(1.528)(5)} = 1.85 = 2$ UG/L.

The spike compound percent recoveries were within the laboratory generated guidelines in the independent source quality control sample (020PPB_QCS) except for bromomethane in file M5221.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS according to NYSDEC '95 Protocols using guidance provided in Methods 3510C/8270C. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

All samples were extracted, concentrated and analyzed without any apparent problems, except as noted below.

The spike recovery for the compound, 2,4,5-trichlorophenol, was below recovery limits for SBLKWSFMS and SBLKDSFMS. The spike recoveries for the compounds, benzoic acid and pentachlorophenol, were above recovery limits for SBLKWSFMS.

Sample Calculation:

Sample ID – MW-34D
Compound – naphthalene

$$\frac{12490(40)1000}{648540(0.959)2(940)} = 0.43 = 0.4 \text{ ug/L}$$

Metals – ICAP metals were determined using a JA61E trace ICAP; mercury was determined by cold vapor technique using a Leeman Labs mercury analyzer; following guidance provided in SW846 according to methods: ICAP – 3010A/6010B; mercury-7470A.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using guidance provided in Methods 3510C/8082. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni63).

All samples were extracted and concentrated without any apparent problems.

Surrogate recovery for Tetrachloro-m-xylene was above QC limits in PBLK19QC2 and MW-31D.

Results were reported to the MDL.

Manual integrations were performed if required, and any affected peaks were designated with an "MM" on the area report in the column titled "Code". Manual integrations were initialed by the analyst that performed the integration.

Sample Calculation:

Sample ID – PBLK26QC2
Compound - Aroclor-1260 peak 18.25

(2144546area)(1000ul) = 4.3 ug/L
(4993236area/ng)(1000ml)(1ul)

Classical Chemistry - Listed below are the wet chemistry analyte methods and references for the samples analyzed in this SDG. No analytical problems were encountered and all holding times were met.

Analyte	Method	Reference
Hexavalent Chromium	7196	1
Cyanide – Total	9012	1

References:

1. Test Methods for the Evaluation of Solid Wastes, SW846, 3rd ed., 1986.

APPENDIX J

Phytoremediation Pilot Study

1.0 PHYTOREMEDIATION PILOT STUDY

A phytoremediation pilot study was performed to determine whether phytoremediation is a viable remedial technology for the removal and/or degradation of CVOCs in groundwater at the Site. The use of plants (e.g., trees) to promote the insitu treatment of contaminants in soil and groundwater, referred to as phytoremediation, is a viable, innovative, cost effective, and aesthetically appealing remediation alternative. It was anticipated that phytoremediation would be suited for use at the Site because of the relatively shallow water table (between 8 ft to 10 ft bls) and the anticipated redevelopment plans (i.e., residential with landscaped areas).

Phytoremediation removes a variety of organic contaminants including PCE and its associated breakdown products from the subsurface through transformation, bioremediation, and filtration. Plants act as natural pumps for groundwater. Along with water, the plants also uptake and transform contaminants from soil and groundwater through the roots. This action physically removes contaminants from the subsurface. Organic contaminants that are taken up by the plants are transformed and ultimately expired through the leaves as innocuous carbon dioxide and water. Contaminants in groundwater that are drawn to the roots become concentrated in the root zone through sorption and become available for biodegradation. In a similar manner that the leaves transpire carbon dioxide and water, the roots release oxygen to the subsurface. The boost of oxygen from the roots promotes propagation of bacteria in the root zone, which in turn, aerobically degrade the organic contaminants during metabolic processes.

The area of the Site that was selected for the pilot study is located in the southeastern portion of the Site near former Monitoring Well MW-6, where one of the highest PCE concentrations was previously detected in groundwater (Figure J-1). Additionally, based on the initial groundwater elevation information, the pilot study area was located directly downgradient from a presumed upgradient portion of the Site where concentrations of PCE and the associated breakdown products were detected during the September 1999 sampling event.

The phytoremediation pilot study field tasks included soil sampling, installation of monitoring wells, tree planting, and groundwater monitoring. A description of each field task is provided below. Additionally, a brief description of the data evaluation for the effectiveness of the pilot study is provided below.

1.1 Soil Sampling

Prior to planting, two composite soil samples from the pilot study area were collected for agronomic analyses to determine nutrient levels in the soil and to identify soil components that may be potentially toxic to the trees, if any. Based on available soil quality data, it was not anticipated that the soil would be toxic to the trees. These samples were collected during the drilling of the monitoring well pilot boreholes (see below).

1.2 Monitoring Well Installation

Two groundwater monitoring wells (i.e., MW-27 and MW-28) were installed prior to the tree planting to monitor the effectiveness of the phytoremediation (Plate 2 of the report). These wells were installed using a hollow-stem auger drilling rig and constructed of 2-inch diameter PVC casing and screen. One of the wells (MW-27) was installed in a presumed upgradient location of the pilot study test area and the other well (MW-28) was installed at a presumed downgradient location. The selection of these up and downgradient locations were based on a groundwater flow map constructed from water-level measurements collected in the fall of 1999.

1.3 Tree Planting

The phytoremediation pilot study entailed the installation of 60, 12-ft tall, one-year old, rooted hybrid poplar trees (Figure J-1). The selection of the hybrid poplar tree was based on its high water uptake and evapotranspiration rates, its ability to withstand winter climates, and its rapid root development.

The trees were planted at a depth of approximately 9 ft bls, which is within the top 1 ft of the water table. This planting depth was selected to promote rapid root propagation into the shallow groundwater at the Site. Planting entailed drilling a boring using a hollow-

stem auger drill rig followed by the installation of the trees. During planting, the trees were placed at 5-ft intervals along rows spaced approximately 5 ft apart. The plot contained five rows in a north/south direction by of six rows in a east/west direction (Figure J-1). Two trees were planted at each of the 30 locations. The phytoremediation test plot measures 20 ft by 25 ft. After the trees were placed in the ground, fertilizer pellets and a soil humus mixture was added around the trees. To promote root development and support the long term viability of the trees, watering of the trees with potable water was performed periodically depending upon the weather conditions.

1.4 Groundwater Monitoring

Comparison of the monitoring results (i.e., quality and water-level measurements) from two wells (MW-27 and MW-28) were used to determine the effect of the phytoremediation. The initial groundwater monitoring was performed on July 20, 2000 prior to planting. The results from this monitoring round were used to establish background (i.e., pre-phytoremediation conditions) water-level elevations and groundwater quality at the pilot study area. Subsequently, monitoring was performed on August 23, 2000 approximately one month after planting. While the IWP intended that quarterly sampling would be conducted for one year, no sampling was conducted during the second and third quarters because this was a period of plant dormancy (i.e., winter season). Groundwater samples from these two wells were sampled during the July 2001 sampling round.

The results of the groundwater monitoring from these wells were used to evaluate the effects of the trees on groundwater elevations and quality as they continue to grow. Samples were analyzed for CVOCs using the USEPA Method 8260.

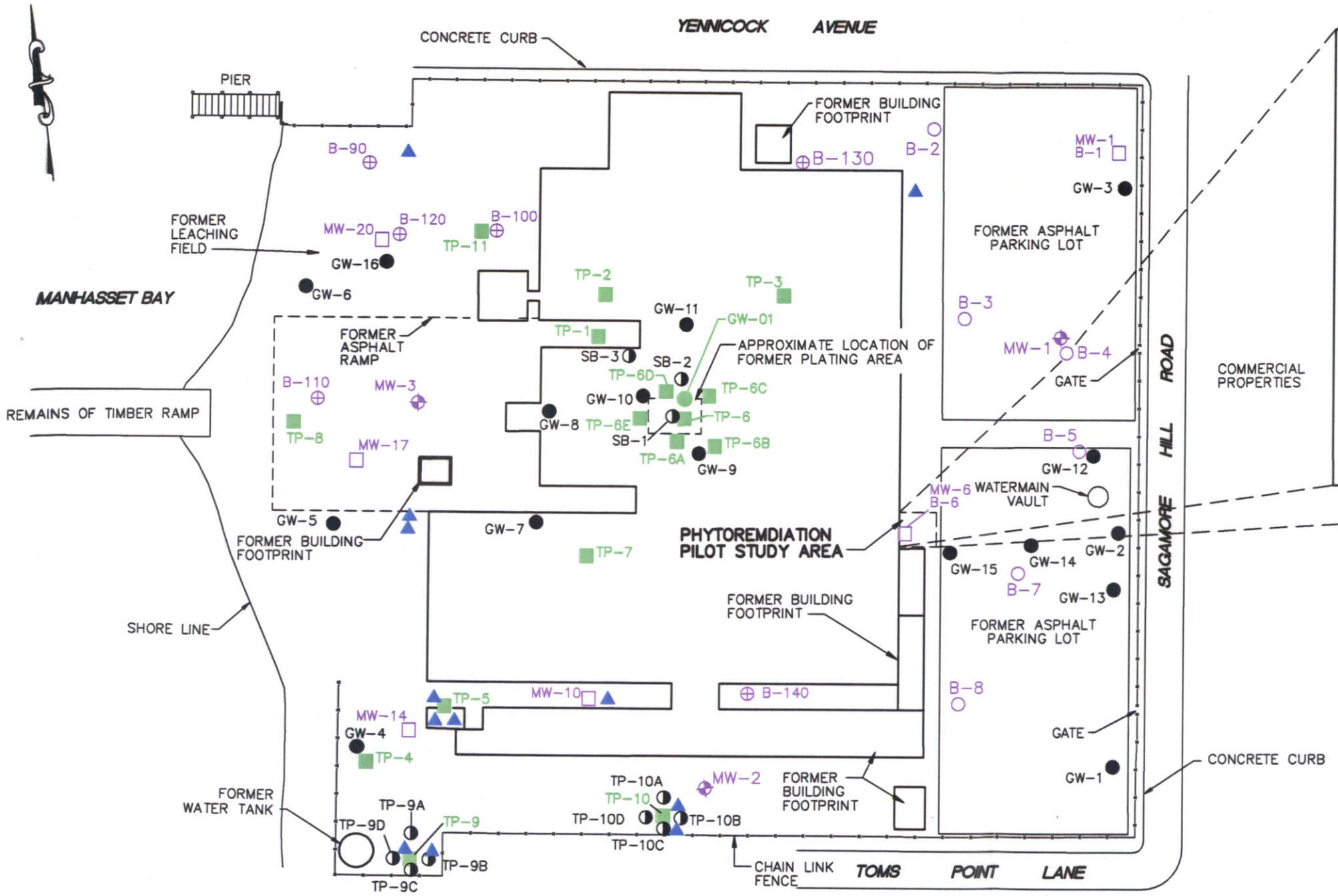
1.5 Phytoremediation Pilot Study Discussion

A discussion regarding the preliminary results is presented in this section to provide an update. As stated in Section 1.0 of the report, information regarding the development of remedial alternatives will be provided in a separate report.

Groundwater elevations were measured before and after the tree planting to evaluate the effect that the trees had on the water table surface. Based on measurements collected on July 20, 2000 and August 23, 2000, there was no perceived change in the elevation of the water table near these wells that could be attributed to the trees. It is important to note that Monitoring Wells MW-27 and MW-28 were installed as upgradient and downgradient phytoremediation plot wells. These well locations were selected based on the limited groundwater flow data generated at the time of installation. Based on a better understanding of the groundwater flow direction at the water table (see Section 4.3 of the report), these wells are actually located cross gradient from each other.

The analytical results of the groundwater samples collected on July 20, 2000 indicate that PCE and TCE marginally exceeded their respective NYSDEC AWQSGVs. PCE was detected at 19 micrograms per liter (µg/L) and 84 µg/L in Monitoring Wells MW-27 and MW-28, respectively, and TCE was detected at an estimated concentration of 4 ug/L and at 21 µg/L in Monitoring Wells MW-27 and MW-28, respectively. Similarly, the analytical results of the groundwater samples collected on August 23, 2000 indicate that PCE and TCE marginally exceeded their respective NYSDEC AWQSGVs. PCE was detected at 13 ug/L and 69 ug/L in Monitoring Wells MW-27 and MW-28, respectively, and TCE was detected at 8 ug/L and 17 ug/L in Monitoring Wells MW-27 and MW-28, respectively.

A comparison of the two sample data sets and the similarities in the respective concentrations of PCE and TCE indicate that the phytoremediation plot did not have any beneficial effect on the groundwater quality in this area of the Site. However, based on this initial data set, the phytoremediation technology is still under consideration and will be evaluated as part of the remedial alternatives for the Site.



LEGEND

- MW-27 ⊕ — LOCATION AND DESIGNATION OF MONITORING WELL
- GW-7 ● — LOCATION AND DESIGNATION OF GEOPROBE POINT INSTALLED BY ROUX ASSOCIATES, INC.
- TP-9D SB-1 ◑ — LOCATION AND DESIGNATION OF FORMER SOIL BORING SAMPLED BY ROUX ASSOCIATES, INC.
- GW-01 ● — LOCATION AND DESIGNATION OF GEOPROBE POINT INSTALLED BY CA RICH CONSULTANTS, INC.
- TP-5 ■ — LOCATION AND DESIGNATION OF FORMER TEST PIT EXCAVATED BY CA RICH CONSULTANTS, INC.
- ▲ — LOCATION OF FORMER UNDERGROUND STORAGE TANK
- MW-14 □ — LOCATION AND DESIGNATION OF FORMER MONITORING WELL INSTALLED BY SOIL MECHANICS DRILLING CORPORATON
- MW-1 ⊕ — LOCATION AND DESIGNATION OF EXISTING MONITORING WELL INSTALLED BY SOIL MECHANICS DRILLING CORPORATION
- B-100 ⊕ — LOCATION AND DESIGNATION OF DRY WELL SAMPLED BY SOIL MECHANICS DRILLING CORPORATION
- B-8 ○ — LOCATION AND DESIGNATION OF FORMER SOIL BORING SAMPLED BY SOIL MECHANICS DRILLING CORPORATION

NOTE: SOIL MECHANICS DRILLING CORPORATION DESIGNATED TWO MONITORING WELLS AS MW-1

PLEASE NOTE THAT THE LOCATIONS OF THE MONITORING WELLS INSTALLED BY SOIL MECHANICS DRILLING CORPORATION, THE TEST PITS AND THE GEOPROBE POINT INSTALLED BY CA RICH CONSULTANTS, INC., THE SOIL BORINGS SAMPLED BY ROUX ASSOCIATES, INC., AND THE FORMER USTs WERE NOT SURVEYED. THEREFORE, THESE LOCATIONS SHOWN ARE CONSIDERED APPROXIMATE. THE BUILDING FOOTPRINT WAS OBTAINED FROM THE APRIL 23, 1951 AERIAL PHOTOGRAPH.

120' 0 120'

Title:

PHYTOREMEDIATION PLOT PLAN

FORMER THYPIN STEEL FACILITY
MANORHAVEN, NEW YORK

Prepared For:
MBA–MANORHAVEN, LLC
PRINCETON, NEW JERSEY

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.W.	Date: 12SEPT01	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	J-1
Project Mgr: S.J.G.	Office: NY	
File No: MBA0111454	Project: 77101Y	

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APPENDIX K

Waste Characterization Analytical Data and Offsite Disposal Tracking

DISPOSAL TRACKING FORM

Fromer Thypin Steel, Inc. Facility, Manorhaven, New York

DATE	LOCATION OF CONTAMINANT SOURCE	TRUCK LICENSE PLATE #	TRAILER LICENSE PLATE #	BOX #	MANIFEST #	TSDF	MEDIA OF CONCERN	AMOUNT DISPOSED	GENERAL DESCRIPTION & COMMENTS	INITIALS
6/26/2001	Test Pits TP-32 & TP-16	AA402E/NJ	N/A	625	N9-3008	Soil Safe, Inc.	(1)	15.00 tons	Wood Debris	ML
6/26/2001	Test Pits TP-32 & TP-16	AA395E/NJ	N/A	675	N9-3008	Soil Safe, Inc.	(1)	15.17 tons	Wood Debris	ML
6/27/2001	Test Pits TP-32 & TP-16	AA402E/NJ	N/A	625	N9-3008	Soil Safe, Inc.	(1)	17.15 tons	Wood Debris	ML
6/27/2001	Test Pits TP-32 & TP-16	AA134R/NJ	N/A	634	N9-3008	Soil Safe, Inc.	(1)	16.86 tons	Wood Debris	ML
6/27/2001	Test Pits TP-32 & TP-16	AF805B/NJ	N/A	705	N9-3008	Soil Safe, Inc.	(1)	18.75 tons	Wood Debris	ML
6/27/2001	Test Pits TP-32 & TP-16	AF904M/NJ	T4X 985/NJ	3005	N9-3008	Soil Safe, Inc.	(1)	12.75 tons	Wood Debris	ML
6/27/2001	Test Pits TP-32 & TP-16	AF904M/NJ	T4X 985/NJ	3005	N9-3008	Soil Safe, Inc.	(1)	13.59 tons	Wood Debris	ML
6/28/2001	Test Pits TP-32 & TP-16	AF904M/NJ	T4X 985/NJ	3005	N9-3008	Soil Safe, Inc.	(1)	9.40 tons	Wood Debris	ML
6/22/2001	Test Pits TP-16, TP-21 Pipe, and TP-23 Pipe	AF904M/NJ	T4X 985/NJ	2523	NJA3262508	Casie Ecology Oil Salvage, Inc.	(1)	16.44 tons	Green Material	ML
6/22/2001	Test Pits TP-16, TP-21 Pipe, and TP-23 Pipe	AE965M/NJ	N/A	2024	NJA3262507	Casie Ecology Oil Salvage, Inc.	(1)	18.11 tons	Green Material	ML
7/5/2001	Test Pits TP-16, TP-21 Pipe, and TP-23 Pipe	AF904M/NJ	T4X 985/NJ	2015	NJA3262509	Casie Ecology Oil Salvage, Inc.	(1)	17.95 tons	Green Material	KS
8/22/2001	TP-23 Manhole			Drums	NJA3262625	Casie Ecology Oil Salvage, Inc.	(1)	(2)	Elemental Mercury	CB
8/22/2001	Water Holding Tank	AF144P	312435A	A084	0002	Clean Water of New York, Inc.	(3)	1,250 gallons	Purge Water from MW-26I, MW-26D, & MW-30 cluster through MW-35 cluster	CB
8/22/2001	Water Holding Tank	AF8814	N/A	A084	0001	Clean Water of New York, Inc.	(3)	5,100 gallons	Purge Water from MW-26I, MW-26D, & MW-30 cluster through MW-35 cluster	CB

Note:
TSDF - Transportation and Storage Disposal Facility
(1) - Subsurface Building Structure Material
(2) - Five 55-gallon Capacity Drums
(3) - Purge, Decontamination and Development Water

Wednesday. July 18, 2001

Bo Iwaskow
Capitol Environmental Services
36 Roosevelt Avenue
Westwood, NJ
07675

Soil Safe®

Recycling of Construction Materials/ Soil/Asphalt

RE: INVOICE SUMMARY FOR: MBA- Manorhaven LLC

DEAR Chris Lee,

SOIL SAFE, INC. WAS CONTRACTED TO COMPLETE THE PETROLEUM CONTAMINATED SOIL REMOVAL REQUIRMENTS FOR THE SITE:

MBA- Manorhaven LLC
5 Sagamore Hill Drive

Manor Haven , NY 11050-

THE ANALYTICAL RESULTS AND SITE AUDIT INFORMATION FOR THE SUBJECT WERE CAREFULLY REVIEWED AND FOUND TO BE IN COMPLIANCE WITH SOIL SAFE'S STANDARDS FOR MATERIAL ACCEPTANCE.

SOIL SAFE APPROVAL NUMBER: **N9-3008** HAS BEEN ASSIGNED TO THIS PROJECT.

THE LAST TRUCK FOR THIS INVOICE WAS RECEIVED AND ACCEPTED ON **7/11/01.**

EACH TRUCK WAS MANIFESTED AND WEIGHED ON A CERTIFIED SCALE. THE FINAL AMOUNTS OF MATERIAL RECEIVED FOR THIS INVOICE INCLUDE A TOTAL OF:

13.59 TONS

OF SOIL TRANSPORTED ON:

1 TRUCK(S).

A NOTORIZED CERTIFICATE OF RECYCLE WILL BE ISSUED UPON RECEIPT OF FULL PAYMENT.

IF YOU HAVE ANY QUESTIONS WITH REGARDS TO THE ENCLOSED INFORMATION, PLEASE CONTACT ME AT (410) 327-5753.

SINCERELY,

SOIL SAFE, INC.

Kelly Rae Fiorillo

KELLY RAE FIORILLO

ADMINISTRATOR

Soil Safe®

Recycling of Construction Materials/ Soil/Asphalt

Thursday July 5, 2001

Capitol Environmental Services
36 Roosevelt Avenue
Westwood, NJ 07675

Attention: Bo Iwaskiw

RE: Invoice Summary for: MBA Manorhaven LLC
5 Sagamore Hill Drive
Manor Haven, NY 11050

Soil Safe, Inc. was contracted to accept petroleum contaminated soil for the **MBA-Manor Haven site.**

The analytical results and site audit information for the subject job were carefully reviewed and found to be in compliance with Soil Safe's standards for material acceptance. After approval, Soil Safe approval number **N9-3008** was assigned to this project.

The last truck was received and accepted on **06/28/2001**. Each truck was manifested and weighed on a certified scale. The amount of material for this invoice includes a total of **105.08** tons of soil, transported on 7 trucks.

A notarized Certificate of Recycle will be issued upon receipt of full payment.

If you have any questions with regards to the enclosed information, please contact me at (410) 327-5753.

Sincerely,
Soil Safe, Inc.

Kelly Fiorillo
Administrator

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name MBA- Manorhaven LLC

Address

Phone No.

Shipping Location MBA- Manorhaven LLC

Address 5 Sagamore Hill Drive

Manor Haven, NY 11050-

Phone No.

Approval Number N9-3008

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

11:58 06/28/2001 33.51 TN G GROSS

ID 3005 24.11 TN T TARE

7 9.40 TN N NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bo Iwasko — 6/28/01

Generator Authorized Agent Name — Signature — Shipment Date

TRANSPORTER

Transporter Name Maumee Express Inc

Address 50 Howard st

Piscataway N.J.

Driver Name (Print) Glenn W Frank

Vehicle License No./State AF-904M NJ T4x985 NJ

Truck Number 3005 T-5058 Box 2530

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature — 06-28-01 Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature — 06-28-01 Delivery Date

DESTINATION

Site Name ~~Soil Safe, Incorporated~~ Phone No. ~~(856) 339-9400~~

Address ~~107 Tilbury Road Salem, NJ 08079~~

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Z8277 — MHL — 6-28-01

Name of Authorized Agent — Signature — Receipt Date

Box # 9756

(2)

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name ~~MBA- Manorhaven LLC~~ Shipping Location ~~MBA- Manorhaven LLC~~

Address _____ Address ~~5 Saganore Hill Drive~~

_____ ~~Manor Haven, NY 11050~~

Phone No. _____ Phone No. _____

Approval Number: **~~N9-3008~~**

Description of Material: Non-Regulated Petroleum Contaminated Soil; Non DOT/RCRA Regulated

14:30 06/26/2001	29.75 TN G (M)	GROSS
ID 625	14.75 TN T	TARE
# 12	15.00 TN N	NET
15.00		TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bill Burns _____ 6/26/01

Generator Authorized Agent Name — Signature — Shipment Date

TRANSPORTER

Transporter Name Freehold Cartage Driver Name (Print) Bill Burns

Address 825 Hwy 33 Freehold N.J. 07728 Vehicle License No./State AA402E/NJ

Truck Number 625

I hereby certify that the above named material was picked up at the generator site listed above.

Bill Burns 6/26/01

Driver Signature — Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Bill Burns 6/26/01

Driver Signature — Delivery Date

DESTINATION

Site Name ~~Soil Safe, Incorporated~~ Phone No. ~~(856) 339-9400~~

Address ~~107 Tilbury Road Salem, NJ 08079~~

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____ 6-26-01

Name of Authorized Agent — Signature — Receipt Date

Box # 9459.

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name ~~MBA Manorhaven LLC~~ Shipping Location ~~MBA Manorhaven LLC~~

Address _____ Address ~~5 Sagamore Hill Drive~~

~~Manor Haven, NY 11050~~

Phone No. _____ Phone No. _____

14:39 06/26/2001 29.91 TN G (M) GROSS

ID 675 14.74 TN T TARE

13 15.17 TN N NET

15.17 TONNAGE

Approval Number: N9-3008

Description of Material: Non-Regulated Petroleum Contaminated Soil; Non DOT/RCRA Regulated

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ 6/26/01 Shipment Date

TRANSPORTER

Transporter Name Freehold Cartage Inc Driver Name (Print) Stephen Klein

Address 825 Rt 33 Vehicle License No./State AA395E - NJ

Freehold N.J. Truck Number 675

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ 06/26/01 Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ 6/26/01 Delivery Date

DESTINATION

Site Name ~~Soil Safe, Incorporated~~ Phone No. ~~(856) 339-9400~~

Address ~~107 Tilbury Road Salem, NJ 08079~~

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____ Signature _____ 6-26-01 Receipt Dat

(4) Box 9821

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name MBA- Manorhaven LLC Shipping Location MBA- Manorhaven LLC

Address _____ Address 5 Sagamore Hill Drive

, _____ Manor Haven, NY 11050-

Phone No. _____ Phone No. _____

Approval Number N9-3008

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

14:55 06/27/2001 32.05 TN G (M) GROSS

ID 625 14.90 TN T TARE

18 17.15 TN N NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ Shipment Date 6/27/01

TRANSPORTER

Transporter Name Freehold Cartage Driver Name (Print) Bill Burns

Address 825 Hwy 33 Freehold N.J. 07728 Vehicle License No./State AA402E/NJ

Truck Number 625

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Shipment Date 6/27/01

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date 6/27/01

DESTINATION

Site Name Soil Safe, Incorporated Phone No. (856) 339-9400

Address 107 Tilbury Road Salem, NJ 08079

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

18277 _____ 6-27-01

Name of Authorized Agent Signature Receipt Date

5

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name MBA- Manorhaven LLC Shipping Location MBA- Manorhaven LLC

Address _____ Address 5 Sagamore Hill Drive

, _____ Manor Haven, NY 11050-

Phone No. _____ Phone No. _____

Approval Number N9-3008

Description of Material

Non-Regulated Petroleum
Contaminated Soil

Non DOT/RCRA Regulated

14:58 06/27/2001 31.64 TN GROSS
ID 634 14.78 TN T TARE
21 16.86 TN N NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ Shipment Date 6/27/01

TRANSPORTER

Transporter Name Freehold Cartage Inc Driver Name (Print) Ralph Gargaloni

Address 33 East Freehold N.J. Vehicle License No./State AD 1340 N.J.

Truck Number 634

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Shipment Date 6/27/01

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date 6/27/01

DESTINATION

Site Name Soil Safe, Incorporated Phone No. (856) 339-9400

Address 107 Tilbury Road Salem, NJ 08079

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent 28277 Signature MAL Receipt Date 6-27-01

(6)

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name MBA- Manorhaven LLC

Address _____

_____ ,

Phone No. _____

Shipping Location MBA- Manorhaven LLC

Address 5 Sagamore Hill Drive

Manor Haven, NY 11050-

Phone No. _____

Approval Number N9-3008

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

15:04 06/27/2001 33.55 TN G (M) GROSS

ID 705 14.80 TN T TARE

23 18.75 TN N NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ Shipment Date 6/27/01

TRANSPORTER

Transporter Name Freehold Cartage, Inc

Driver Name (Print) Tim Purko

Address Freehold, NJ

Soil Safe, Incorporated

Vehicle License No./State AF805B NJ

(856) 339-9400

Truck Number 705

107 Tilbury Road Salem, NJ 08079

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Shipment Date 6 2701

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date 6-27-01

DESTINATION

Site Name Soil Safe Inc

Phone No. 8563399400

Address 107 Tilbury Rd Salem NJ

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

28277 _____ 6-27-01

(3) Box 2019

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name ~~MBA Manorhaven LLC~~ Shipping Location ~~MBA Manorhaven LLC~~

Address _____ Address ~~5 Sagamore Hill Drive~~

_____ ~~Manor Haven, NY 11050~~

Phone No. _____ Phone No. _____

12:09 06/27/2001 36.69 TN G (M) GROSS

ID 3005 23.94 TN T TARE

11 12.75 TN N NET

12.75 TONNAGE

Approval Number N9-3008

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bo Walklin/Capitol 6/27/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name Maumee Express Inc

Address 50 Howard st

Piscataway NJ

Driver Name (Print) Glenn W Frank

Vehicle License No./State TRUCK - NJ AF904M / TRAILER NJ T4X 985

Truck Number 3005 T-5058 Box 2019

I hereby certify that the above named material was picked up at the generator site listed above.

06-27-01

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

06-27-01

Driver Signature Delivery Date

DESTINATION

Site Name ~~Soil Safe, Incorporated~~ Phone No. ~~(856) 339 9400~~

Address ~~107 Tilbury Road Salem, NJ 08079~~

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

6-27-01

Name of Authorized Agent Signature Receipt Date

Box 3010

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

09:13 07/11/2001 37.33 TN G (M) GROSS

ID 3005 23.74 TN T TARE

4 13.59 TN N NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

6/28/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No./State _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

07-01-01

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

07-11-01

Driver Signature Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

7/11/01

Name of Authorized Agent Signature Receipt Date

TR. AF904M
TLR- 74X 785

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

3262508

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYR000097618 — Manifest Document No. 62508
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.
A. State Manifest Document Number: **NJA 3262508**

3. Generator's Name and Mailing Address
NBA - Bayonne LLC
215 Nassau St., Princeton, NJ 08540
B. State Generator's ID-(Gen. Site Address)
5 Dupont Mill Dr, Bayonne, NJ
4. Generator's Phone (609) 497-8796
C. State Trans. ID-NJDEP 0214
Decal No. - 0214

5. Transporter 1 Company Name: Tanner Express, Inc.
6. US EPA ID Number: NJD066073880
D. Transporter's Phone (609) 747-9543
7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID-NJDEP
Decal No. -
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Caste Ecology Oil Salvage, Inc.
3200 North Mill Road
Vineland, NJ 08360
10. US EPA ID Number: NJD045995693
G. State Facility's ID
H. Facility's Phone (856) 696-4491

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	X	XXI	CM	XXX20	Y	D007
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. App#NBA2665-H EB6171
c. Box # 2523
b.
d.

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

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 368-2374 JOB#DEB16003

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 governm 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 th best waste management method that is available to me and that I can afford.

Printed/Typed Name — Signature — Month Day Ye

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Glenn W Frank — Signature — Month 06 Day 12 Ye

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Ye

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 — Month Day Ye

GENERATOR — TRANSPORTER — FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-7172

PRINT AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

CASIE | PROTANK
3209 North Mill Road • Vineland, NJ 08360 • Phone: 856-696-4401 • Fax: 856-696-7065
Recycling, Treatment & Storage of Hazardous Waste

LAND DISPOSAL RESTRICTION NOTIFICATION AND CERTIFICATION FORM

Generator Name: MBA-Manorhaven LLC

Address: 5 Sagamore Hill Dr., Manorhaven, NY 11050

Generator EPA ID: NYR000097618 State Manifest # NJA3262508

This land disposal restriction (LDR) notification must be submitted with the initial shipment of all new waste streams. Due to revised LDR notification requirements effective after August 23, 1998, previously approved waste streams will require re-notification on this form with the first shipment after that date. Subsequent notification is not required unless the process generating the waste stream changes.

(1) ***WASTE STREAM INFORMATION***

Box A: Check this box if this LDR certification has been supplied with a previous shipment. Additional information and certification is not required on this form.

Box B: List all EPA waste codes and subcategory reference letters (if applicable). Alternatively, attach and reference additional pages (e.g. profiles or lab pack slips) containing required information.

Box C: Indicate if waste stream is a wastewater (WW) or non-wastewater (NWW) (aqueous waste streams containing <1% total organic carbon (TOC) and < 1% total suspended solids (TSS) are wastewaters. All other streams are non-wastewaters).

	A	B	C
Line #	Previously shipped LDR on file	EPA Waste Codes and SubcategoryReference Letter (If applicable)	NWW/WW *Circle One*
Exmpl.	Last	D001 (A); D018; D008(A)	(NWW)/WW
A		D007	(NWW)/WW
B			NWW/WW
C			NWW/WW
D			NWW/WW

Subcategory Reference Letters (EPA codes not listed here do not have subcategories)

D001	A	Ignitable characteristic wastes, except high TOC ignitable liquids subcategory
D001	B	High TOC (>10%) Ignitable liquid subcategory
D003	A	Reactive sulfide subcategory
D003	B	Reactive cyanide subcategory
D003	C	Water reactive subcategory
D003	D	Other reactive subcategory
D006	A	Cadmium non-battery subcategory
D006	B	Cadmium containing batteries subcategory
D008	A	Lead non-battery subcategory
D008	B	Lead acid batteries subcategory
D009	A	High mercury organic subcategory (≥ 260 PPM Total Mercury)
D009	B	High mercury inorganic subcategory (≥260 PPM Total Mercury)
D009	C	Low mercury subcategory (< 260 PPM Total Mercury)
D009	D	Mercury wastewater subcategory

Generator Copy

(2) SPENT SOLVENT WASTE CONSTITUENTS

Circle applicable waste code(s) and constituent(s) for each manifest line item containing EPA spent solvent waste codes F001-F005.

F001 A B C D F002 A B C D F003 A B C D F004 A B C D F005 A B C D

acetone-	A	B	C	D
benzene-	A	B	C	D
n-butyl alcohol-	A	B	C	D
iso-butyl alcohol-	A	B	C	D
carbon disulfide-	A	B	C	D
carbon tetrachloride-	A	B	C	D
chlorobenzene-	A	B	C	D
m-cresol-	A	B	C	D
o-cresol-	A	B	C	D
p-cresol-	A	B	C	D
cresylic acid-	A	B	C	D
cyclohexanone-	A	B	C	D
o-dichlorobenzene-	A	B	C	D
ethyl acetate-	A	B	C	D
ethyl benzene-	A	B	C	D
ethyl ether-	A	B	C	D
methanol-	A	B	C	D
methylene chloride-	A	B	C	D
methyl ethyl ketone-	A	B	C	D
methyl isobutyl ketone-	A	B	C	D
nitrobenzene-	A	B	C	D
pyridine-	A	B	C	D
tetrachloroethylene-	A	B	C	D
toluene-	A	B	C	D
1,1,1,-trichloroethane-	A	B	C	D
1,1,2,-trichloroethane-	A	B	C	D
trichloroethylene-	A	B	C	D
trichloromonofluoromethane-	A	B	C	D
1,1,2-trichloro-1,2,2,-trifluoroethane-	A	B	C	D
xylenes-	A	B	C	D

(3) UNDERLYING HAZARDOUS CONSTITUENTS

For characteristically hazardous waste streams (EPA codes D001-D043), please list all underlying hazardous constituents as defined in 40 CFR 268 (2)(i) that are present at concentrations exceeding the universal treatment standards listed in 40 CFR 268.48 (F001-F005 constituents identified in section (2) and specific constituents for EPA U-, P-, and D004-D043 codes listed in Section (1) do not need to be listed in this section).

A. _____ __ None Present

B. _____ __ None Present

C. _____ __ None Present

D. _____ __ None Present

(4) HOW MUST THESE WASTE STREAMS BE MANAGED?

For each manifest line item, circle applicable treatment/requirement. For contaminated soil, circle applicable choice as indicated.

A B C D This waste is nonhazardous per CFR 261, and is not restricted from land disposal under 40 CFR 268 subpart D.

A B C D This is an EPA hazardous waste that is not contaminated soil or hazardous debris. Waste must be treated to the appropriate treatment standard set forth in 40 CFR subpart D Prior to land disposal.

A B C D This is a hazardous debris and is subject to the alternative treatment standards of 40 CFR 268.45.

(A) B C D This is a hazardous waste contaminated soil. This contaminated soil does/does not (circle one) contain listed hazardous wastes and does/does not (circle one) exhibit a characteristic of hazardous waste and is subject to/complies with (circle one) the soil treatment standards as provided by 268.49 (c) or the universal treatment standards.

A B C D This is an EPA hazardous waste that meets all applicable treatment standards set forth in 40 CFR 268 subpart D, and can be landfilled without further treatment. I certify under penalty of law that I have personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004 (d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(5) CERTIFICATION

I certify that all information on this and all associated documents is complete and accurate to the best of my knowledge.

Signature: _____ Title: _____

Printed Name: _____ Date: _____

AE 965M

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

3262507

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

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYR000097618 Manifest Document No. 62907

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number **NJA 3262507**

3. Generator's Name and Mailing Address
NBA - Manorhaven LLC
215 Nassau St., Princeton, NJ 08540
4. Generator's Phone (609) 497-0796

B. State Generator's ID-(Gen' Site Address)
5 Square Hill Dr., Manorhaven, NY11050

C. State Trans. ID-NJDEP
Decal No. -

5. Transporter 1 Company Name
Nunno Express, Inc.

6. US EPA ID Number NJD986560738

D. Transporter's Phone (908) 742-554

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID-NJDEP
Decal No. -

F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Caste Ecology Oil Salvage, Inc.
3200 North Hill Road
Vineland, NJ 08360

10. US EPA ID Number NJ0045995693

G. State Facility's ID

H. Facility's Phone (856) 696-44

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	X	XX	CM	XX 20	Y	D007
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

a. App#NBA2663-M ERG171

c. Box 2024

b.

d.

K. Handling Codes for Wastes Listed Above

a. c.

b. d.

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 560-2374 JUB#D681003

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 govern 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 best waste management method that is available to me and that I can afford.

Printed/Typed Name Signature Month Day

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day

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 Month Day

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-7172

CASIE | PROTANK
3209 North Mill Road • Vineland, NJ 08360 • Phone: 856-696-4401 • Fax: 856-696-7065
Recycling, Treatment & Storage of Hazardous Waste

LAND DISPOSAL RESTRICTION NOTIFICATION AND CERTIFICATION FORM

Generator Name: MBA-Manorhaven LLC

Address: 5 Sagamore Hill Dr., Manorhaven, NY 11050

Generator EPA ID: NYR000097618 State Manifest # NJA3262507

This land disposal restriction (LDR) notification must be submitted with the initial shipment of all new waste streams. Due to revised LDR notification requirements effective after August 23, 1998, previously approved waste streams will require re-notification on this form with the first shipment after that date. Subsequent notification is not required unless the process generating the waste stream changes.

(1) ***WASTE STREAM INFORMATION***

Box A: Check this box if this LDR certification has been supplied with a previous shipment. Additional information and certification is not required on this form.

Box B: List all EPA waste codes and subcategory reference letters (if applicable). Alternatively, attach and reference additional pages (e.g. profiles or lab pack slips) containing required information.

Box C: Indicate if waste stream is a wastewater (WW) or non-wastewater (NWW) (aqueous waste streams containing <1% total organic carbon (TOC) and < 1% total suspended solids (TSS) are wastewaters. All other streams are non-wastewaters).

	A	B	C
Line #	Previously shipped LDR on file	EPA Waste Codes and SubcategoryReference Letter (if applicable)	NWW/WW *Circle One*
Exmpl.	~~Yes~~	D001 (A); D018; D008(A)	(NWW)/WW
A		D007	(NWW)/WW
B			NWW/WW
C			NWW/WW
D			NWW/WW

Subcategory Reference Letters (EPA codes not listed here do not have subcategories)

D001	A	Ignitable characteristic wastes, except high TOC ignitable liquids subcategory
D001	B	High TOC (>10%) ignitable liquid subcategory
D003	A	Reactive sulfide subcategory
D003	B	Reactive cyanide subcategory
D003	C	Water reactive subcategory
D003	D	Other reactive subcategory
D006	A	Cadmium non-battery subcategory
D006	B	Cadmium containing batteries subcategory
D008	A	Lead non-battery subcategory
D008	B	Lead acid batteries subcategory
D009	A	High mercury organic subcategory (≥ 260 PPM Total Mercury)
D009	B	High mercury inorganic subcategory (≥260 PPM Total Mercury)
D009	C	Low mercury subcategory (< 260 PPM Total Mercury)
D009	D	Mercury wastewater subcategory

Generator Copy

(2) SPENT SOLVENT WASTE CONSTITUENTS

Circle applicable waste code(s) and constituent(s) for each manifest line item containing EPA spent solvent waste codes F001-F005.

F001 A B C D F002 A B C D F003 A B C D F004 A B C D F005 A B C D

acetone-	A	B	C	D
benzene-	A	B	C	D
n-butyl alcohol-	A	B	C	D
iso-butyl alcohol-	A	B	C	D
carbon disulfide-	A	B	C	D
carbon tetrachloride-	A	B	C	D
chlorobenzene-	A	B	C	D
m-cresol-	A	B	C	D
o-cresol-	A	B	C	D
p-cresol-	A	B	C	D
cresylic acid-	A	B	C	D
cyclohexanone-	A	B	C	D
o-dichlorobenzene-	A	B	C	D
ethyl acetate-	A	B	C	D
ethyl benzene-	A	B	C	D
ethyl ether-	A	B	C	D
methanol-	A	B	C	D
methylene chloride-	A	B	C	D
methyl ethyl ketone-	A	B	C	D
methyl isobutyl ketone-	A	B	C	D
nitrobenzene-	A	B	C	D
pyridine-	A	B	C	D
tetrachloroethylene-	A	B	C	D
toluene-	A	B	C	D
1,1,1,-trichloroethane-	A	B	C	D
1,1,2,-trichloroethane-	A	B	C	D
trichloroethylene-	A	B	C	D
trichloromonofluoromethane-	A	B	C	D
1,1,2-trichloro-1,2,2,-trifluoroethane-	A	B	C	D
xylenes-	A	B	C	D

(3) UNDERLYING HAZARDOUS CONSTITUENTS

For characteristically hazardous waste streams (EPA codes D001-D043), please list all underlying hazardous constituents as defined in 40 CFR 268 (2)(i) that are present at concentrations exceeding the universal treatment standards listed in 40 CFR 268.48 (F001-F005 constituents identified in section (2) and specific constituents for EPA U-, P-, and D004-D043 codes listed in Section (1) do not need to be listed in this section).

A. _____ __ None Present

B. _____ __ None Present

C. _____ __ None Present

D. _____ __ None Present

(4) HOW MUST THESE WASTE STREAMS BE MANAGED?

For each manifest line item, circle applicable treatment/requirement. For contaminated soil, circle applicable choice as indicated.

A B C D This waste is nonhazardous per CFR 261, and is not restricted from land disposal under 40 CFR 268 subpart D.

A B C D This is an EPA hazardous waste that is not contaminated soil or hazardous debris. Waste must be treated to the appropriate treatment standard set forth in 40 CFR subpart D Prior to land disposal.

A B C D This is a hazardous debris and is subject to the alternative treatment standards of 40 CFR 268.45.

(A) B C D This is a hazardous waste contaminated soil. This contaminated soil does/(does not) (circle one) contain listed hazardous wastes and does/does not (circle one) exhibit a characteristic of hazardous waste and is subject to/complies with (circle one) the soil treatment standards as provided by 268.49 (c) or the universal treatment standards.

A B C D This is an EPA hazardous waste that meets all applicable treatment standards set forth in 40 CFR 268 subpart D, and can be landfilled without further treatment. I certify under penalty of law that I have personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004 (d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(5) CERTIFICATION

I certify that all information on this and all associated documents is complete and accurate to the best of my knowledge.

Signature: RTT Title: Manager

Printed Name: Richard Thypin Date: 6/22/01

AF 904M NJ
LR 7y x 98 NJ

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

3262509

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYD000097618 — Manifest Document No. 62599
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NBA - Hanorhaven LLC
215 Nassau St., Princeton, NJ 08540
4. Generator's Phone (609) 497-0796

A. State Manifest Document Number **NJA 3262509**
B. State Generator's ID-(Gen. Site Address)
9 Sycamore Mill Dr., Hanorhaven, NJ 1150
C. State Trans. ID-NJDEP E50059
Decal No. - D850090

5. Transporter 1 Company Name
Mauser Express, Inc.
6. US EPA ID Number NJD986673580
D. Transporter's Phone (908) 742-5542

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID-NJDEP
Decal No. -
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Cecil Ecology Oil Salvage, Inc.
3289 North Mill Road
Vineland, NJ 08360
10. US EPA ID Number NJD045995693
G. State Facility's ID
H. Facility's Phone (856) 696-9401

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	X	XX	CM	XXX	20 Y	D007
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. App#NBA2663-N ERG171
c. Box 2015
b.
d.

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

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 368-2374 JOB#DEB1003

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 — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year 10 30 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

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 — Month Day Year

GENERATOR
TRANSPORTER
FACILITY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

CASIE | PROTANK
3209 North Mill Road • Vineland, NJ 08360 • Phone: 856-696-4401 • Fax: 856-696-7065
Recycling, Treatment & Storage of Hazardous Waste

LAND DISPOSAL RESTRICTION NOTIFICATION AND CERTIFICATION FORM

Generator Name: MBA-Manorhaven LLC

Address: 5 Sagamore Hill Dr., Manorhaven, NY 11050

Generator EPA ID: NYR000097618 State Manifest # NJA3262509

This land disposal restriction (LDR) notification must be submitted with the initial shipment of all new waste streams. Due to revised LDR notification requirements effective after August 23, 1998, previously approved waste streams will require re-notification on this form with the first shipment after that date. Subsequent notification is not required unless the process generating the waste stream changes.

(1) *WASTE STREAM INFORMATION*

Box A: Check this box if this LDR certification has been supplied with a previous shipment. Additional information and certification is not required on this form.

Box B: List all EPA waste codes and subcategory reference letters (if applicable). Alternatively, attach and reference additional pages (e.g. profiles or lab pack slips) containing required information.

Box C: Indicate if waste stream is a wastewater (WW) or non-wastewater (NWW) (aqueous waste streams containing <1% total organic carbon (TOC) and < 1% total suspended solids (TSS) are wastewaters. All other streams are non-wastewaters).

	A	B	C
Line #	Previously shipped LDR on file	EPA Waste Codes and SubcategoryReference Letter (if applicable)	NWW/WW *Circle One*
Exmpl.	✓	D001 (A); D018; D008(A)	(NWW)/WW
A		D007	(NWW)/WW
B			NWW/WW
C			NWW/WW
D			NWW/WW

Subcategory Reference Letters (EPA codes not listed here do not have subcategories)

D001	A	Ignitable characteristic wastes, except high TOC ignitable liquids subcategory
D001	B	High TOC (>10%) Ignitable liquid subcategory
D003	A	Reactive sulfide subcategory
D003	B	Reactive cyanide subcategory
D003	C	Water reactive subcategory
D003	D	Other reactive subcategory
D006	A	Cadmium non-battery subcategory
D006	B	Cadmium containing batteries subcategory
D008	A	Lead non-battery subcategory
D008	B	Lead acid batteries subcategory
D009	A	High mercury organic subcategory (≥ 260 PPM Total Mercury)
D009	B	High mercury inorganic subcategory (≥260 PPM Total Mercury)
D009	C	Low mercury subcategory (< 260 PPM Total Mercury)
D009	D	Mercury wastewater subcategory

Generator Copy

(2) SPENT SOLVENT WASTE CONSTITUENTS

Circle applicable waste code(s) and constituent(s) for each manifest line item containing EPA spent solvent waste codes F001-F005.

F001 A B C D F002 A B C D F003 A B C D F004 A B C D F005 A B C D

acetone-	A	B	C	D
benzene-	A	B	C	D
n-butyl alcohol-	A	B	C	D
iso-butyl alcohol-	A	B	C	D
carbon disulfide-	A	B	C	D
carbon tetrachloride-	A	B	C	D
chlorobenzene-	A	B	C	D
m-cresol-	A	B	C	D
o-cresol-	A	B	C	D
p-cresol-	A	B	C	D
cresylic acid-	A	B	C	D
cyclohexanone-	A	B	C	D
o-dichlorobenzene-	A	B	C	D
ethyl acetate-	A	B	C	D
ethyl benzene-	A	B	C	D
ethyl ether-	A	B	C	D
methanol-	A	B	C	D
methylene chloride-	A	B	C	D
methyl ethyl ketone-	A	B	C	D
methyl isobutyl ketone-	A	B	C	D
nitrobenzene-	A	B	C	D
pyridine-	A	B	C	D
tetrachloroethylene-	A	B	C	D
toluene-	A	B	C	D
1,1,1,-trichloroethane-	A	B	C	D
1,1,2,-trichloroethane-	A	B	C	D
trichloroethylene-	A	B	C	D
trichloromonofluoromethane-	A	B	C	D
1,1,2-trichloro-1,2,2,-trifluoroethane-	A	B	C	D
xylenes-	A	B	C	D

(3) UNDERLYING HAZARDOUS CONSTITUENTS

For characteristically hazardous waste streams (EPA codes D001-D043), please list all underlying hazardous constituents as defined in 40 CFR 268 (2)(i) that are present at concentrations exceeding the universal treatment standards listed in 40 CFR 268.48 (F001-F005 constituents identified in section (2) and specific constituents for EPA U-, P-, and D004-D043 codes listed in Section (1) do not need to be listed in this section).

A. _____ __ None Present

B. _____ __ None Present

C. _____ __ None Present

D. _____ __ None Present

(4) HOW MUST THESE WASTE STREAMS BE MANAGED?

For each manifest line item, circle applicable treatment/requirement. For contaminated soil, circle applicable choice as indicated.

A B C D This waste is nonhazardous per CFR 261, and is not restricted from land disposal under 40 CFR 268 subpart D.

A B C D This is an EPA hazardous waste that is not contaminated soil or hazardous debris. Waste must be treated to the appropriate treatment standard set forth in 40 CFR subpart D Prior to land disposal.

A B C D This is a hazardous debris and is subject to the alternative treatment standards of 40 CFR 268.45.

(A) B C D This is a hazardous waste contaminated soil. This contaminated soil does/(does not) (circle one) contain listed hazardous wastes and does/(does not) (circle one) exhibit a characteristic of hazardous waste and is subject to/complies with (circle one) the soil treatment standards as provided by 268.49 (c) or the universal treatment standards.

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(5) CERTIFICATION

I certify that all information on this and all associated documents is complete and accurate to the best of my knowledge.

Signature: _____ Title: Manager

Printed Name: Richard Thyen Date: 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

FAX TRANSMISSION
COVER SHEET

NUMBER OF SHEETS (including cover sheet) 1 OF

DATE: 6-22-01

TO: SCOTT GLASS
ROUX ASSOCIATES

FAX no. 631-232-9898

RE: REMEDIATION PERMIT
TYPIN STEEL PROP.

FROM:
LEN BARON
SUPERINTENDENT OF BUILDINGS

MESSAGE: PLEASE FORWARD COPY OF SITE PLAN FOR VILLAS ON MANHASSET BAY WITH TEST WELLS LOCATED.

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

RECEIVED
JUN 22 2001
INC. VILLAGE OF MANORHAVEN

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

PERMIT NUMBER R10001 Date issued 6/22/01

SECT 4 BLOCK L LOT(S) 153

ZONING R-3 OCCUPANCY TYPE CLUSTER - RESIDENTIAL

Permit Date

Property Address 5 Sagamore Hill Drive

Owner of Property MBA-Manorhaven, LLC

Owners Address 215 Nassau Street, Princeton, NJ 08540

Owners Telephone 609-497-0796

Property Manger's Name and Telephone Richard Thypin 609-497-0796

Name of Environmental Contractor Roux Associates, Inc.

Telephone of Contractor (T) 631-232-2600 (F) 631-232-9898

Demo and Remediation Contractor Contact Name SCOTT GLASS (ROUX)

Demo Contractor Address Not Applicable

Demo Contractor Telephone Not Applicable

Name of Labortory Not Applicable

D.E. C. Approvals

D.E.C Project Supervisor Name And Phone Jamie Ascher 631-444-0246

E.P.A. ID Number NYR000097618 R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

CONTINUED

Describe in detail the remediation process.
If more room is needed in order to answer any questions, please provide additional paper.

Soil and wood debris was excavated as part of a test pit/trenching program. The material was placed in a roll-off container and analyzed for disposal at a permitted transfer, storage, disposal facility.

R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By LaBaron
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

CONTINUED

1. List any material or debris to be removed other than structures
   Soil, wood, iron pipes containing soil and pieces of concrete.

2. Reason for removal? Material was analyzed and the results indicated that the material was contaminated.

3. Location where shipped, DEC permit
   Casie Ecology Oil Salvage, Inc., Franklinville, NJ 08322. #0614DIHP07
   Soil Safe, Inc., Salem, NJ 08079. #1712001323

4. Describe any structures to be demolished and indicate location on property Not Applicable

5. If test wells are to be installed list how many. Describe purpose and indicate location on property. List the exact location. How long will the test wells have to be in place, are any temporary.
   Thirty-three monitoring wells have been installed to characterize the groundwater quality at the site..The locations of these wells are spread out throughout the site. The wells may need to stay in place for two to three years.

R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

CONTINUED

6. Describe remains of any previous demolished or underground structures. Update as excavation proceeds. Several subsurface concrete structures were identified during the test pit/trenching program.

7. Have contaminants been found in the water table or soils and at what concentrations? List locations
This information will be provided in the final investigation report to be submitted to the NYSDEC. The investigation is not complete as of June 19, 2001; but after the completion of the investigation, the report will be prepared.

8. What level of remediation are you trying to reach? Explain
Remedial levels for the site have not been determined to date.

9. List any contaminants that were found and will remain on site indicate reason.
The site is undergoing a voluntary cleanup remediation under the supervision of the NYSDEC. The work is still in the investigation phase. The termination of whether and to what extent contaminants, if any, remain on site, will be made with the NYSDEC/NYSDOH after public notice and hearing.

R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

RECEIVED
JUN 22 2001
INC. VILLAGE OF MANORHAVEN

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

CONTINUED

One of the following affidavits must be completed

Affidavit to be completed by Owner other than Corporation

STATE OF NEW YORK
COUNTY OF NASSAU:

_____ Being duly sworn deposes and says he is the owner in fee of the property described in the foregoing application. That the statements contained therein are true to the best of his knowledge and belief.

Sworn to me this day _____ of _____ 2001

_____
Signed

_____
Notary Public

Affidavit to be completed by Corporation Owner

STATE OF NEW YORK
COUNTY OF NASSAU:

Richard Thyein Being duly sworn, deposes and says he resides at

144 Constitution Dr In the county of Mercer and State of NJ

That he is the Manager/Member of MBA - Manorhaven

The Corporation, which is owner in fee of the property, described in the foregoing application, and that the statements contained therein is true to the best of his knowledge and belief.

Sworn to me this day 21 of June 2001

Ivan M. Baley
Notary Public

_____
Signed

IVAN M. BALEY NOTARY PUBLIC STATE OF NEW JERSEY My Comm. Expires 04/03/2006 No. 2273810

R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By _____
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

(End Page)

Affidavit to be completed by Agent of Owner

STATE OF NEW YORK
COUNTY OF NASSAU:

_____ Being duly sworn deposes and says he is the agent named in the foregoing application, that he has been duly authorized by the owner in fee to make application, and that the foregoing statements contained therein are true to the best of his knowledge and belief.

Sworn to me this day _____ of _____ 2001 _____
Signed

_____
Notary Public

R10001

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By Terry Boron
Date 6/22/01

VILLAGE OF MANORHAVEN
BUILDING DEPARTMENT
33 Manorhaven Blvd.
Port Washington, New York 11050
(516) 883-7000

DEMOLITION –REMEDIATION AND REMOVAL PERMIT

CONTINUED

This application is made with the understanding that if the application is granted, and in consideration thereof, I agree to hold Manorhaven Village harmless from any liability for and any reason of any injury to persons, or property, as a result of negligence, or otherwise in connection with the Remediation-Demolition process.

6-21-01

Signature of Applicant Date

MUST BE NOTERISED SEE BELOW

Ivan M. Baley

Fee $100.00

Not valid unless stamped and signed

R10001

IVAN M. BALEY NOTARY PUBLIC STATE OF NEW JERSEY My Comm. Expires 04/03/2006 No. 2273810

INC. VILLAGE OF MANORHAVEN
APPROVED PLAN
By
Date 6/22/01

TR-AF 104M
TR-TH 985

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

3262508

Please type or print in black letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYR000097618 — Manifest Document No. 625008
2. Page 1 of 1
Information in the shaded areas is not required by Federal law

A. State Manifest Document Number: NJA 3262508

3. Generator's Name and Mailing Address
MBA - Manorhaven LLC
215 Nassau St., Princeton, NJ 08540
4. Generator's Phone (609) 497-0796

B. State Generator's ID-(Gen. Site Address)
5 Sagamore Hill Dr., Manorhaven, NY 11050
C. State Trans. ID-NJDEP NJ3324
Decal No. 084147

5. Transporter 1 Company Name: Maumee Express, Inc.
6. US EPA ID Number: NJD986607380
D. Transporter's Phone (800) 742-5542

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID-NJDEP
Decal No.

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc.
3209 North Mill Road
Vineland, NJ 08360
10. US EPA ID Number: NJD045995693
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (856) 696-4401

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HM X RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	XX1	CM	XXX20	Y	D007
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. App#MBA2665-M ERG171
c. Box # 2523
b.
d.

K. Handling Codes for Wastes Listed Above
a. 501
c.
b.
d.

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 560-2374 JOB#DEBI0031

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: Richard Thypin, Mgr. Signature: [signature] Month 06 Day 26 Year 01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Glenn W Frank Signature: [signature] Month 06 Day 26 Year 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Deb Staas-Haught Signature: [signature] Month 06 Day 26 Year 01

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

BARRON PRINTING — VINELAND, NJ 856 692-6445

CASIE PROTANK
ENVIRONMENTAL SERVICES

P.O. Box 92
Franklinville, NJ 08322
696-4401

1F2604
No 35190

Generator MBA - MANOR HAVEN LLC

Trailer ID

Analyst KM13

☑ Incoming ☐ Outgoing ☐ Sale CFI#

MANIFEST # NJA326 2508

LVC LABORATORY DATA

pH N/a

Total BS&W Option % 1

FLASH N/a °F

BS %

CHLORINE CONTENT <10 PPM

H_2O %

PCB <1.0 PPM

PAR %

WASTE CODE	GALLONS	LAB FEE
D007	20Y	

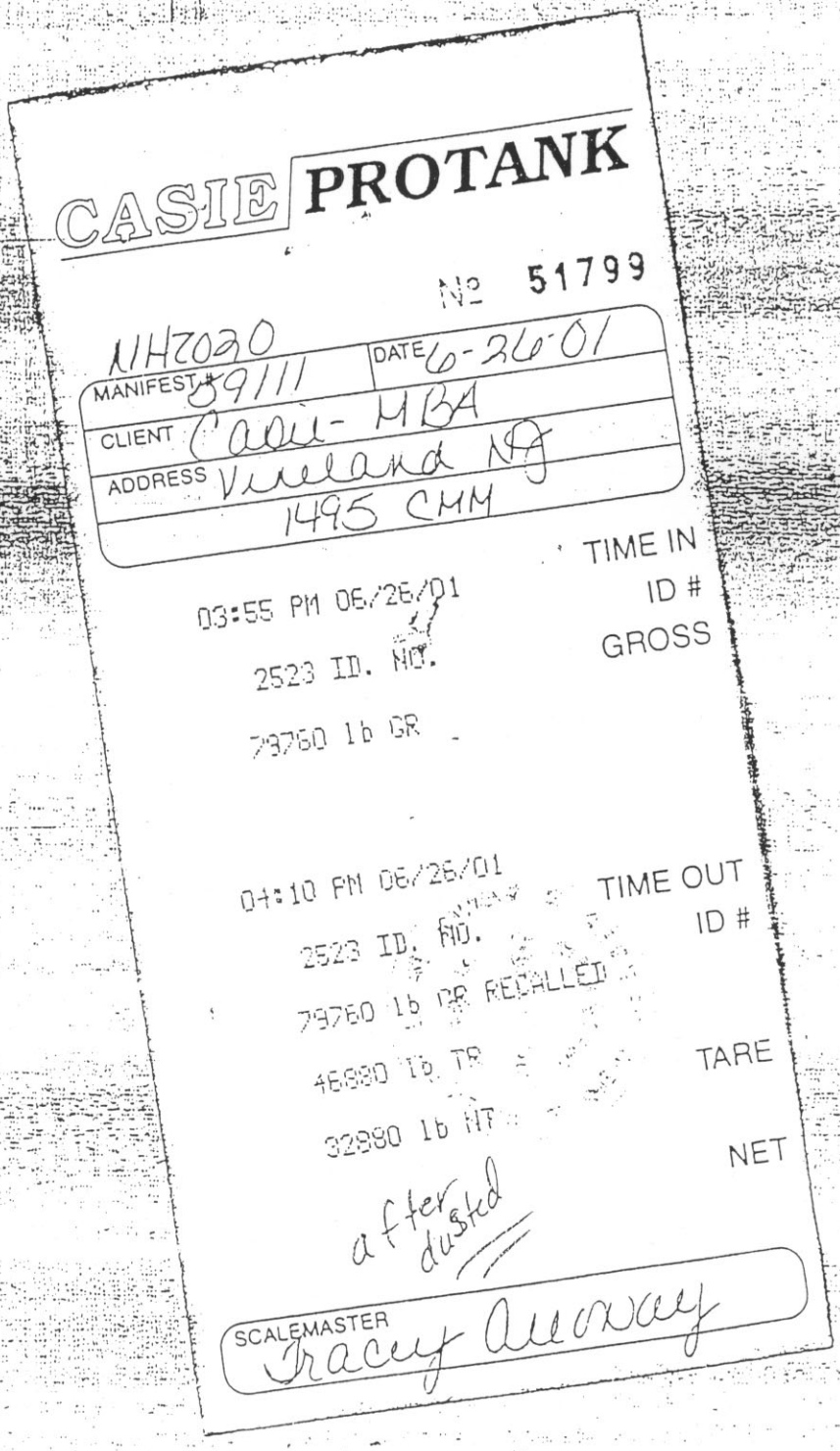
PLANT DATA

Tank TA mark

TIME LOG

Submitted By:

Date 6/26/1



CASIE PROTANK

№ 51799

NJH7020

MANIFEST # 59111 DATE 6-26-01

CLIENT Cadi - MBA

ADDRESS Vineland NJ

1495 CMM

TIME IN

03:55 PM 06/26/01

ID #

2523 ID. NO.

GROSS

79760 lb GR

TIME OUT

04:10 PM 06/26/01

ID #

2523 ID. NO.

79760 lb GR RECALLED

TARE

46880 lb TR

NET

32880 lb NT

after dusted

SCALEMASTER Tracy Conway

Box 2024

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

BR008356

Form Approved. OMB # 2050-0039.

Please type or print in black letters. (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.
	NYR000976186 2507		

A. State Manifest Document Number: NJA 3262507

3. Generator's Name and Mailing Address
MBA - Manorhaven LLC
215 Nassau St., Princeton, NJ 08540

B. State Generator's ID-(Gen. Site Address)
5 Sagamore Hill Dr., Manorhaven, NY11050

4. Generator's Phone (609) 497-0796

C. State Trans. ID-NJDEP 707134
Decal No. - 049822

5. Transporter 1 Company Name: Maumee Express, Inc.
6. US EPA ID Number: NJD986607380

D. Transporter's Phone (800) 742-5542

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Trans. ID-NJDEP
Decal No. -

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc.
3209 North Mill Road
Vineland, NJ 08360
10 US EPA ID Number: NJD045995693

F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (856) 696-4401

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
	HM					
a.	X RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	XX	CM	XX 20	Y	D007
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
App#MBA2665-M ERG171 Box 2024
a. c.
b. d.

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

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 560-2374 JOB#DEBI0031

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: Richard Thyp in Manager
Signature: [signature], Manager
Month Day Year: 10/22/01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Edward Hawkins
Signature: [signature]
Month Day Year: 10/26/01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Edward Hawkins
Signature: [signature]
Month Day Year: 10/29/01

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: Deb Staas-Haught
Signature: [signature]
Month Day Year: 10/29/01

TRANSPORTER
FACILITY
GENERATOR

BARRON PRINTING VINELAND, NJ 856 692-6445

CASIE/PROTANK
ENVIRONMENTAL SERVICES

P.O. Box 92
Franklinville, NJ 08322
696-4401

1609D3
No 35489

Generator MBA Major Lauer LLC

Trailer ID

Analyst

☑ Incoming ☐ Outgoing ☐ Sale CFI#

MANIFEST # NJA 3262507

LVC LABORATORY DATA

pH N/A

FLASH N/A °F

CHLORINE CONTENT < 10 PPM

PCB < 1.0 PPM

Total BS&W PFT = 0 %

BS %

H_2O %

PAR %

WASTE CODE	GALLONS	LAB FEE
D007	20 Y	

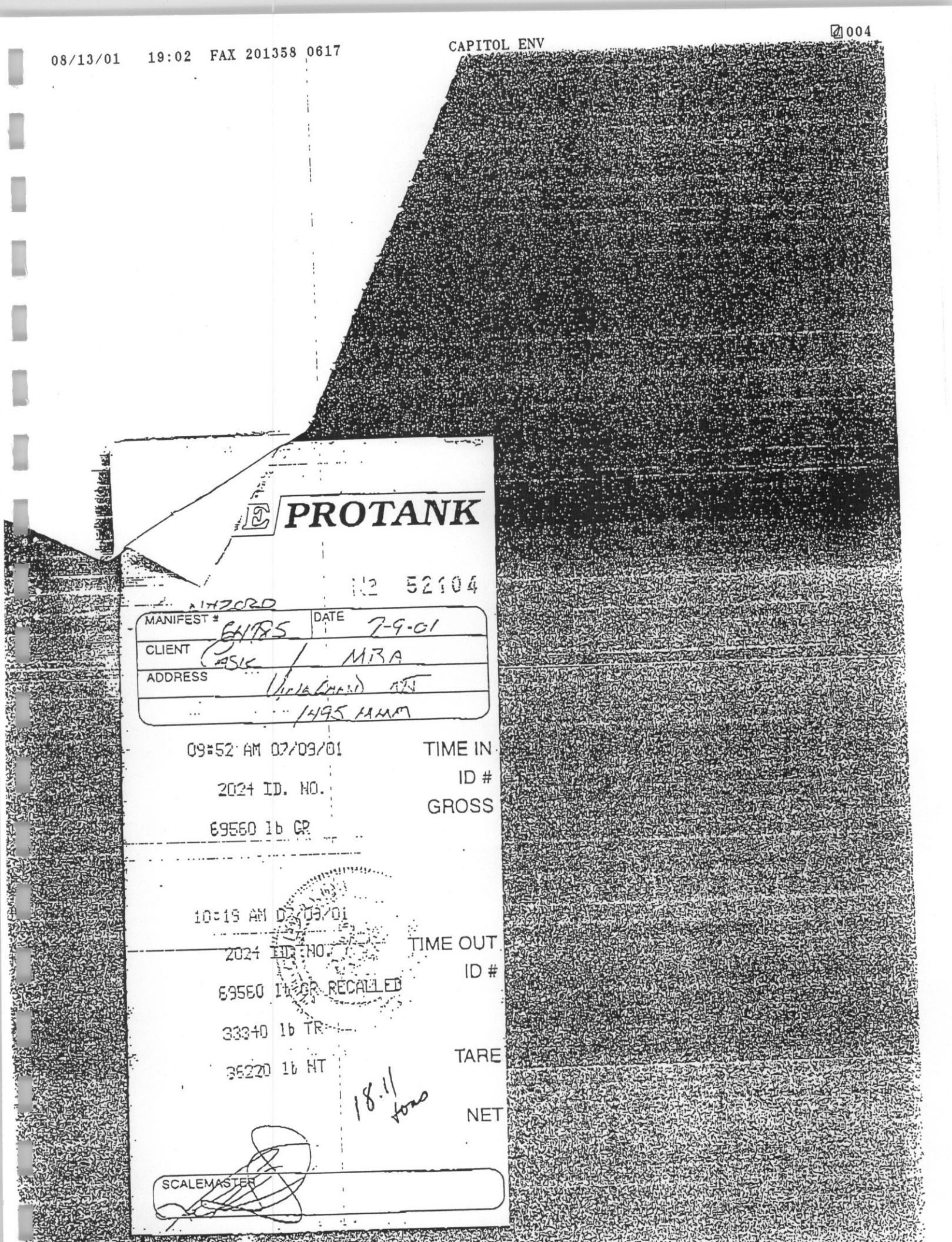
PLANT DATA

Tank TA mart

TIME LOG

Submitted By:

Date 7/9/1



PROTANK

NJ 52104

HAZARD

MANIFEST # 6485 DATE 7-9-01

CLIENT CASK / MRA

ADDRESS Woodland NJ

1495 HWY

09:52 AM 07/09/01 TIME IN

2024 ID. NO. ID #

69560 lb GR GROSS

10:19 AM 07/09/01

2024 ID. NO. TIME OUT

69560 lb GR RECALLED ID #

33340 lb TR

36220 lb NT TARE

18.11 tons

NET

SCALEMASTER

08/13/01 19:02 FAX 201358 0617 CAPITOL ENV

TR: AF 904M NJ
TLR: T4X985 NJ

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

3262509

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NYR000097618 — Manifest Document No.: 62509
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MBA - Manorhaven LLC
215 Nassau St., Princeton, NJ 08540

A. State Manifest Document Number: NJA 3262509

B. State Generator's ID-(Gen. Site Address): 5 Sagamore Hill Dr., Manorhaven, NY 11050

4. Generator's Phone (609) 497-0796

5. Transporter 1 Company Name: Maumee Express, Inc. — 6. US EPA ID Number: NJD986607380

C. State Trans. ID-NJDEP: E50059 — Decal No.: 088090

7. Transporter 2 Company Name — 8. US EPA ID Number

D. Transporter's Phone (800) 742-5542

E. State Trans. ID-NJDEP — Decal No. -

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc.
3209 North Mill Road
Vineland, NJ 08360 — 10. US EPA ID Number: NJD045995693

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (856) 696-4401

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14 Unit Wt/Vol	I Waste No.
a. RQ, Hazardous Waste Solid, (D007), 9, NA3077, III	X	XX	CM	XXX	Y	D007
b.						
c.						
d.						

GENERATOR

J. Additional Descriptions for Materials Listed Above
a. App#MBA2665-M ERG171
c. Box 2015

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

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 560-2374 JOB#DEBI0031

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: Richard Thypin, Manager — Signature — Month Day Year: 08/21/01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Glenn W Frank — Signature — Month Day Year: 08/05/01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — 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: Deb Stas-Haught — Signature — Month Day Year: 08/05/01

CASIE PROTANK

No 52055

NHZ020

MANIFEST # 4784 DATE 7/5/01

CLIENT Cosre - MBA

ADDRESS Vineland NJ

1495 CMH

02:50 PM 07/05/01 TIME IN

2015 ID. NO. ID #

83680 lb GR GROSS

03:52 PM 07/05/01 TIME OUT

2015 ID. NO. ID #

83560 lb GR. RECALLED

47760 lb TR. TARE

35800 lb NT NET

17.95 tons

SCALEMASTER Mary Allowell

BARRON PRINTING VINELAND, NJ 856 692-6445

CASIE/PROTANK
ENVIRONMENTAL SERVICES
P.O. Box 92
Franklinville, NJ 08322
696-4401

1605D2

No 35477

Generator MBA Mauerhaven LLC

Trailer ID

Analyst

☑ Incoming ☐ Outgoing ☐ Sale CFI#

MANIFEST # NJA3262509

LVC LABORATORY DATA

PFT = Ok

pH	N/A	Total BS&W	%
FLASH	N/A °F	BS	%
CHLORINE CONTENT	<10 PPM	H_2O	%
PCB	<1.0 PPM	PAR	%

WASTE CODE	~~GALLONS~~	LAB FEE
D007	20 Y	

PLANT DATA

Tank TA Mark

TIME LOG

Submitted By:

Date 7/5/1

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
P.O. Box 421, Trenton, NJ 08625-0421

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYR000097618 — Manifest Document No. 626225

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law

A. State Manifest Document Number: **NJA 3262625**

3. Generator's Name and Mailing Address
NBA - Nanorhaven LLC
215 Nassau St., Princeton, NJ 08540

B. State Generator's ID-(Gen. Site Address)
5 Sycamore Hill Dr., Nanuhaven, NY11560

4. Generator's Phone (609) 497-0796

C. State Trans. ID-NJDEP 6747
Decal No. 083660

5. Transporter 1 Company Name: **Casie Ecology Oil Salvage, Inc T/A Casie Protank**

6. US EPA ID Number: NJD045995693

D. Transporter's Phone (800) 742-3542

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID-NJDEP
Decal No.

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc. T/A Casie Protank
3209 North Hill Road
Vineland, NJ 08360

10. US EPA ID Number: NJD045995693

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (856) 696-4461

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ, Hazardous Waste Solid, (D007), (D009) 9, NA3077, III	XX	5DM	X2200	P	D007
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
D009 App# 5024 CIDS ERG171
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Emergency Contact: Capitol Environmental (800) 560-2374 **JOB#DEBI0031**

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.

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Printed/Typed Name: Richard Thypin, Manager — Signature — Month 08 Day 16 Year 01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JAMES J GUNTHER — Signature — Month 08 Day 22 Year 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

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: PATRICK OCCAMAKA — Signature: Patrick Occamaka — Month 08 Day 22 Year 01

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

EPA Form 8700-22

In case of an emergency or spill the state emergency coordinator should be immediately notified.

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____

Phone No. _____ Phone No. _____

Approval Number

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

_____ _____ 6/26/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No./State _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

_____ _____ _____

Driver Signature Shipment Date Driver Signature Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____

Name of Authorized Agent Signature Receipt Date

Box #
9756

SOIL SAFE, INC.

(2)

Log Number

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number	Description of Material	
NJ 3001	Non-Regulated Petroleum Contaminated Soil Non DOT/RCRA Regulated	GROSS TARE NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

By Luke B. [signature] 6/26/01

Generator Authorized Agent Name — Signature — Shipment Date

TRANSPORTER

Transporter Name Freehold Cartage — Driver Name (Print) Bill Burns

Address 825 Hwy 33 Freehold N.J. 07728 — Vehicle License No./State AH402E/NJ

Truck Number 625

I hereby certify that the above named material was picked up at the generator site listed above.

[signature] 6/26/01

Driver Signature — Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

_____

Driver Signature — Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____

Name of Authorized Agent — Signature — Receipt Date

(5) Box 9949

SOIL SAFE, INC.

Log Number

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No./State AD134

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature

(4) Box 9821

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number	Description of Material	
NJ 3808	Non-Regulated Petroleum Contaminated Soil Non DOT/RCRA Regulated	GROSS TARE NET TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bill Burns _____ 6/27/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name Freehold Cartage Driver Name (Print) Bill Burns

Address 825 Hwy 33 Freehold Vehicle License No./State AA4025/NJ

N.J. 07728 Truck Number 625

I hereby certify that the above named material was picked up at the generator site listed above.

Bill Burns 6/27/01

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

_____ 6/27/01

Driver Signature Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____

Name of Authorized Agent Signature Receipt Date

MXI

MXI Maumee Express, Inc

P.O. Box 278
Somerville, NJ 08876
Phone: (732) 424-8441
Fax: (732) 424-8446

17600 Jeb Stuart Hgwy.
Abingdon, VA 24211
Phone: (540) 628-1156
Fax: (540) 628-4435

14750 Boyle Ave.
Fontana, CA 92337
Phone: (909) 350-9090
Fax: (909) 350-9287

MANIFEST

MXI EPA ID NO.:
NJD986607380
8729

GENERATOR NAME / ADDRESS	PHONE (AREA CODE)	GENERATOR EPA ID NO.:
5 Sayamore Hill Road Manor Haven NY	(516) 903-9043	
	TRACTOR: Trc# 103 TRAILER	APPOINTMENT TIME :

MXI REP. LOADING (PRINT)	PROCEDURE	BOX SPOTTED	BOX REMOVED	TIME AT GENERATOR (MILITARY TIME ONLY)
J. Phillips	~~Drop Box~~	#2530		1:30 PM (ARRIVAL TIME) 3 PM (DEPARTURE TIME)

COMMENTS OR DELAYS AT GENERATOR: Places Box # 2530 to be Loaded. (2) Drop Box on Site Loaded

EQUIPMENT USED

BROKER:

PO. NO#:

STATE MANIFEST NO.: BRU84/2

(X) HM		PROPER U.S. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE	FORM
	1										
	2										
	3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E. IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor/broker for waste removal does not constitute payment to the carrier and if the contractor/broker does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor/broker.

PLEASE PRINT NAME / TITLE	GENERATOR'S SIGNATURE	DATE LOADED
M Lindberg - for Drop	X for Drop - M Lindberg I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	4/25/01 MO. DAY YR.

TSDF NAME / ADDRESS	PHONE (AREA CODE)	TSDF EPA ID NO.:
	TRACTOR TRAILER	APPOINTMENT TIME :

MXI REP. UNLOADING (PRINT)	PROCEDURE	BOX SPOTTED	BOX REMOVED	TIME AT TSDF (MILITARY TIME ONLY)
				: (ARRIVAL TIME) : (DEPARTURE TIME)

COMMENTS OR DELAYS AT TSDF

EQUIPMENT USED

PLEASE PRINT NAME / TITLE	TSDF SIGNATURE	DATE UNLOADED
	X	/ / MO. DAY YR.

AL- NJD986607380	FL- NJD986607380	MD- HWH 539	NJ- 50059	OH- UPWO389242-OH	TN- NJD986607380
AR- PC-1469	GA- NJD986607380	MA- NJD986607380	SW-18582	OK- 3762	UT- NJD986607380
H-778	IL- 3401	MI- NJD986607380	NM- NJD986607380	PA- AH 0420	VT- NJD986607380
AZ- NJD986607380	IN- NJD986607380	MN- UPWO389242-OH	NY- JA-334	RI- 702	VA- NJD9866073801
CA- 3184	KS- NJD986607380	MS- NJD986607380	NV- UPWO389242-OH	SC- NJD986607380	WV- UPWO389242-OH
CT- HW-613	KE- NJD986607380	M0- H-2083	NC- NJD986607380	TX- 41825	WI- 16148
DE- HW-409	LA- NJD986607380	NH- TNH-0211			

MXI

MXI Maumee Express, Inc

MANIFEST

P.O. Box 278
Somerville, NJ 08876
Phone: (732) 424-8441
Fax: (732) 424-8446

17600 Jeb Stuart Hgwy
Abingdon, VA 24211
Phone: (540) 628-1156
Fax: (540) 628-4435

14750 Boyle Ave.
Fontana, CA 92337
Phone: (909) 350-9090
Fax: (909) 350-9287

MXI EPA ID NO.: NJD986607380

8716

GENERATOR NAME / ADDRESS	PHONE (AREA CODE)	GENERATOR EPA ID NO.:
Roux Associates 5 Saybrook Hill Rd Manchester NJ	516 903 9043	NOT REQUIRED
	TRACTOR 3005 TRAILER	APPOINTMENT TIME :

MXI REP. LOADING (PRINT)	PROCEDURE	BOX SPOTTED	BOX REMOVED	TIME AT GENERATOR (MILITARY TIME ONLY)
Glenn		2024		07:30 ARRIVAL TIME — 07:45 DEPARTURE TIME

COMMENTS OR DELAYS AT GENERATOR

EQUIPMENT USED: 1 Liner

BROKER:

PO. NO#:

STATE MANIFEST NO.: 8356

(X) HM		PROPER U.S. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE	FORM
	1										
	2										
	3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E. IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor/broker for waste removal does not constitute payment to the carrier and if the contractor/broker does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor/broker.

PLEASE PRINT NAME / TITLE	GENERATOR'S SIGNATURE	DATE LOADED
M Lindsey	X [signature] I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	04 / 12 / 01 MO. DAY YR.

TSDF NAME / ADDRESS PHONE	(AREA CODE)	TSDF EPA ID NO.:
	TRACTOR TRAILER	APPOINTMENT TIME :

MXI REP. UNLOADING (PRINT)	PROCEDURE	BOX SPOTTED	BOX REMOVED	TIME AT TSDF (MILITARY TIME ONLY)
				: ARRIVAL TIME — : DEPARTURE TIME

COMMENTS OR DELAYS AT TSDF

EQUIPMENT USED

PLEASE PRINT NAME / TITLE	TSDF SIGNATURE	DATE UNLOADED
	X	/ / MO. DAY YR.

AL- NJD986607380	FL- NJD986607380	MD- HWH 539	NJ- 50059	OH- UPWO389242-OH	TN- NJD986607380
AR- PC-1469	GA- NJD986607380	MA- NJD986607380	SW-18582	OK- 3762	UT- NJD986607380
H-778	IL- 3401	MI- NJD986607380	NM- NJD986607380	PA- AH 0420	VT- NJD986607380
AZ- NJD986607380	IN- NJD986607380	MN- UPWO389242-OH	NY- JA-334	RI- 702	VA- NJD9866073801
CA- 3184	KS- NJD986607380	MS- NJD986607380	NV- UPWO389242-OH	SC- NJD986607380	WV- UPWO389242-OH
CT- HW-613	KE- NJD986607380	M0- H-2083	NC- NJD986607380	TX- 41825	WI- 16148
DE- HW-409	LA- NJD986607380	NH- TNH-0211			

White: MXI original — Canary: Retained by TSDF — Pink: Retained by Generator

MXI

P.O. Box 278
Somerville, NJ 08876
Phone: (732) 424-8441
Fax: (732) 424-8446

MXI Maumee Express, Inc

17600 Jeb Stuart Hgwy
Abingdon, VA 24211
Phone: (540) 628-1156
Fax: (540) 628-4435

14750 Boyle Ave.
Fontana, CA 92337
Phone: (909) 350-9090
Fax: (909) 350-9287

MANIFEST

MXI EPA ID NO.:
NJD986607380
8714

GENERATOR NAME / ADDRESS: Roux Associates, 5 Sayamore Hill Road, Manorhaven NY

PHONE (AREA CODE): (516) 903-9043

GENERATOR EPA ID NO.: NOT REQUIRED

TRACTOR: 3005 TRAILER: 5058

APPOINTMENT TIME: :

MXI REP. LOADING (PRINT): G. Frank

PROCEDURE:

BOX SPOTTED: 2015

BOX REMOVED:

TIME AT GENERATOR: 15:00 ARRIVAL TIME (MILITARY TIME ONLY) 15:15 DEPARTURE TIME

EQUIPMENT USED: 1 Liner

COMMENTS OR DELAYS AT GENERATOR:

BROKER:

STATE MANIFEST NO.: BR008356

PO. NO#:

(X) HM		PROPER U.S. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE	FORM
	1										
	2										
	3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E. IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor/broker for waste removal does not constitute payment to the carrier and if the contractor/broker does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor/broker.

PLEASE PRINT NAME / TITLE: M. Chelli

GENERATOR'S SIGNATURE: X _____ I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.

DATE LOADED: 4 / 1 / 91 MO. DAY YR.

TSDF NAME / ADDRESS:

PHONE (AREA CODE):

TSDF EPA ID NO.:

TRACTOR: TRAILER:

APPOINTMENT TIME: :

MXI REP. UNLOADING (PRINT):

PROCEDURE:

BOX SPOTTED:

BOX REMOVED:

TIME AT TSDF: : ARRIVAL TIME (MILITARY TIME ONLY) : DEPARTURE TIME

EQUIPMENT USED:

COMMENTS OR DELAYS AT TSDF:

PLEASE PRINT NAME / TITLE:

TSDF SIGNATURE: X _____

DATE UNLOADED: / / MO. DAY Y

AL- NJD986607380
AR- PC-1469
H-778
AZ- NJD986607380
CA- 3184
CT- HW-613

FL- NJD986607380
GA- NJD986607380
IL- 3401
IN- NJD986607380
KS- NJD986607380
KE- NJD986607380

MD- HWH 539
MA- NJD986607380
MI- NJD986607380
MN- UPWO389242-OH
MS- NJD986607380
M0- H-2083
NH- TNH-0211

NJ- 50059
SW-18582
NM- NJD986607380
NY- JA-334
NV- UPWO389242-OH
NC- NJD986607380

OH- UPWO389242-OH
OK- 3762
PA- AH 0420
RI- 702
SC- NJD986607380
TX- 41825

TN- NJD986607380
UT- NJD986607380
VT- NJD986607380
VA- NJD9866073801
WV- UPWO389242-(
WI- 16148

MXI

MXI Maumee Express, Inc

P.O. Box 278
Somerville, NJ 08876
Phone: (732) 424-8441
Fax: (732) 424-8446

17600 Jeb Stuart Hgwy
Abingdon, VA 24211
Phone: (540) 628-1156
Fax: (540) 628-4435

14750 Boyle Ave.
Fontana, CA 92337
Phone: (909) 350-9090
Fax: (909) 350-9287

MANIFEST

MXI EPA ID NO.:
NJD986607380

2

8735

GENERATOR NAME / ADDRESS: 5 Sagamore Hill Road Manor Haven NY

PHONE (AREA CODE)

GENERATOR EPA ID NO.:

TRACTOR: 3005 TRAILER: 5058

APPOINTMENT TIME:

MXI REP. LOADING (PRINT): Glenn

PROCEDURE

BOX SPOTTED: 3010

BOX REMOVED

TIME AT GENERATOR (MILITARY TIME ONLY)
ARRIVAL TIME: 14:45
DEPARTURE TIME: 16:00

EQUIPMENT USED: Lind & RoSoot
1 Liner Installed

COMMENTS OR DELAYS AT GENERATOR

BROKER:

STATE MANIFEST NO.: B1008412

PO. NO#:

(X) HM		PROPER U.S. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE	FORM
	1										
	2										
	3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E. IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor/broker for waste removal does not constitute payment to the carrier and if the contractor/broker does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor/broker.

PLEASE PRINT NAME / TITLE: A Conley

GENERATOR'S SIGNATURE
X
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.

DATE LOADED / / MO. DAY YR.

TSDF NAME / ADDRESS

PHONE (AREA CODE)

TSDF EPA ID NO.:

TRACTOR TRAILER

APPOINTMENT TIME:

MXI REP. UNLOADING (PRINT)

PROCEDURE

BOX SPOTTED

BOX REMOVED

TIME AT TSDF (MILITARY TIME ONLY)
ARRIVAL TIME
DEPARTURE TIME

EQUIPMENT USED

COMMENTS OR DELAYS AT TSDF

PLEASE PRINT NAME / TITLE

TSDF SIGNATURE
X

DATE UNLOADED / / MO. DAY YR

AL- NJD986607380
AR- PC-1469
H-778
AZ- NJD986607380
CA- 3184
CT- HW-613

FL- NJD986607380
GA- NJD986607380
IL- 3401
IN- NJD986607380
KS- NJD986607380
KE- NJD986607380

MD- HWH 539
MA- NJD986607380
MI- NJD986607380
MN- UPWO389242-OH
MS- NJD986607380
M0- H-2083
NH- TNH-0211

NJ- 50059
SW-18582
NM- NJD986607380
NY- JA-334
NV- UPWO389242-OH
NC- NJD986607380

OH- UPWO389242-OH
OK- 3762
PA- AH 0420
RI- 702
SC- NJD986607380
TX- 41825

TN- NJD986607380
UT- NJD986607380
VT- NJD986607380
VA- NJD9866073801
WV- UPWO389242-(
WI- 16148

APARO'S
Little John

(631) 968-9107

Main Office: 5th Avenue and Sunrise Highway, Bay Shore, NY 11706

№ 31914

ORDER DATE 6/2/01

DRIVER ~~[illegible]~~ TITO

DELIVERY DATE	PICK-UP DATE
6/4/01	

P.O. #	JOB #

NAME Rowa Associates

IN CARE OF Scot Glash

ADDRESS

TOWN

TELEPHONE 232-2600

Comm site contact

DELIVER TO 5 Saganore Hill D.

Manorhaven

TELEPHONE 627-8757

DESCRIPTION	QUANTITY	EXTRA	PRICE	AMOUNT
BASIC	2	Cost	78 75	126
BASIC/SINK				
FLUSH				
DELUXE				
VIP				
HANDI-CAP				
MINI-JOHN				
MICRO FLUSH				
HOLDING TANK				
WASH STATION				
14' TRAILOR				
16' TRAILOR				
SERVICE				
SPCL. CLEANS				
WEEKLY				
BI-WEEKLY				
RENTAL				
DAILY				
WEEKLY				
MONTHLY				

SUB TOTAL	
TAX	
TOTAL	
DEPOSIT	
BALANCE	

PAID	CASH	CHECK	NOT PAID	ACCOUNT NO.

REMARKS: See Michele Lambert c/s Flams Point Lane per lot - 1 acre 11 acres

See Michele

EVENT START TIME/DATE 9-3.

SPECIAL CLEAN DATES

CLEAN TIMES

TOTAL CLEANS

X [signature] 6.5.01

CUSTOMER'S SIGNATURE DATE

Lessee responsible for any damage or theft of units while in lessee's use.

All Work Completed Satisfactorily

Box 9806

SOIL SAFE, INC.

Log Number

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____

Phone No. _____ Phone No. _____

Approval Number: NJ-3005

Description of Material: Non-Regulated Petroleum Contaminated Soil; Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name _____ Signature _____ Shipment Date _____

TRANSPORTER

Transporter Name Envirotech Cartage Inc Driver Name (Print) _____

Address Freehold, NJ Vehicle License No./State _____

Soil Safe, Incorporated Truck Number 765 (856) 339-9400

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Shipment Date _____

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date _____

DESTINATION

Site Name Soil Safe Inc Phone No. 856 339 9400

Address 107 Tilbury Rd Salem NJ

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent _____ Signature _____ Receipt Date _____

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name _____ Shipping Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number NJ-3005

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bo Waskiw _____ 6/28/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name Maumee Express Inc Driver Name (Print) Glenn W Frank

Address 50 Howard St Vehicle License No./State AF904M NJ

Parsippany NJ Truck Number 3005

I hereby certify that the above named material was picked up at the generator site listed above.

_____ 07-09-01

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

_____

Driver Signature Delivery Date

DESTINATION

Site Name _____ Phone No. _____

Address _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____

Name of Authorized Agent Signature Receipt Date

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name MBA Maurbeen LLC Shipping Location MBA Maurbeen LLC

Address _____ Address 5 Sagamore Hill Drive

_____ Manor Haven, NY 11050

Phone No. _____ Phone No. _____

Approval Number N9-3003

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Bo Iwaskw 6/28/01

Generator Authorized Agent Name Signature Shipment Date

TRANSPORTER

Transporter Name Maumee Express Inc Driver Name (Print) Glenn W Frank

Address 50 Howard st Vehicle License No./State AF-904M NJ T4x985 NJ

Piscataway N.J. Truck Number 3005 T-5058 Box 2530

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature 06-28-01 Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Delivery Date

DESTINATION

Site Name Soil Safe, Incorporated Phone No. (856) 339-0400

Address 107 Kings Road Salem, NJ 08079

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature Receipt Date

[redacted]

HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. N/A	Manifest Doc. No.	2. Page 1 of
3. Generator's Name and Mailing Address Richard Twiss	Manorhaven LLC. 215 Nassau St. Princeton, NJ 08540		Site Address 5 Sagamore Hill Dr. Manorhaven, NY 11050
4. Generator's Phone 609) 497-0796			
5. Transporter 1 Company Name TERRACE TRANSPORTATION	a. US EPA ID Number N/A		A. Transporter's Phone (718) 981-4600
7. Transporter 2 Company Name	a. US EPA ID Number		B. Transporter's Phone
8. Designated Facility Name and Site Address CLEAN WATER OF NEW YORK, INC. 3249 RICHMOND TERRACE STATEN ISLAND, NY 10303	10. US EPA ID Number N/A		C. Facility's Phone (718) 981-4600

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit WW
a. NON RCRA, NON DOT oily water	XX	TT	1250	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste

Printed/Typed Name [redacted] Signature [redacted] Month 08 Day 22

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name [redacted] Signature [redacted] Month 08 Day 22

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day

FACILITY

19. Discrepancy Indication Space

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

Printed/Typed Name [redacted] Signature [redacted] Month Day

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N/A	Manifest Doc. No. 0000	2. Page 1 of

3. Generator's Name and Mailing Address: Manorhaven, LLC, 215 Nassau St. Princeton, NJ 08540, Attn: Richard Tryon
Site address: 5 Sagamore Hill Dr. Manorhaven, NY 11050
4. Generator's Phone: 609 497-0296

5. Transporter 1 Company Name: TERRACE TRANSPORTATION	6. US EPA ID Number: N/A
A. Transporter's Phone: (718) 981-4600	
7. Transporter 2 Company Name	8. US EPA ID Number
B. Transporter's Phone	
9. Designated Facility Name and Site Address: CLEAN WATER OF NEW YORK, INC. 3249 RICHMOND TERRACE STATEN ISLAND, NY 10303	10. US EPA ID Number: N/A
C. Facility's Phone: (718) 981-4600	

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-RCRA, Non-DOT oily water	XX	TT	1500	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
emergency response # 718-981-4600

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Ed Lwaski — Signature: [signature] — Month 08 Day 22 Year 01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Thomas Kinch — Signature: [signature] — Month 08 Day 22 Year 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: E Richards — Signature: [signature] — Month 8 Day 22 Year 01

ORIGINAL – RETURN TO GENERATOR

DESIGNATED FACILITY

Aqueous

TABLE VO-1.0
7001-0972A
ROUX ASSOCIATES
CFR PART 261 VOLATILE ORGANICS (TCLP)

TCLP VOCs

All values are ug/L.

Cl Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank VBLKNQ VBLKNQ 1.00	TP-16/GSO 010972A-01 VBLKNQ 1.00	04/25 TCLPBLK04/25 VBLKNQ 1.00	Quant. Limits with no Dilution
Chloromethane	U	U	~~20~~ U	10
Bromomethane	U	U	U	10
Vinyl Chloride	U	U	U	10
Chloroethane	U	U	U	10
Methylene Chloride	U	6	1J	5.0
Acetone	3J	37B	30B	10
Carbon Disulfide	U	U	U	5.0
Vinyl Acetate	U	U	U	10
1,1-Dichloroethene	U	U	U	5.0
1,1-Dichloroethane	U	U	U	5.0
cis-1,2-Dichloroethene	U	U	U	5.0
trans-1,2-Dichloroethene	U	U	U	5.0
Chloroform	U	U	U	5.0
1,2-Dichloroethane	U	U	~~70B~~ U	5.0
2-Butanone	2J	U	U	10
1,1,1-Trichloroethane	U	U	U	5.0
Carbon Tetrachloride	U	U	U	5.0
Bromodichloromethane	U	U	U	5.0
1,2-Dichloropropane	U	U	U	5.0
cis-1,3-Dichloropropene	U	U	~~6~~ U	5.0
Trichloroethene 500	U	.7J	U	5.0
Dibromochloromethane	U	U	U	5.0
1,1,2-Trichloroethane	U	U	U	5.0
Benzene	U	U	U	5.0
trans-1,3-Dichloropropene	U	U	U	5.0
Bromoform	U	U	U	5.0
4-Methyl-2-Pentanone	U	2J	2J	10
2-Hexanone	U	U	~~22~~ U	10
Tetrachloroethene 700	U	3J	U	5.0
Toluene	U	2J	~~1J~~ U	5.0
1,1,2,2-Tetrachloroethane	U	U	U	5.0
Chlorobenzene	U	U	U	5.0
Ethylbenzene	U	U	U	5.0
Styrene	U	U	U	5.0
Xylene (total)	U	.6J	U	5.0
Date Received	N/A	04/21/01	N/A	
Date Extracted	04/26/01	N/A	04/26/01	
Date Analyzed		04/26/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

LHH 4-27-01

TCLP
SVOCs

TABLE SV-1.0
7001-0972A
ROUX ASSOCIATES
40CFR PART 261 SEMI-VOLATILES (TCLP)

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	TP-16/GSO	04/23	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKLQ	010972A-01	TCLPBLK04/23	
Method Blank I.D.	SBLKLQ	SBLKLQ	SBLKLQ	
Quant. Factor	1.00	2.00	2.00	
1,4-Dichlorobenzene	U	U	U	10
Hexachloroethane	U	U	U	10
Nitrobenzene	U	U	U	10
Hexachlorobutadiene	U	U	U	10
2,4,6-Trichlorophenol	U	U	U	10
2,4,5-Trichlorophenol	U	U	U	50
2,4-Dinitrotoluene	U	U	U	10
Hexachlorobenzene	U	U	U	10
Pentachlorophenol	U	U	U	50
2-Methylphenol	U	U	U	10
4-Methylphenol	U	U	U	10
Pyridine	U	U	U	10
Date Received		04/21/01		
Date Extracted	04/26/01	04/26/01	04/26/01	
Date Analyzed	04/26/01	04/27/01	04/26/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TAL [redacted] RESULTS

TCLP
METALS

all results in [redacted] ug/L

job # 0972A

Lab Sample ID	01				
Client ID	TP-16/GSC				
PARAMETER	TCLP Metals				
Aluminum					
Antimony					
5,000 Arsenic	ND < 41.				
100,000 Barium	301.				
Beryllium					
1,000 Cadmium	385.				
Calcium					
5,000 * Chromium	(180000.)				
Cobalt					
Copper					
Iron					
5,000 Lead	38.				
Magnesium					
Manganese					
200 Mercury	ND < 1				
Nickel					
Potassium					
1000 Selenium	ND < 46.				
5000 Silver	ND < 10.				
Sodium					
Thallium					
Vanadium					
Zinc					

* Exceeds the MCL (5 mg/L)

TOTAL VOCs

TABLE VO-1.3
7001-0819A
ROUX ASSOCIATES
TCL VOLATILE ORGANICS + TIC'S

Soil Medium

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	TP6-16GS		Quant. Limits with no Dilution
Lab Sample I.D.	VBLKN1	010819A-14		
Method Blank I.D.	VBLKN1	VBLKN1		
Quant. Factor	1.00	3.51		
Chloromethane	U	U		1000
Bromomethane	U	U		1000
Vinyl Chloride	U	U		1000
Chloroethane	U	U		1000
Methylene Chloride	U	850J		1000
Acetone	U	1200J		1000
Carbon Disulfide	U	U		1000
Vinyl Acetate	U	U		1000
1,1-Dichloroethene	U	U		1000
1,1-Dichloroethane	U	U		1000
cis-1,2-Dichloroethene	U	U		1000
trans-1,2-Dichloroethene	U	U		1000
Chloroform	U	U		1000
1,2-Dichloroethane	U	U		1000
2-Butanone	U	U		1000
1,1,1-Trichloroethane	U	U		1000
Carbon Tetrachloride	U	U		1000
Bromodichloromethane	U	U		1000
1,2-Dichloropropane	U	U		1000
cis-1,3-Dichloropropene	U	5200		1000
Trichloroethene	U	U		1000
Dibromochloromethane	U	U		1000
1,1,2-Trichloroethane	U	U		1000
Benzene	U	U		1000
trans-1,3-Dichloropropene	U	U		1000
Bromoform	U	U		1000
4-Methyl-2-Pentanone	U	U		1000
2-Hexanone	U	180J		1000
Tetrachloroethene	U	5200		1000
Toluene	U	U		1000
1,1,2,2-Tetrachloroethane	U	2900J		1000
Chlorobenzene	U	6500		1000
Ethylbenzene	U	U		1000
Styrene	U	86000		1000
Xylene (total)				
Date Received		04/06/01		
Date Extracted	N/A	N/A		
Date Analyzed	04/11/01	04/11/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Soil

TOTAL METALS

TABLE AS-1.1
7001-0819A
ROUX ASSOCIATES
TAL METALS

All values are mg/Kg dry weight basis.

Client Sample I.D.	TP6-16GS			
Lab Sample I.D.	010819A-14			
Aluminum	1430			
Antimony	4500			
Arsenic	23.2U			
Barium	114.B			
Beryllium	1.3U			
Cadmium	105.			
Calcium	12200B			
Chromium	25200			
Cobalt	179.B			
Copper	20.8B			
Iron	3670			
Lead	10200			
Magnesium	6650B			
Manganese	73.6B			
Mercury	0.20			
Nickel	12.9B			
Potassium	6490B			
Selenium	26.6B			
Silver	2.6U			
Sodium	215.B			
Thallium	27.8U			
Vanadium	45.6B			
Zinc	81300			

See Appendix for qualifier definitions

Soil

TABLE GC-1.0
7001-0972A
ROUX ASSOCIATES
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank 042501-B06 PBLK40 1.00	TP-16/GSO 010972A-01 PBLK40 150.	PBLK40 QC2 042501-B06 QC2 PBLK40 1.00	Quant. Limits with no Dilution
Aroclor-1016	U	U	U	33.
Aroclor-1221	U	U	U	67.
Aroclor-1232	U	U	U	33.
Aroclor-1242	U	U	120X	33.
Aroclor-1248	U	U	U	33.
Aroclor-1254	U	U	U	33.
Aroclor-1260	U	8600	150X	33.
Date Received		04/21/01		
Date Extracted	04/25/01	04/25/01	04/25/01	
Date Analyzed	04/27/01	04/28/01	04/27/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Soil

TABLE SV-1.0
7001-0819A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank SBLKWP SBLKWP 1.00	TP6-16GS 010819A-14 SBLKWP 322.		Quant. Limits with no Dilution
Phenol	U	67000J		330
bis(2-Chloroethyl)ether	U	U		330
2-Chlorophenol	U	U		330
1,3-Dichlorobenzene	U	4400J		330
1,4-Dichlorobenzene	U	54000J		330
Benzyl alcohol	U	U		330
1,2-Dichlorobenzene	U	440000		330
2-Methylphenol	U	U		330
2,2'-oxybis(1-Chloropropane)	U	U		330
4-Methylphenol	U	U		330
N-Nitroso-di-n-propylamine	U	U		330
Hexachloroethane	U	U		330
Nitrobenzene	U	U		330
Isophorone	U	U		330
2-Nitrophenol	U	U		330
2,4-Dimethylphenol	U	U		1600
Benzoic acid	U	U		330
bis(2-Chloroethoxy)methane	U	U		330
2,4-Dichlorophenol	U	U		330
1,2,4-Trichlorobenzene	U	2100J		330
Naphthalene	U	U		330
4-Chloroaniline	U	U		330
Hexachlorobutadiene	U	U		330
4-Chloro-3-methylphenol	U	U		330
2-Methylnaphthalene	U	U		330
Hexachlorocyclopentadiene	U	U		1600
2,4,6-Trichlorophenol	U	U		330
2,4,5-Trichlorophenol	U	U		1600
2-Chloronaphthalene	U	U		330
2-Nitroaniline	U	U		330
Dimethylphthalate	U	U		330
Acenaphthylene	U	U		1600
2,6-Dinitrotoluene	U	U		330
3-Nitroaniline	U	U		
Acenaphthene	U	U		
Date Received	04/19/01	04/06/01		
Date Extracted	04/20/01	04/19/01		
Date Analyzed		04/22/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Soil

TABLE SV-1.0
7001-0819A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

All values are ug/Kg dry weight basis.

Client Sample I.D. / Lab Sample I.D. / Method Blank I.D. / Quant. Factor	Method Blank SBLKWP SBLKWP 1.00	TP6-16GS 010819A-14 SBLKWP 322.		Quant. Limits with no Dilution
2,4-Dinitrophenol	U	U		1600
4-Nitrophenol	U	U		1600
Dibenzofuran	U	U		330
2,4-Dinitrotoluene	U	U		330
Diethylphthalate	U	U		330
4-Chlorophenyl-phenylether	U	U		330
Fluorene	U	U		1600
4-Nitroaniline	U	U		1600
4,6-Dinitro-2-methylphenol	U	U		330
N-Nitrosodiphenylamine (1)	U	U		330
4-Bromophenyl-phenylether	U	U		330
Hexachlorobenzene	U	U		1600
Pentachlorophenol	U	U		330
Phenanthrene	U	U		330
Anthracene	U	U		330
Carbazole	U	U		330
Di-n-butylphthalate	3J	21000JB		330
Fluoranthene	U	U		330
Pyrene	U	U		330
Butylbenzylphthalate	U	U		660
3,3'-Dichlorobenzidine	U	U		330
Benzo(a)anthracene	U	U		330
Chrysene	U	U		330
bis(2-Ethylhexyl)phthalate	33J	U		330
Di-n-octylphthalate	U	U		330
Benzo(b)fluoranthene	U	U		330
Benzo(k)fluoranthene	U	U		330
Benzo(a)pyrene	U	U		330
Indeno(1,2,3-cd)pyrene	U	U		330
Dibenzo(a,h)anthracene	U	U		330
Benzo(g,h,i)perylene	U	U		
Date Received	04/19/01	04/06/01		
Date Extracted	04/20/01	04/19/01		
Date Analyzed		04/22/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Soil

TABLE GC-2.0
7001-0972A
ROUX ASSOCIATES
DIESEL RANGE ORGANICS

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank 042501-B04 PBLK45 1.00	TP-16/GSO 010972A-01 PBLK45 446.	PBLK45 QC 042501-B04QC PBLK45 1.00	Quant. Limits with no Dilution
Diesel Range Organics	BQL	7800000	26000X	17000
Date Received Date Extracted Date Analyzed	04/25/01 04/27/01	04/21/01 04/25/01 04/27/01	04/25/01 04/27/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

STL
Committed To Your Success

ANALYTICAL RESULTS
FOR WET CHEMISTRY PARAMETERS

Client: Roux Associates

Project ID: Manor Haven

STL-CT ID: 7001-1015A

PARAMETER(S), UNITS

Client ID	Date Received	Corrosivity	Ignitability	Reactive Sulfide mg/L
TP-16/GSO	4/27/01	Non-Corrosive	Non-Ignitable	ND < 10

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

TP-16/GSO

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 1015A SAS No.: _____ SDG No.: A1015

Matrix (soil/water): SOIL Lab Sample ID: 011015A-1

% Solids: 0 Date Received: 04/27/01

CAS No.	Analyte	Concentration	C	Units	Q	M
	Corrosivity	No (pH 8.12)		S.U.		D
	Cyanide, Reactive	0.500	U	mg/Kg		L
	Ignitability	No				D
	Reactivity	No (see CNR/RSULFIDE)				D
	Sulfide, Reactive	10.0	U	mg/Kg		T

Comments:

FORM I - WC

Soil

TABLE VO-1.2
7001-0819A
ROUX ASSOCIATES
TCL VOLATILE ORGANICS + TIC'S

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	TP6-PIPE NORTH 010819A-16 VBLKKI 1.41	SB-67/0-2 010819A-17 VBLKKI 1.05	TP16 WOOD 010819A-18 VBLKKI 1.19	Quant. Limits with no Dilution
Chloromethane	U	U	U	10
Bromomethane	U	U	U	10
Vinyl Chloride	U	U	U	10
Chloroethane	U	U	U	10
Methylene Chloride	9B	13B	11B	5.0
Acetone	11B	10B	26B	10
Carbon Disulfide	U	U	U	5.0
Vinyl Acetate	U	U	U	10
1,1-Dichloroethene	U	U	U	5.0
1,1-Dichloroethane	U	U	U	5.0
cis-1,2-Dichloroethene	U	U	U	5.0
trans-1,2-Dichloroethene	U	U	U	5.0
Chloroform	U	U	U	5.0
1,2-Dichloroethane	U	U	U	5.0
2-Butanone	U	U	U	10
1,1,1-Trichloroethane	U	U	U	5.0
Carbon Tetrachloride	U	U	U	5.0
Bromodichloromethane	U	U	U	5.0
1,2-Dichloropropane	U	U	U	5.0
cis-1,3-Dichloropropene	U	U	U	5.0
Trichloroethene	6J	3J	U	5.0
Dibromochloromethane	U	U	U	5.0
1,1,2-Trichloroethane	U	U	U	5.0
Benzene	U	U	U	5.0
trans-1,3-Dichloropropene	U	U	U	5.0
Bromoform	U	U	U	5.0
4-Methyl-2-Pentanone	U	U	U	10
2-Hexanone	U	U	U	10
Tetrachloroethene	1J	1J	.5J	5.0
Toluene	U	U	U	5.0
1,1,2,2-Tetrachloroethane	U	U	U	5.0
Chlorobenzene	U	U	U	5.0
Ethylbenzene	U	U	U	5.0
Styrene	U	U	U	5.0
Xylene (total)	U	U	U	5.0
Date Received	04/06/01	04/07/01	04/07/01	
Date Extracted	N/A	N/A	N/A	
Date Analyzed	04/11/01	04/11/01	04/11/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.0
7001-0853A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	TP-16/PET	TP-16/12-13	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKOP	010853A-01	010853A-09	
Method Blank I.D.	SBLKOP	SBLKOP	SBLKOP	
Quant. Factor	1.00	72.5	2.42	
Phenol	U	340J	12J	330
bis(2-Chloroethyl)ether	U	U	U	330
2-Chlorophenol	U	U	U	330
1,3-Dichlorobenzene	U	U	U	330
1,4-Dichlorobenzene	U	U	10J	330
Benzyl alcohol	U	U	U	330
1,2-Dichlorobenzene	U	U	U	330
2-Methylphenol	U	U	U	330
2,2'-oxybis(1-Chloropropane)	U	U	U	330
4-Methylphenol	U	510J	42J	330
N-Nitroso-di-n-propylamine	U	U	U	330
Hexachloroethane	U	U	U	330
Nitrobenzene	U	U	U	330
Isophorone	U	U	U	330
2-Nitrophenol	U	U	U	330
2,4-Dimethylphenol	U	U	U	330
Benzoic acid	U	U	U	1600
bis(2-Chloroethoxy)methane	U	U	U	330
2,4-Dichlorophenol	U	U	U	330
1,2,4-Trichlorobenzene	U	U	U	330
Naphthalene	U	14000J	460J	330
4-Chloroaniline	U	U	U	330
Hexachlorobutadiene	U	U	U	330
4-Chloro-3-methylphenol	U	U	U	330
2-Methylnaphthalene	U	6600J	220J	330
Hexachlorocyclopentadiene	U	U	U	330
2,4,6-Trichlorophenol	U	U	U	330
2,4,5-Trichlorophenol	U	U	U	1600
2-Chloronaphthalene	U	U	U	330
2-Nitroaniline	U	U	U	1600
Dimethylphthalate	U	U	U	330
Acenaphthylene	U	1200J	51J	330
2,6-Dinitrotoluene	U	U	U	330
3-Nitroaniline	U	U	U	1600
Acenaphthene	U	19000J	590J	330
Date Received		04/11/01	04/11/01	
Date Extracted	04/13/01	04/13/01	04/13/01	
Date Analyzed	04/17/01	04/18/01	04/18/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.0
7001-0853A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Soil

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	TP-16/PET	TP-16/12-13	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKOP	010853A-01	010853A-0	
Method Blank I.D.	SBLKOP	SBLKOP	SBLKOP	
Quant. Factor	1.00	72.5	2.42	
2,4-Dinitrophenol	U	U	U	1600
4-Nitrophenol	U	U	U	1600
Dibenzofuran	U	16000J	420J	330
2,4-Dinitrotoluene	U	U	U	330
Diethylphthalate	2J	U	JB	330
4-Chlorophenyl-phenylether	U	U	U	330
Fluorene	U	26000	760J	330
4-Nitroaniline	U	U	U	1600
4,6-Dinitro-2-methylphenol	U	U	U	1600
N-Nitrosodiphenylamine (1)	U	U	U	330
4-Bromophenyl-phenylether	U	U	U	330
Hexachlorobenzene	U	U	U	330
Pentachlorophenol	U	U	U	1600
Phenanthrene	U	140000	450	330
Anthracene	U	49000	140	330
Carbazole	U	23000J	73 J	330
Di-n-butylphthalate	3J	150JB	28 B	330
Fluoranthene	2J	150000B	480 B	330
Pyrene	1J	170000B	5 0 B	330
Butylbenzylphthalate	2J	U	U	330
3,3'-Dichlorobenzidine	U	U	U	660
Benzo(a)anthracene	U	92000	20	330
Chrysene	U	82000	000	330
bis(2-Ethylhexyl)phthalate	5J	550JB	160J B	330
Di-n-octylphthalate	1J	U	U	330
Benzo(b)fluoranthene	1J	53000B	2300 B	330
Benzo(k)fluoranthene	1J	65000B	2000 B	330
Benzo(a)pyrene	1J	78000B	2800 B	330
Indeno(1,2,3-cd)pyrene	U	64000	2100	330
Dibenzo(a,h)anthracene	U	26000	800	330
Benzo(g,h,i)perylene	U	64000	1800	330
Date Received		04/11/01	04/11/01	
Date Extracted	04/13/01	04/13/01	04/13/01	
Date Analyzed	04/17/01	04/18/01	04/18/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE AS-1.0
7001-0853A
ROUX ASSOCIATES
TAL METALS

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	TP-16/PET	TP-16/12-13	TP-16-2	TP-16-3/P
Lab Sample I.D.	010853A-01	010853A-09	010853A-10	010853A-15
Aluminum	4500	2090	1740	4180
Antimony	2.8U	2.2U	2.1U	3.1U
Arsenic	13.1	6.3	7.1	3.7U
Barium	165.	81.4	73.1	42.1
Beryllium	1.4U	1.1U	1.0U	1.6U
Cadmium	3.3	2.2	1.0U	2.5
Calcium	29800	3740	3040	8770
Chromium	62.6	33.5	32.7	68.2
Cobalt	3.8B	2.4B	2.5B	5.0
Copper	67.2	21.0	6.0	42.9
Iron	17800	8700	10900	14200
Lead	104.	23.3	14.8	2890
Magnesium	2870	1040	1570	3290
Manganese	239.	260	128.	58.7
Mercury	0.19	0.056	0.082	0.22
Nickel	16.7	8.2	12.4	6.0B
Potassium	822.B	560	1210B	1560
Selenium	1.4U	1.1U	1.3U	1.6U
Silver	1.4U	1.1U	1.3U	1.6U
Sodium	197.B	108.U	134.U	156.U
Thallium	2.8U	2.2U	2.7U	3.1U
Vanadium	16.7	23.6	17.3B	18.6
Zinc	591	106.	141.	4200

See Appendix for qualifier definitions

Aqueous

TABLE VO-3.0
7001-1009A
ROUX ASSOCIATES
VOLATILE ORGANICS (TCLP)

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank VBLKM9 VBLKM9 1.00	TP-16/BWP 011009A-18 VBLKM9 1.00	TP-16/BWP FMS 011009A-18 FMS VBLKM9 1.00	Quant. Limits with no Dilution
Chloromethane	U	U	45X	10
Bromomethane	U	U	45X	10
Vinyl Chloride	U	U	47X	10
Chloroethane	U	U	48X	10
Methylene Chloride	.6J	1JBT	45BX	5.0
Acetone	6J	31BT	73BX	10
Carbon Disulfide	U	U	49X	5.0
Vinyl Acetate	U	U	68X	10
1,1-Dichloroethene	U	U	47X	5.0
1,1-Dichloroethane	U	U	48X	5.0
cis-1,2-Dichloroethene	U	U	50	5.0
trans-1,2-Dichloroethene	U	U	49	5.0
Chloroform	U	U	50X	5.0
1,2-Dichloroethane	U	U	56X	5.0
2-Butanone	U	U	64X	10
1,1,1-Trichloroethane	U	U	53X	5.0
Carbon Tetrachloride	U	U	52X	5.0
Bromodichloromethane	U	U	51X	5.0
1,2-Dichloropropane	U	U	50X	5.0
cis-1,3-Dichloropropene	U	U	50X	5.0
Trichloroethene	U	1J	51X	5.0
Dibromochloromethane	U	U	55X	5.0
1,1,2-Trichloroethane	U	U	56X	5.0
Benzene	U	U	50X	5.0
trans-1,3-Dichloropropene	U	U	53X	5.0
Bromoform	U	U	70X	5.0
4-Methyl-2-Pentanone	U	U	92X	10
2-Hexanone	U	U	65X	10
Tetrachloroethene	U	U	54X	5.0
Toluene	U	U	49X	5.0
1,1,2,2-Tetrachloroethane	U	U	57X	5.0
Chlorobenzene	U	U	50X	5.0
Ethylbenzene	U	U	51X	5.0
Styrene	U	U	53X	5.0
Xylene (total)	U	U	150X	5.0
Date Received		04/26/01	04/26/01	
Date Extracted	N/A	N/A	N/A	
Date Analyzed	04/27/01	04/27/01	04/27/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.0
7001-1009A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	FIELD BLANK	TP-16/BWP	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKQQ	011009A-10	011009A-18	
Method Blank I.D.	SBLKQQ	SBLKQQ	SBLKQQ	
Quant. Factor	1.00	1.00	2.00	
Phenol	U	U	U	10
bis(2-Chloroethyl)ether	U	U	U	10
2-Chlorophenol	U	U	U	10
1,3-Dichlorobenzene	U	U	U	10
1,4-Dichlorobenzene	U	U	U	10
Benzyl alcohol	U	U	U	10
1,2-Dichlorobenzene	U	U	U	10
2-Methylphenol	U	U	U	10
2,2'-oxybis(1-Chloropropane)	U	U	U	10
4-Methylphenol	U	U	U	10
N-Nitroso-di-n-propylamine	U	U	U	10
Hexachloroethane	U	U	U	10
Nitrobenzene	U	U	U	10
Isophorone	U	U	U	10
2-Nitrophenol	U	U	U	10
2,4-Dimethylphenol	U	U	U	10
Benzoic acid	U	U	U	50
bis(2-Chloroethoxy)methane	U	U	U	10
2,4-Dichlorophenol	U	U	U	10
1,2,4-Trichlorobenzene	U	U	U	10
Naphthalene	U	U	4J	10
4-Chloroaniline	U	U	U	10
Hexachlorobutadiene	U	U	U	10
4-Chloro-3-methylphenol	U	U	U	10
2-Methylnaphthalene	U	U	8J	10
Hexachlorocyclopentadiene	U	U	U	10
2,4,6-Trichlorophenol	U	U	U	10
2,4,5-Trichlorophenol	U	U	U	50
2-Chloronaphthalene	U	U	U	10
2-Nitroaniline	U	U	U	50
Dimethylphthalate	U	U	U	10
Acenaphthylene	U	U	9J	10
2,6-Dinitrotoluene	U	U	U	10
3-Nitroaniline	U	U	U	50
Acenaphthene	U	U	6J	10
Date Received		04/26/01	04/26/01	
Date Extracted	04/29/01	04/29/01	04/29/01	
Date Analyzed	04/30/01	04/30/01	04/30/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.0
7001-1009A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	FIELD BLANK	TP-16/BWP	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKQQ	011009A-10	011009A-18	
Method Blank I.D.	SBLKQQ	SBLKQQ	SBLKQQ	
Quant. Factor	1.00	1.00	2.00	
2,4-Dinitrophenol	U	U	U	50
4-Nitrophenol	U	U	U	50
Dibenzofuran	U	U	3J	10
2,4-Dinitrotoluene	U	U	U	10
Diethylphthalate	U	U	U	10
4-Chlorophenyl-phenylether	U	U	U	10
Fluorene	U	U	11J	10
4-Nitroaniline	U	U	U	20
4,6-Dinitro-2-methylphenol	U	U	U	50
N-Nitrosodiphenylamine (1)	U	U	U	10
4-Bromophenyl-phenylether	U	U	U	10
Hexachlorobenzene	U	U	U	10
Pentachlorophenol	U	U	U	50
Phenanthrene	U	U	11J	10
Anthracene	U	U	3J	10
Carbazole	U	U	5J	10
Di-n-butylphthalate	U	U	U	10
Fluoranthene	U	U	3J	10
Pyrene	U	U	2J	10
Butylbenzylphthalate	U	U	U	10
3,3'-Dichlorobenzidine	U	U	U	20
Benzo(a)anthracene	U	U	U	10
Chrysene	U	U	U	10
bis(2-Ethylhexyl)phthalate	4J	.5JB	5JTB	10
Di-n-octylphthalate	U	U	U	10
Benzo(b)fluoranthene	U	U	U	10
Benzo(k)fluoranthene	U	U	U	10
Benzo(a)pyrene	U	U	U	10
Indeno(1,2,3-cd)pyrene	U	U	U	10
Dibenzo(a,h)anthracene	U	U	U	10
Benzo(g,h,i)perylene	U	U	U	10
Date Received		04/26/01	04/26/01	
Date Extracted	04/29/01	04/29/01	04/29/01	
Date Analyzed	04/30/01	04/30/01	04/30/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE AS-2.0
7001-1009A
ROUX ASSOCIATES
TCLP METALS

All values are ug/L uncorrected for spike recovery.

Client Sample I.D.	TP-16/BWP			
Lab Sample I.D.	011009A-18			
Arsenic	21.0U			
Barium	310.B			
Cadmium	5.3B			
Chromium	4.0U			
Lead	14.4B			
Mercury	20.8			
Selenium	24.5U			
Silver	5.0U			

See Appendix for qualifier definitions

0020

Soil

TABLE GC-1.0
7001-1009A
ROUX ASSOCIATES
8082 POLYCHLORINATED BIPHENYL'S

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	TP-16/BWP		Quant. Limits with no Dilution
Lab Sample I.D.	042901-S04	011009A-18		
Method Blank I.D.	PCBLK55	PCBLK55		
Quant. Factor	1.00	11.1		
Aroclor-1016	U	U		33.
Aroclor-1221	U	U		67.
Aroclor-1232	U	210J		33.
Aroclor-1242	U	U		33.
Aroclor-1248	U	U		33.
Aroclor-1254	U	850		33.
Aroclor-1260	U	670		33.
Date Received		04/26/01		
Date Extracted	04/29/01	04/29/01		
Date Analyzed	05/02/01	05/04/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Soil

TABLE GC-2.0
7001-1009A
ROUX ASSOCIATES
DIESEL RANGE ORGANICS

All values are ug/Kg dry weight basis.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank 042901-B08 PBLK57 1.00	TP-32/WP 011009A-11 PBLK57 4.46	TP-16/BWP 011009A-18 PBLK57 45.2	Quant. Limits with no Dilution
Diesel Range Organics	BQL	270000	2700000	17000
Date Received Date Extracted Date Analyzed	04/29/01 05/02/01	04/26/01 04/29/01 05/02/01	04/26/01 04/29/01 05/02/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

1
WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

TP-16/BWP

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 1009A SAS No.: _____ SDG No.: A1009

Matrix (soil/water): SOIL Lab Sample ID: 011009A-18

% Solids: 0 Date Received: 04/26/01

CAS No.	Analyte	Concentration	C	Units	Q	M
	Corrosivity	No (pH 8.12)		S.U.		D
	Cyanide, Reactive	0.500	U	mg/Kg		L
	Ignitability	No				D
	Reactivity	No (see CNR/RSULFIDE)				D
	Sulfide, Reactive	10.0	U	mg/Kg		T

Comments:

FORM I - WC

Aqueous

TABLE VO-1.0
7001-1893A
ROUX ASSOCIATES
TCL VOLATILE ORGANICS + TIC'S

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank VBLKKT VBLKKT 1.00	WCT-2 011893A-03 VBLKKT 1.00	TB072401 011893A-04 VBLKKT 1.00	Quant. Limits with no Dilution
Chloromethane	U	U	U	10
Bromomethane	U	U	U	10
Vinyl Chloride	U	U	U	2.0
Chloroethane	U	U	U	10
Methylene Chloride	U	.4J	1JB	5.0
Acetone	3J	U	U	10
Carbon Disulfide	U	.6J	U	5.0
Vinyl Acetate	U	U	U	10
1,1-Dichloroethene	U	U	U	5.0
1,1-Dichloroethane	U	U	U	5.0
cis-1,2-Dichloroethene	U	2J	U	5.0
trans-1,2-Dichloroethene	U	U	U	5.0
Chloroform	U	U	U	5.0
1,2-Dichloroethane	U	U	U	5.0
2-Butanone	U	U	U	10
1,1,1-Trichloroethane	U	2J	U	5.0
Carbon Tetrachloride	U	U	U	5.0
Bromodichloromethane	U	U	U	5.0
1,2-Dichloropropane	U	U	U	5.0
cis-1,3-Dichloropropene	U	U	U	5.0
Trichloroethene	U	12	U	5.0
Dibromochloromethane	U	U	U	5.0
1,1,2-Trichloroethane	U	U	U	5.0
Benzene	U	U	U	0.70
trans-1,3-Dichloropropene	U	U	U	5.0
Bromoform	U	U	U	5.0
4-Methyl-2-Pentanone	U	U	U	10
2-Hexanone	U	U	U	10
Tetrachloroethene	U	.8J	U	5.0
Toluene	U	U	U	5.0
1,1,2,2-Tetrachloroethane	U	U	U	5.0
Chlorobenzene	U	U	U	5.0
Ethylbenzene	U	U	U	5.0
Styrene	U	U	U	5.0
Xylene (total)	U	U	U	5.0
Date Received	N/A	07/25/01	07/25/01	
Date Extracted	07/30/01	N/A	N/A	
Date Analyzed		07/30/01	07/30/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE VO-2.0
7001-1893A
ROUX ASSOCIATES
VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Related Method Blank: VBLKKT

Lab Sample Id: VBLKKT Client Sample Id: Method Blank

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

Lab Sample Id: 011893A-03 Client Sample Id: WCT-2

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

Lab Sample Id: 011893A-04 Client Sample Id: TB072401

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

See Appendix for qualifier definitions

Aqueous

TABLE VO-2.0
7001-1893A
ROUX ASSOCIATES
VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Related Method Blank: VBLKM8

Lab Sample Id: VBLKM8 Client Sample Id: Method Blank

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

Lab Sample Id: 011893A-01 Client Sample Id: WCT-1

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

Lab Sample Id: 011893A-02 Client Sample Id: TB072001

CAS#	Compound	RT	Estimated Conc., ug/L
NONE DETECTED			

See Appendix for qualifier definitions

Aqueous

TABLE SV-2.0
7001-1893A
ROUX ASSOCIATES
SEMI-VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Related Method Blank: SBLKFQ

Lab Sample Id: SBLKFQ Client Sample Id: Method Blank

CAS#	Compound	RT	Estimated Conc., ug/L
67-68-5	DIMETHYL SULFOXIDE	6.90	6JN
	UNKNOWN ALKANE	27.98	2J
	UNKNOWN ALKANE	27.25	2J

Lab Sample Id: 011893A-01 Client Sample Id: WCT-1

CAS#	Compound	RT	Estimated Conc., ug/L
598-16-3	ETHENE, TRIBROMO-	9.92	57JN
	UNKNOWN	10.48	16J
	UNKNOWN	10.22	11J
67-68-5	DIMETHYL SULFOXIDE	6.91	7JBN
	UNKNOWN	10.28	5J
	UNKNOWN	22.47	3J
	UNKNOWN ALKANE	27.97	3JB
733-57-9	ETHYLDIPHENYLPHOSPHINE OXIDE	22.79	2JN
	UNKNOWN ALKANE	28.79	2J
	UNKNOWN ALKANE	26.60	2J
	UNKNOWN ALKANE	27.26	2JB
	UNKNOWN	13.37	2J

See Appendix for qualifier definitions

TABLE SV-1.1
7001-1893A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	WCT-2		Quant. Limits with no Dilution
Lab Sample I.D.	SBLKLS	011893A-03		
Method Blank I.D.	SBLKLS	SBLKLS		
Quant. Factor	1.00	1.00		
Phenol	U	U		10
bis(2-Chloroethyl)ether	U	U		10
2-Chlorophenol	U	U		10
1,3-Dichlorobenzene	U	U		10
1,4-Dichlorobenzene	U	U		10
Benzyl alcohol	U	U		10
1,2-Dichlorobenzene	U	U		10
2-Methylphenol	U	U		10
2,2'-oxybis(1-Chloropropane)	U	U		10
4-Methylphenol	U	U		10
N-Nitroso-di-n-propylamine	U	U		10
Hexachloroethane	U	U		10
Nitrobenzene	U	U		10
Isophorone	U	U		10
2-Nitrophenol	U	U		10
2,4-Dimethylphenol	U	U		50
Benzoic acid	U	U		10
bis(2-Chloroethoxy)methane	U	U		10
2,4-Dichlorophenol	U	U		10
1,2,4-Trichlorobenzene	U	U		10
Naphthalene	U	U		10
4-Chloroaniline	U	U		10
Hexachlorobutadiene	U	U		10
4-Chloro-3-methylphenol	U	U		10
2-Methylnaphthalene	U	U		10
Hexachlorocyclopentadiene	U	U		10
2,4,6-Trichlorophenol	U	U		50
2,4,5-Trichlorophenol	U	U		10
2-Chloronaphthalene	U	U		50
2-Nitroaniline	U	U		10
Dimethylphthalate	U	U		10
Acenaphthylene	U	U		10
2,6-Dinitrotoluene	U	U		50
3-Nitroaniline	U	U		10
Acenaphthene	U	U		
Date Received		07/25/01		
Date Extracted	07/27/01	07/27/01		
Date Analyzed	07/27/01	07/27/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.1
7001-1893A
ROUX ASSOCIATES
TCL SEMI-VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	WCT-2		Quant. Limits with no Dilution
Lab Sample I.D.	SBLKLS	011893A-03		
Method Blank I.D.	SBLKLS	SBLKLS		
Quant. Factor	1.00	1.00		
2,4-Dinitrophenol	U	U		50
4-Nitrophenol	U	U		50
Dibenzofuran	U	U		10
2,4-Dinitrotoluene	U	U		10
Diethylphthalate	U	U		10
4-Chlorophenyl-phenylether	U	U		10
Fluorene	U	U		10
4-Nitroaniline	U	U		20
4,6-Dinitro-2-methylphenol	U	U		50
N-Nitrosodiphenylamine (1)	U	U		10
4-Bromophenyl-phenylether	U	U		10
Hexachlorobenzene	U	U		10
Pentachlorophenol	U	U		50
Phenanthrene	U	U		10
Anthracene	U	U		10
Carbazole	U	U		10
Di-n-butylphthalate	U	U		10
Fluoranthene	U	U		10
Pyrene	U	U		10
Butylbenzylphthalate	U	U		10
3,3'-Dichlorobenzidine	U	U		20
Benzo(a)anthracene	U	U		10
Chrysene	U	U		10
bis(2-Ethylhexyl)phthalate	U	U		10
Di-n-octylphthalate	U	U		10
Benzo(b)fluoranthene	U	U		10
Benzo(k)fluoranthene	U	U		10
Benzo(a)pyrene	U	U		10
Indeno(1,2,3-cd)pyrene	U	U		10
Dibenzo(a,h)anthracene	U	U		10
Benzo(g,h,i)perylene	U	U		10
Date Received		07/25/01		
Date Extracted	07/27/01	07/27/01		
Date Analyzed	07/27/01	07/27/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE SV-2.1
7001-1893A
ROUX ASSOCIATES
SEMI-VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Related Method Blank: SBLKLS

Lab Sample Id: SBLKLS Client Sample Id: Method Blank

CAS#	Compound	RT	Estimated Conc., ug/L
	UNKNOWN ALKANE	24.50	15J
	UNKNOWN ALKANE	25.08	13J
	UNKNOWN ALKANE	23.90	12J
	UNKNOWN ALKANE	23.29	10J
	UNKNOWN ALKANE	25.63	10J
	UNKNOWN ALKANE	26.16	8J
	UNKNOWN ALKANE	22.65	7J
67-68-5	DIMETHYL SULFOXIDE	3.59	6JN
	UNKNOWN ALKANE	26.70	6J
	UNKNOWN	3.75	5J
	UNKNOWN ALKANE	21.99	4J
	UNKNOWN ALKANE	25.43	4J
	UNKNOWN ALKANE	27.31	4J

Lab Sample Id: 011893A-03 Client Sample Id: WCT-2

CAS#	Compound	RT	Estimated Conc., ug/L
	UNKNOWN ALKANE	24.50	16JB
	UNKNOWN ALKANE	25.07	12JB
	UNKNOWN	7.49	11J
	UNKNOWN ALKANE	23.91	10JB
	UNKNOWN ALKANE	23.29	9JB
	UNKNOWN	7.22	8J
	UNKNOWN ALKANE	25.62	8JB
	UNKNOWN	7.30	6J
	UNKNOWN ALKANE	22.65	6JB
	UNKNOWN ALKANE	26.17	6JB
67-68-5	DIMETHYL SULFOXIDE	3.59	5JNB
	UNKNOWN ALKANE	21.99	4JB
	UNKNOWN ALKANE	26.70	4JB

See Appendix for qualifier definitions

TABLE GC-2.0
7001-1893A
ROUX ASSOCIATES
DIESEL RANGE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank 072601-B04 PBLK33 1.00	WCT-1 011893A-01 PBLK33 1.00	WCT-2 011893A-03 PBLK33 1.00	Quant. Limits with no Dilution
Diesel Range Organics	BQL	BQL	BQL	500
Date Received Date Extracted Date Analyzed	 07/26/01 07/28/01	07/21/01 07/26/01 07/28/01	07/25/01 07/26/01 07/28/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE GC-2.1
7001-1893A
ROUX ASSOCIATES
DIESEL RANGE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	PBLK33 QC			Quant. Limits with no Dilution
Lab Sample I.D.	072601-B04QC			
Method Blank I.D.	PBLK33			
Quant. Factor	1.00			
Diesel Range Organics	1100X			500
Date Received				
Date Extracted	07/26/01			
Date Analyzed	07/28/01			

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

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WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

WCT-2

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 1893A SAS No.: _____ SDG No.: A1893

Matrix (soil/water): WATER Lab Sample ID: 011893A-03

% Solids: 0 Date Received: 07/25/01

CAS No.	Analyte	Concentration	C	Units	Q	M
	Corrosivity	No (pH 8.06)		S.U.		D
	Cyanide, Reactive	0.500	U	mg/Kg		L
	Ignitability	No				D
	Reactivity	No (see CNR/RSULFIDE)				D
	Sulfide, Reactive	10.	U	mg/Kg		T
	TSS	5.0	U	mg/L		G

Comments:

FORM I - WC

TABLE AS-1.0
7001-1893A
ROUX ASSOCIATES
RCRA METALS

Aqueous

All values are ug/L.

Client Sample I.D.	WCT-1	WCT-2		
Lab Sample I.D.	011893A-01	011893A-03		
Arsenic	4.8B	4.1U		
Barium	41.5B	62.2B		
Cadmium	0.90U	0.80U		
Chromium	5.7B	1.0U		
Lead	4.3	2.6U		
Mercury	NR	NR		
Selenium	4.9U	4.6U		
Silver	2.1B	1.0U		

See Appendix for qualifier definitions