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SUPPLEMENTAL DOCUMENTS

Designers Woodcraft, Site Registry # 2-24-020

WORK ASSIGNMENT NO. D002708-23

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SUPPLEMENTAL DOCUMENTS

FOR

DESIGNERS WOODCRAFT
BROOKLYN, NEW YORK
REGISTRY NO. 2-24-020

WORK ASSIGNMENT NO. D002708-23

PREPARED FOR

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

BY

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NOVEMBER 1997

SUPPLEMENTAL DOCUMENTS FOR
DESIGNERS WOODCRAFT
REGISTRY NO. 2-24-020
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Appendix B

APPENDIX B

DATA VALIDATION SUMMARIES

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Volatile Organic Analyses by GC/MS
Samples Received: October 23rd, 24th, & 25th 1996
Sample Delivery Group: STONE 4
Laboratory Reference Numbers:

Samples Received 10/23	
TB-1	2952201
GP-1	2952202
GP-1MS	2952203
GP-1MSD	2952204
GP-3	2952205
MSB	2952206
Samples Received 10/24	
TB-2	295330
GP-2	295330
GP-9	295330
GP-8	295330
SUMP	295330
Samples Received 10/25	
TB-3	2954601
GP-10	2954602
GP-7	2954603

Water samples were received for analyses of the volatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - GC/MS Tuning
* * - Holding Times
  - Calibrations
  - Laboratory Blanks
  - Field Blanks
  - Trip Blanks
* * - System Monitoring Compound Recoveries
* * - Internal Standard Recoveries
  - Matrix Spike / Matrix Spike Duplicate
* * - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No significant problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 8, 1996

Holding Times

All samples were analyzed within the required 7 day holding time.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring recoveries were within the quality assurance limits of the NYS DEC's ASP program.

Calibrations

The initial calibration was performed on 7/30/96. The continuing calibrations were analyzed between 10/29 and 10/30.

The %RSD of bromomethane (28%) was greater than the 20.5% quality assurance limit used by the NYS DEC ASP program for this compound. The percent RSDs of methylene chloride (38%) and acetone (49%) in the initial calibration were greater than 30%. Although these compounds do not have strict limits on the %RSD in the analytical method, the 30% RSD was used for the purposes of the data validation. A low concentration of methylene chloride was found in several of the samples. This was negated due to the presence of this compound in the associated trip blank.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

All internal standard areas and retention times were within the required quality assurance limits.

Matrix Spike / Matrix Spike Duplicate

Sample GP1-1 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate.

All of the RPD's were greater than the NYS DEC ASP quality assurance limits.

Compound	MS %Rec	MSD %Rec	QC Limits	RPD	Limits
1,1-Dichloroethene			61-145	24%	14%
Trichloroethene			71-120	25%	14%
Benzene			76-127	23%	11%
Toluene			76-125	25%	13%
Chlorobenzene			75-130	25%	13%

None of the spiking compounds were detected in the sample.

No problems were found with any of the matrix spike or matrix spike duplicate recoveries.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits.

Method Blanks

Two method blanks were associated with this sample delivery group:

Methylene chloride was detected at a low concentration (2J ug/l) in the method blank associated with the analyses of samples TB-2, GP-2, GP-9, GP-8 and SUMP. This compound was negated from the samples according to the standard EPA data validation protocols due to its presence in the trip blank.

Trip Blanks

One trip blank was collected on each of the three days of sampling:

A low concentration of methylene chloride (1J ug/l) was detected in the trip blank collected on 10/23. This was negated from all of the samples which were collected on this day due to its presence in this trip blank.

Methylene chloride (4J ug/l) was also detected in the field blank collected on 10/24. Methylene chloride was negated in the samples collected on this date due to this compounds presence in both the trip blank and method blank.

No compounds were detected in Trip Blank #1 which was collected on 10/25.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Semivolatile Organic Analyses by GC/MS
Samples Received: October 23rd, 24th, & 25th 1996
Sample Delivery Group: STONE 4
Laboratory Reference Numbers:

Samples Received 10/23	
GP-1	2952202
GP-1MS	2952203
GP-1MSD	2952204
GP-3	2952205
MSB	2952206
Samples Received 10/24	
GP-2	295330
GP-9	295330
GP-8	295330
SUMP	295330
Samples Received 10/25	
GP-10	2954602
GP-7	2954603

Water samples were received for analyses of the semivolatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
- Laboratory Blanks
- Field Blanks
- Surrogate Compound Recoveries
- Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
- Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The problems with the surrogate and internal standard recoveries in sample GP-8 should be noted. It is recommended that the data from the first analysis be used in the final reporting of this sample since both the internal standard and surrogate recoveries were significantly better in this analysis.

No other significant problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 10, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Compound Recoveries

All surrogate recoveries were within the quality assurance limits of the NYS DEC's ASP program with the exception of sample GP-8:

The recoveries of the 2-fluorobiphenyl (152%) and 2,4,6-tribromophenol (168%) surrogates were both greater than the required quality assurance limits of 116% and 123%. The EPA quality assurance data validation guidelines allow for the recovery of one surrogate in each fraction to be above the quality assurance limits.

This sample was reanalyzed, but not re-extracted, and in the reanalysis two base neutral surrogates, 2-fluorobiphenyl (470%) and terphenyl-d14 (516%) were above the quality assurance limits of 116% and 141%. The recovery of the phenolic surrogate, 2,4,6-tribromophenol (493%) was also above the 123% quality assurance limit.

It is recommended that the data from the first analysis be used in the final reporting of this sample since both the internal standard and surrogate recoveries were significantly better in this analysis.

Calibrations

No problems were found with the one initial calibration associated with the samples of this delivery group.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

All internal standard areas and retention times were within the required quality assurance limits with the exception of sample GP-8.

In the initial analysis of this sample the recovery of the third internal standard (48%) was just under the 50% quality assurance limit and the last internal standard was not recovered (0%).

This sample was reanalyzed, but it was not re-extracted. In the reanalysis the recoveries of the third (14%), fourth (48%) and fifth (5%) internal standards were less than the 50% recovery limit. The last internal standard was not recovered (0%).

It is recommended that the data from the initial analysis be used in the final reporting. No TCL compounds were detected in either samples and the concentrations of the non-target compounds were slightly higher in the initial analysis.

The data for the compounds which were quantitated against the last internal standard would be considered unusable according to the January 1992 EPA data validation guidelines (Section 14.1.3). These were flagged with the "R" qualifier and footnoted with #89 in the data validation summary table.

The compounds which were quantitated against the third internal standard in the initial analyses and the fourth internal standard in the reanalysis were flagged with the "J" qualifier and footnoted with #90 in the data validation summary table. Low concentrations of these semivolatiles may have been overlooked.

The data for the compounds quantitated against the third and fifth internal standards in the reanalysis were also rejected due to the low recoveries (<25%).

Matrix Spike / Matrix Spike Duplicate

Sample GP-1 of this sample delivery group was used for the matrix spike and matrix spike duplicate for the water samples. Only the recoveries of 4-nitrophenol were outside of the acceptable limits:

Compound	MS %Rec	MSD %Rec	QC Limits	RPD Limits
Phenol			12 - 110	42
2-Chlorophenol			27 - 123	40
1,4-Dichlorobenzene			37 - 97	28
N-Nitroso-di-n-prop.			41 - 116	38
1,2,4-Trichlorobenzene			39 - 98	28
4-Chloro-3-methylphenol			23 - 97	42
Acenaphthene			46 - 118	31
4-Nitrophenol	90%	101%	10 - 80	50
2.4-Dinitrotoluene			24 - 96	38
Pentachlorophenol			9 - 103	50
Pyrene			26 - 127	31

The high recoveries were also found in the blank spike. 4-Nitrophenol was not detected in any of the samples of this delivery group. The slightly high recoveries do not affect the end use of the data.

Blank Spike

The blank spike was analyzed in duplicate. All blank spike recoveries were within the acceptable quality assurance limits with the one exception of both 4-nitrophenol recoveries (101% & 101%) which were above the quality assurance limit of 80%. All of the RPDs were within the required quality assurance limits.

Method Blanks

Several non-target compounds were detected in each of the two method blanks which were associated with this sample delivery group. These were negated whenever they were found in an associated sample according to the EPA data validation guidelines.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

Sample GP-8 (Lab. #: 2953304)

This sample was reanalyzed due to problems with both the surrogates and internal standards. It is recommended that the data from the first analysis be used in the final reporting of this sample since both the internal standard and surrogate recoveries were significantly better in this first analysis.

The recoveries of the 2-fluorobiphenyl (152%) and 2,4,6-tribromophenol (168%) surrogates were both greater than the required quality assurance limits of 116% and 123%. The EPA quality assurance data validation guidelines allow for the recovery of one surrogate in each fraction to be above the quality assurance limits.

This sample was reanalyzed, but not re-extracted, and in the reanalysis two base neutral surrogates, 2-fluorobiphenyl (470%) and terphenyl-d14 (516%) were above the quality assurance limits of 116% and 141%. The recovery of the phenolic surrogate, 2,4,6-tribromophenol (493%) was also above the 123% quality assurance limit.

In the initial analysis of this sample the third internal standard recovery (48%) was just under the 50% quality assurance limit and the last internal standard was not recovered (0%).

This sample was reanalyzed, but was not re-extracted. In the reanalysis the recoveries of the third (14%), fourth (48%) and fifth (5%) internal standards were less than the 50% recovery limit. The last internal standard was not recovered (0%).

It is recommended that the data from the initial analysis be used in the final reporting. No TCL compounds were detected in either samples and the concentrations of the non-target compounds were slightly higher in this initial analysis.

The data for the compounds which were quantitated against the last internal standard would be unusable according to the January 1992 EPA data validation guidelines (Section 14.1.3). The were flagged with the "R" qualifier and footnoted with #89 in the data validation summary table.

The data for the compounds which were quantitated against the third internal standard in the initial analyses and the fourth internal standard in the reanalysis were flagged with the "J" qualifier and footnoted with #90 in the data validation summary table. Low concentrations of these semivolatiles may have been overlooked.

The compounds quantitated against the third and fifth internal standards in the reanalysis were also rejected due to the low recoveries (<25%).

Some minor problems were found with the reporting of some of the non-target raw data. These were noted in bold in the data validation summary table. These did not affect the end use of the data.

No other problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Inorganic Analyses
Samples Received: October 23rd, 24th, & 25th 1996
Sample Delivery Group: STONE 4
Laboratory Reference Numbers:

Samples Received 10/23	
GP-1	2952202
GP-1MS	2952203
GP-1MSD	2952204
GP-3	2952205
Samples Received 10/24	
GP-2	2953302
GP-9	2953303
GP-8	2953304
SUMP	2953305
Samples Received 10/25	
GP-10	2954602
GP-7	2954603

Water samples were received for TCL metals analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

- Data Completeness
* - Holding Times
* - Calibration Verification
- CRDL Standard
- Laboratory Control Sample
- Serial Dilutions
- Laboratory Blanks
- Field Blanks
- Preparation Blanks
- Matrix Spike
- Duplicate Analyses
* - Detection Limit Results
- Linear Range
- Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

The data for samples GP-10 and GP-7 were not initially found in the analytical data package. These were analyzed as a separate analytical package and attached at the end of the first SDG (page 127). These samples were received by the laboratory on 10/25, but the date received on the FORM I was reported as 11/19.

The mercury data originally reported for sample GP7 (102 ug/l) was taken from a concentration which was above the linear range of the analysis. The mercury data for this sample was reanalyzed within the required holding time the revised concentration of 195 ug/l was reported on their amended FORM I which was included in their 1/14 correspondence.

The linear range reported for sodium was only 50,000 ug/l but the sodium concentrations in samples GP-1 (386,000 ug/l), GP-2 (100,000 ug/l) and GP-3 (291,000 ug/l) were all much great than the linear range. The data for all of the sodium analyses were previously rejected due to the large problem with the sodium serial dilution. The problem with the serial dilution is very likely due to the analysis of sample GP-1 at a concentration almost 4 times the linear range of the analysis.

The raw data for samples GP-8, GP-9 and SUMP were not found in the original analytical report. These were included in the raw data supplied in the laboratory's 1/14 correspondence.

Other more minor problems are discussed below.

Nancy J. Potak
January 18, 1996

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

Three ICP runs were included in the analyses for this sample delivery group.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits for the first ICP run with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Silver	68%	71%

Only samples GP-1 and GP-3 were analyzed with this calibration. Silver was not detected in either of these samples. It is possible that low concentrations of silver were overlooked in these samples. The data for silver in these two samples were flagged with the "J" qualifier and footnoted with #21 in the data validation summary table.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits in the second ICP run with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Thallium	142%	144%

Only the diluted sodium analyses, post digestion spike and serial dilution were analyzed with this calibration. None of the data were required to be qualified for the high thallium recoveries.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits for the third ICP run with the following exceptions:

Analyte	Initial % Recovery	Second % Recovery	Final % Recovery
Arsenic	(ok)	(ok)	79%
Beryllium	124%	(ok)	
Lead	(ok)	(ok)	76%
Manganese	(ok)	130%	

Only the first two runs were associated with the analyses of samples GP-7 and GP-10. The concentrations of beryllium and manganese in these samples were both too high to be affected by the high CRDL standard recoveries. The data for these analytes were not qualified.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group.

Preparation Blank

No compounds were detected in the either of the two preparation blanks associated with the digestions of these samples at concentrations greater than the CRDL.

Calibration Blanks

The concentration of lead reported in the third continuing calibration blank (3.1 ug/l) was just above the 3 ug/l CRDL in the first ICP run. None of the samples of this delivery group were bracketed by this continuing calibration blank.

The concentrations of cadmium in the last three continuing calibrations blanks (5.6 ug/l, 7.4, ug/l and 6.0 ug/l) were greater than the CRDL (5 ug/l) in the third ICP analytical run. None of these continuing calibration blanks were associated with the analyses of these two samples.

The concentration of selenium in the last continuing calibration blank of the third ICP run (6.4 ug/l) was greater than the CRDL (5 ug/l). This continuing calibration blank was not associated with the analyses of either of these two samples.

Several other analytes were found in the continuing calibration blanks at concentrations between the CRDL and instrument detection limit. These very low concentration are not required to be noted in the data validation summary table.

Field Blank

A field blank was not submitted with this sample delivery group.

ICP Interference Check Sample

Arsenic, selenium and thallium were not added to the ICP Interference Check Samples. Although the NYS DEC ASP procedure was written before these parameters were analyzed by ICP, they should have been added to these solutions at a reasonable concentration.

No problems were detected with the reported ICP Interference Check Sample recoveries.

Matrix Spike Recovery

Sample GP-1 of this sample delivery group was used for the soil matrix spike for the ICP analyses for the samples received on 10/23 and 10/24. All recoveries were within the acceptable limits with the following exceptions:

Analyte	MS %Rec	Qualifier
Lead	68%	31
Manganese	63%	31
Silver	56%	31

The low matrix spike recoveries for lead, manganese and silver indicate that low concentrations of these analytes may have been overlooked in the samples of this delivery group and the concentrations reported may have been significantly

underestimated. The data for these analytes were flagged with the "J" qualifier and footnoted with #31 in the data validation summary table.

The post digestion spike recovery for lead was only 3%. This low of a post digestion spike recovery is very unusual when the digested spike recovery was as high as 68%. It may have been possible that the lead spike was not added many of the other TCL spiking compounds did not appear to have been added to the post digestion spike.

The post digestion spike recovery for the manganese spike was 109%.

A post digestion spike was not analyzed for silver.

A sample from another sample delivery group was analyzed for the matrix spike for samples GP10 and GP-7 (which were received on 10/25). All recoveries were within the acceptable limits. The matrix of this sample may not be applicable to the matrix of samples GP-10 and GP-7.

Duplicate Analysis

Sample GP-1 of this sample delivery group was used for the matrix duplicate for the ICP analyses for the samples collected on 10/23 and 10/24. All RPDs were within the 20% quality assurance limit with the following exceptions:

Analyte	MS %Rec	Qualifier
Aluminum	35%	45
Iron	36%	45
Lead	99%	43
Manganese	22%	45
Zinc	27%	45

The very high RPD of the lead duplicates results in all of the lead data being considered to be highly estimated.

The high RPDs of the aluminum, iron, manganese and zinc duplicates indicates that the data for these analytes should be considered to be estimated values.

Sample GP-10 from this sample delivery group was analyzed for the matrix duplicate for samples GP10 and GP-7 (which were received on 10/25). All recoveries were within the acceptable limits with the following exceptions:

Analyte	RPD	Qualifier
Aluminum	62%	45
Chromium	28%	45
Iron	26%	45
Vanadium	38%	45

The data for these analytes were flagged with the "J" qualifier and footnoted with #45 in the data validation summary table. The data for these analytes should be considered to be estimated values.

Laboratory Control Sample

The recovery of the silver LCS in the ICP run associated with the analyses of samples GP-10 and GP-7 was only 58%. Technically there is not quality assurance limit for the silver LCS so the data for this analyte were not qualified in the data validation summary table.

No other problems were detected with the recoveries of the water LCS standards.

Serial Dilutions

Sample GP-1 of this sample delivery group was used for the ICP serial dilution for the samples which were received on 10/23 and 10/24. All percent differences which could be calculated were greater than the required 10% quality assurance limit with the following exceptions:

Analyte	% Difference	Qualifier
Aluminum	19%	51
Calcium	14%	51
Lead	15%	51
Magnesium	12%	51
Potassium	12%	51
Sodium	390%	See Below

The reporting of the sodium data was somewhat confusing. The initial data for this analyte in the undiluted sample GP-1 was above the linear range of the analysis. The sample was reanalyzed at a 5X dilution (page 99) and a concentration of 77 ug/l in the diluted digestion solution (or 386,000 ug/l - when the dilution was accounted for) was reported as the sample sodium concentration. When the serial dilution of this sample was analyzed, it was also analyzed at a 5X dilution. The concentrations reported from this 5X dilution would have been the same as those reported from the sample that was analyzed at a 5X dilution to bring the sodium within the linear range of the analysis. The data reported in the serial dilution summary form (FORM IX - page 32) should have been reported as 386,000 ug/l. The correct percent difference was 1.2%. The "E" qualifier was removed from the data validation summary table.

The very high percent difference of the sodium data would result in the rejection of the data for this analyte.

The data for the remaining five analytes were flagged with the "J" qualifier and footnoted with #51 in the data validation summary table. The reported concentrations for these analytes should be considered to be estimated.

A sample from another sample delivery group was analyzed for the serial dilution for samples GP10 and GP-7 (which were received on 10/25). The matrix of this sample may not be applicable to the matrix of samples GP-10 and GP-7. All recoveries were within the acceptable limits with the following exception:

Analyte	RPD	Qualifier
Manganese	22%	See Below

The data for these analytes were flagged with the "J" qualifier and the "See Text" notation in the data validation summary table since the sample selected for the matrix duplicate was not from this sample delivery group.

Instrument Detection Limit

No problems with the instrument detection limits were found.

ICP Linear Ranges

The linear range reported for sodium was only 50,000 ug/l. The sodium concentrations in samples GP-1 (386,000 ug/l), GP-2 (100,000 ug/l) and GP-3 (291,000 ug/l) were all much great than the linear range. The data for all of the sodium analyses were previously rejected due to the large problem with the sodium serial dilution. The problem with the serial dilution is very likely due to the analysis of sample GP-1 at a concentration almost 4 times the linear range of the analysis.

No other problems were detected with the linear ranges.

Run Logs

The date analyzed was reported as 10/30 in the raw data, but 10/31 was noted on the analysis run log. The times of analyses in the raw data also did not appear to agree with those on the run log summary for.

Sample Results

The raw data for samples GP-8, GP-9 and SUMP were not found in the original analytical report. These were included in the raw data supplied in the laboratory's 1/14 correspondence.

Sample GP-7 (Lab. #: 954603)

The mercury data originally reported for sample GP7 (102 ug/l) was taken from a concentration which was above the linear range of the analysis. The mercury data for this sample was reanalyzed within the required holding time the revised concentration of 195 ug/l was reported on their amended FORM I which was included in their 1/14 correspondence.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil Volatile Organic Analyses by GC/MS
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
FD-1RE	2953406RE
SUMPS	2953407
SS-1	2953408
SS-1RE	2953408RE
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for analyses of the volatile organic TCL analyte list by NYS DEC CLP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
* - Laboratory Blanks
- Field Blanks
- Trip Blanks
* - System Monitoring Compound Recoveries
- Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The areas of the second and third internal standards were less than the 50% quality assurance limit in the initial analyses of samples FD-1 (45% and 36%) and SS-1 (48% and 33%). Both samples were reanalyzed according to the NYS DEC ASP requirements:

The recovery of the third internal standard was less than 50% in the reanalysis of sample FD-1. It is recommended that the data from the reanalysis be used for the final reporting. The reanalysis of this sample contained low concentrations of acetone (24 ug/kg), and tetrachloroethene which were not found in the original analysis.

The recoveries of the second and third internal standards were again less than the quality assurance limit when sample SS-1 was reanalyzed (47% & 33%). No compounds were detected in either analysis of this sample.

No other problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 6, 1996

Holding Times

All samples were analyzed within the required 7 day holding time.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring recoveries were within the quality assurance limits of the NYS DEC's ASP program.

Calibrations

The initial calibration was performed on 8/18/96. The continuing calibrations were analyzed on 10/30 and 10/31.

The %RSD of acetone (30.2%) in the one initial calibration of this sample delivery group was just above the 30% quality assurance limit used for the purposes of the data validation. Acetone does not have a limit imposed by the NYS DEC method.

The percent differences of 2-butanone (40%), 4-methyl-2-pentanone (41%), 2-hexanone (43%) and 1,1,2,2-tetrachloroethane (28%) were above the 25% quality assurance limit in the first of the two continuing calibrations associated with this delivery group. A 25% quality assurance limit was used for the purposes of the data validation for the analyses of all samples which did not have a percent difference imposed by the NYS DEC ASP method.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

Internal Standards

The areas of the second and third internal standards were less than the 50% quality assurance limit in the initial analyses of samples FD-1 (45% and 36%) and SS-1 (48% and 33%). Both samples were reanalyzed according to the NYS DEC ASP requirements:

The recovery of the third internal standard was less than 50% in the reanalysis of sample FD-1. It is recommended that the data from the reanalysis be used for the final reporting. The reanalysis of this sample contained low concentrations of acetone (24 ug/kg), and tetrachloroethene which were not found in the original analysis.

The recoveries of the second and third internal standards were again less than the quality assurance limit when sample SS-1 was reanalyzed (47% & 33%). No compounds were detected in either analysis of this sample.

All other internal standard areas and retention times were within the required quality assurance limits.

Matrix Spike / Matrix Spike Duplicate

Sample GP-94-7 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate. All recoveries and RPDs were within the required quality assurance limits with the one exception of the recovery of toluene (141%) in the matrix spike. This was just over the 139% quality assurance limit. The high recovery does not affect the end use of the data since toluene was not detected in any of the samples of this delivery group.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits.

Method Blanks

Two method blanks were associated with this sample delivery group.

A low concentration of methylene chloride (4J ug/kg) was detected in both of the method blanks.

A siloxane compound was detected in method blank VBLKN87.

Both of these compounds were negated or qualified according to the EPA standard data validation procedures whenever they were found in a sample.

Trip Blank

Data for a trip blank was not included with this sample delivery group.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

Several siloxane compounds were occasionally found in some of these samples which were not directly associated with a method blank. These are likely to be laboratory artifacts from column bleed and they were flagged with the "J" qualifier and footnoted with #64 in the data validation summary table.

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil Semivolatile Organic Analyses by GC/MS
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
FD-1RE	2953406RE
SUMPS	2953407
SS-1	2953408
SS-1RE	2953408RE
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for analyses of the semivolatile organic TCL analyte list by NYS DEC CLP protocols. A complete analytical validation was performed based upon the following parameters:

- Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
- Laboratory Blanks
- Field Blanks
- Surrogate Compound Recoveries
* - Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
- Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The percent solids data for the original analysis of sample FD-1 (Lab. #: 2953406) was incorrectly reported as 77% on the laboratory's FORM I. The correct percent solids (44%) was used in the reanalysis of this sample. The data for the initial analysis was recalculated on the basis of the correct percent solids in the data validation summary table. This resulted in the data being increased by a factor of 2.

The recoveries of all six surrogates in samples SS-1 and FD-1 were less than 10% in both the initial and diluted analyses of these samples. Both of these samples were reanalyzed (but not reextracted) at a dilution due to the presence of high concentrations of some semivolatile compounds. None of the surrogates were recovered in the dilutions.

No other problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 26, 1996

Holding Times

All samples were extracted and analyzed within the required holding time.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Recoveries

The recoveries of all six surrogates in samples SS-1 and FD-1 were less than 10%.

Both of these samples were reanalyzed (but not reextracted) at a dilution due to the presence of high concentrations of semivolatile compounds. None of the surrogates were recovered in the dilutions.

Compounds which were not detected in any of these four analyses were flagged with the "R" qualifier and rejected according to the EPA data validation guidelines. These compounds were footnoted with #85 in the data validation summary table.

The semivolatile compounds which were detected in the sample were flagged with the "J" qualifier and footnoted with #84. The concentrations reported for these compounds should be considered to be highly estimated.

No other problems were detected with any of the surrogate recoveries.

Calibrations

No problems were found with the one initial calibration associated with the samples of this delivery group.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

No problems were found with any of the internal standard recoveries or retention times.

Matrix Spike / Matrix Spike Duplicate

Sample GP94-7 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate. All recoveries and RPDs were within the required quality assurance limits with the following exceptions:

Compound	MS %Rec	MSD %Rec	QC Limits	RPD	Limits
Phenol			26-90		35
2-Chlorophenol			25-102		50
1,4-Dichlorobenzene			28-104		27
N-Nitroso-di-n-prop.			41-126		38
1,2,4-Trichlorobenzene			38-107		23
4-Chloro-3-methylphenol			26-103		33
Acenaphthene		196%	31-137	80%	19
4-Nitrophenol			11-114		50
2.4-Dinitrotoluene			28-89		47
Pentachlorophenol			17-109		47
Pyrene		357%	35-142	124%	36

The data were not qualified for the problems with the matrix spike recoveries or RPDs.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits with the one exception of the recoveries of 4-nitrophenol. The 94% recoveries in both the matrix spike and matrix spike duplicate were just above the 80% quality assurance limit. This does not significantly affect the end use of the data.

Method Blanks

Two method blanks were associated with this sample delivery group. Bis(2-ethylhehxyl)phthalate and several non-target compounds were detected in both of the method blanks. These compounds were negated in the samples in which they were detected according to the EPA data validation protocols. The compounds present in the method blanks are detailed in the data validation worksheets.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

Some of the raw data for the dilution of samples SS-1 and SUMPS were reversed in the copy of the analytical report submitted for data validation. All of the raw data was accounted for.

Sample FD-1 (Lab. #: 2953406)

This sample was reanalyzed at a 2X dilution due to a high concentration of bis(2-ethylhexyl)phthalate (4,600 ug/kg). The data for bis(2-ethylhexyl)-phthalate should be reported from the 2X dilution. All of the other semivolatile compounds should be reported from the initial analysis.

The percent solids data for the original analysis of sample FD-1 (Lab. #: 2953406) was incorrectly reported as 77% on the laboratory's FORM I.

The correct percent solids (44%) was used in the reanalysis of this sample. The data for the initial analysis was recalculated on the basis of the correct percent solids in the data validation summary table. This resulted in the data being increased by a factor of 2.

The laboratory had been asked to review the percent solids for this and the other samples of this delivery group. For the purposes of the data validation, the percent solids were taken from the raw data for this analysis in the inorganic fraction. Percent solids raw data was not included with any of the organic fractions. All of the percent solids data for these samples were verified from the raw data found in the inorganic fraction.

It is recommended that the data for the non-target compounds be taken from the diluted analysis of this sample since many of these were present in very high concentration.

All of the surrogate recoveries were less than 10% in both the initial and 2X dilution of this sample. Compounds which were detected in the samples were flagged with the "J" qualifier and footnoted with #84 in the data validation summary table. These concentrations should be considered to be highly estimated. The data for the semivolatile compounds which were not detected in either of these samples were rejected according to the standard EPA data validation protocols. The data for these compounds were flagged with the "R" qualifier and footnoted with #85 in the data validation summary table.

Sample SS-1 (Lab. #: 2953408)

This sample was reanalyzed at a 10X dilution due to a high concentration of several target semivolatile compounds. All of the other semivolatile compounds should be reported from the initial analysis.

It is recommended that the data for the non-target compounds be taken from the diluted analysis of this sample since many of these were present in very high concentration.

All of the surrogate recoveries were less than 10% in both the initial and 2X dilution of this sample. Compounds which were detected in the samples were flagged with the "J" qualifier and footnoted with #84 in the data validation summary table. These concentrations should be considered to be

highly estimated. The data for the semivolatile compounds which were not detected in either of these samples were rejected according to the standard EPA data validation protocols. The data for these compounds were flagged with the "R" qualifier and footnoted with #85 in the data validation summary table.

Sample SUMPS (Lab. #: 2953407)

This sample was reanalyzed at a 4X dilution due to a high concentration of bis(2-ethylhexyl)phthalate (4,600 ug/kg). The data for bis(2-ethylhexyl)-phthalate should be reported from the 4X dilution. All of the other target semivolatile compounds should be reported from the initial analysis.

It is recommended that the data for the non-target compounds be taken from the diluted analysis of this sample since many of these were present in very high concentration.

No other problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCL Inorganic Analyses
Samples Received: October 24th and 25, 1995
Sample Delivery Group: Stone 5
Laboratory Reference Numbers:

GP2811	953401
GP94-7	953402
GP94-7MS	953403
GP94-7MD	953404
GP80-3	953405
FD-1	953406
SUMPS	953707
SS-1	953408
GP1058	954701
GP73-6	954702

Soil samples were received for TAL metals analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
* - Calibration Verification
  - CRDL Standard
* - Laboratory Control Sample
* - Serial Dilutions
* - Laboratory Blanks
  - Field Blanks
* - Preparation Blanks
  - Matrix Spike
  - Duplicate Analyses
* - Detection Limit Results
* - Linear Range
* - Percent Solids
* - Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

Several major problems were found with the matrix spike recoveries and the precision of the matrix duplicates. These may be indicative of severe matrix interference or significant problems with sample homogeneity. There may also be a possibility that the samples were mislabeled and the incorrect samples were designated as the matrix spike and matrix duplicate.

Severe problems were found with the matrix spike recoveries of copper, lead and zinc. The recoveries of the soil predigestion spikes were greater than 200% and these analytes were detected in all of the samples of this delivery group. Although the matrix of sample GP94-7 may not be similar to all of the other samples of this delivery group, the data for these three analytes were technically rejected according to the EPA data validation guidelines referenced in HW-2 (A.1.9.7.4).

The RPDs of seven of the analytes were greater than 100% in the duplicate analysis. Although the data validation guidelines do not generally reject soils data on the basis of poor precision, these poor RPDs make the data very questionable. The data for arsenic, barium, calcium, copper, lead, selenium and zinc are all highly qualified.

The matrix spike recoveries and RPDs of many of the other analytes were also outside of the quality assurance limits. These are detailed below.

Nancy J. Potak
December 11, 1996

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

Three CRDL standards were analyzed with the ICP run.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits with the following exceptions:

Analyte	Initial % Recovery	Second % Recovery	Final % Recovery
Selenium	69%	(ok)	72%
Thallium	138%	(ok)	(ok)

Only the second and third CRDL standard analyses bracketed the analyses of the samples of this delivery group.

All of the selenium data was flagged with the "J" qualifier and footnoted with #21 in the data validation summary table. It is possible that low concentrations of this analyte were overlooked or underestimated.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group.

Preparation Blank

No compounds were detected in the preparation blank which were greater than the CRDL. Several compounds were detected at low concentrations between the IDL and the CRDL. The data were not required to be qualified for these low concentrations. The data for the method blank is noted in the first column of the data validation summary table.

Calibration Blanks

No analytes were detected in any of the calibration blanks at concentrations greater than the CRDL.

Field Blank

Field blanks were not submitted with this sample delivery group.

ICP Interference Check Sample

Concentrations of arsenic, thallium and selenium were not added to the ICP check samples. Although the NYS DEC ASP method was implemented before ICPs were routinely used for the low level analyses of these analytes, reasonable concentrations of these parameters should be added to the interference check solutions to verify the lack on interferences.

No other problems were detected with the reported ICP Interference Check Sample recoveries.

Matrix Spike Recovery

Sample GP94-7 of this sample delivery group was used for the matrix spike. All of the recoveries were within the 75% - 125% quality assurance limits with the following exceptions:

Analyte	MS %Rec	Qualifier	
Antimony	34%	35	
Barium	144%	37	
Chromium	129%	37	
Copper	230%	38	Reject
Lead	527%	38	Reject
Mercury	145%	37	
Nickel	36%	35	
Zinc	285%	38	Reject

Severe problems were found with the matrix spike recoveries of copper, lead and zinc. The recoveries of the soil predigestion spikes were greater than 200% and these analytes were detected in all of the samples of this delivery group. Although the matrix of sample GP94-7 may not be similar to all of the other samples of this delivery group, the data for these three analytes were technically rejected according to the EPA data validation guidelines referenced in HW-2 (A.1.9.7.4). The data for these analytes were flagged with the "R" qualifier and footnoted with #38 in the data validation summary table.

Low spike recoveries were found for antimony and nickel. The reported concentrations of these analytes may have been underestimated and low concentrations may have been overlooked. The data for these analytes were flagged with the "J" qualifier and footnoted with #35 in the data validation summary table.

High spike recoveries (but less than 200%) were also found for barium, chromium and mercury. The data for these analytes, when they were detected in a sample, were flagged with the "J" qualifier and footnoted with #37 in the data validation summary table.

Post digestion spikes were analyzed for all of the analytes with the one exception of copper. All of the post digestion spike recoveries were within the required quality assurance limits.

A sample from another sample delivery group was selected for the mercury matrix spike for samples GP1058 and GP73-6. Even though the mercury recovery of this spike was within the required quality assurance limits, the mercury data for these two samples were qualified against the matrix spike recoveries for sample GP94-7 for the purposes of the data validation since this was from this project.

Duplicate Analysis

Sample GP94-7 of this sample delivery group was also used for the matrix duplicate. Many problems were found with the duplicate analyses:

Analyte	MS %Rec	Qualifier	
Arsenic	155%	43	Highly Qualified
Barium	108%	43	Highly Qualified
Calcium	174%	43	Highly Qualified
Copper	101%	43	Highly Qualified
Lead	177%	43	Highly Qualified
Magnesium	41%	45	
Manganese	33%	45	
Nickel	21%	45	
Selenium	200%	43	Highly Qualified
Zinc	131%	43	Highly Qualified

The RPDs of seven of the analytes were greater than 100%. Although the data validation guidelines do not generally reject soils data on the basis of poor precision, these poor RPDs make the data very questionable. The data for arsenic, barium, calcium, copper, lead, selenium and zinc are all highly qualified. The data for these compounds were flagged with the "J" qualifier and footnoted with #43 in the data validation summary table.

Less severe problems were also found with the RPDs of magnesium, manganese and lead. The data for these compounds were flagged with the "J" qualifier and footnoted with #45 in the data validation summary table.

Laboratory Control Sample

No problems were detected with the recoveries of the soil LCS standards.

Serial Dilutions

Sample GP94-7 was also used for the serial dilution. All of the percent differences which could be calculated were less than 10%.

Instrument Detection Limit

No problems were found with the reported instrument detection limits.

ICP Linear Ranges

No problems were detected with the linear ranges. The reported concentrations of all samples in this delivery group were within their linear range for each analyte. The

iron data for some of the samples was reanalyzed at a dilution because it was originally above the linear range of the analyses.

Sample Results

The data for all of the samples was verified from the raw data for all of the analytes. No discrepancies were found between he concentrations reported by the laboratory and those found in the raw data.

The major problems with the matrix spike and duplicate analyses are noted above.

No other problems were found which would affect the end use of the data.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil Volatile Organic TCLP Analyses by GC/MS
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
FD-1RE	2953406RE
SUMPS	2953407
SS-1	2953408
SS-1RE	2953408RE
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for analyses of the volatile organic TCLP analyte list by NYS DEC CLP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - GC/MS Tuning
* * - Holding Times
  - Calibrations
* * - Laboratory Blanks
  - Field Blanks
  - Trip Blanks
* * - System Monitoring Compound Recoveries
* * - Internal Standard Recoveries
* * - Matrix Spike / Matrix Spike Duplicate
* * - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 6, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring recoveries were within the quality assurance limits of the NYS DEC's ASP program.

Calibrations

The initial calibration was performed on 7/30/96. The continuing calibrations were analyzed between 11/01 and 11/05.

The quality assurance format for the calibration data of this sample delivery group was reported according to a SW-846 methodology which had not been upgraded to meet the usual NYS DEC ASP requirements. All of the calibration data was validated in accordance with the ASP program.

No problems were found with the TCLP compounds in the one initial calibration associated with this sample delivery group.

Several TCLP compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

All internal standard areas and retention times were within the required quality assurance limits.

Matrix Spike / Matrix Spike Duplicate

Sample GP-94-7 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate. All recoveries and RPDs were within the required quality assurance limits. All of the TCLP compounds were included in the spiking compounds.

Blank Spike

All of the TCLP compounds were used in the blank spike. The recoveries of all of the compounds were with the required quality assurance limits.

Method Blanks

None of the TCLP compounds were detected in either of the three method blanks associated with this sample delivery group.

None of the TCLP compounds were detected in either of the two extraction blanks associated with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

Sample SUMPS (Lab. #: 2953407)

A low concentration of 2-butanone was reported in the TCLP extraction digest of this sample (1.81J ug/l). This is less than the reported instrument detection limit of 3.67 ug/l, but it was included in the data validation summary table since there was an adequate spectral match.

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Semivolatile Organic Analyses by GC/MS
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
SUMPS	2953407
SS-1	2953408
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for analyses of the semivolatile organic TCLP analyte list by NYS DEC CLP protocols. A complete analytical validation was performed based upon the following parameters:

- Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
- Laboratory Blanks
- Field Blanks
* - Surrogate Compound Recoveries
* - Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
- Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
December 6, 1996

Holding Times

All samples were extracted and analyzed within the required holding time.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Recoveries

No problems were detected with any of the surrogate recoveries.

Calibrations

No problems were found with the one initial calibration associated with the samples of this delivery group.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

No problems were found with any of the internal standard recoveries or retention times.

Matrix Spike / Matrix Spike Duplicate

Sample GP94-7 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate for the TCLP analyses. All of the TCLP compounds were reported in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits with the following exceptions:

Compound	MS %Rec	MSD %Rec	QC Limits	RPD	Limits
2-Methylphenol			20 - 150	67%	40%
3+4 Methylphenol			20 - 150	45%	40%
Hexachlorobenzene	171%	178%	20 - 150		40%

The data were not qualified for the problems with the matrix spike recoveries or RPDs. Hexachlorobenzene was not detected in any of the samples of this delivery gourp.

Blank Spike

The blank spike was analyzed in duplicate. All of the TCLP compounds were reported in the blank spike summary. No problems were found with any of the recoveries or RPDs.

Method Blanks

No TCLP compounds were detected in any of the method or extraction blanks.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Pesticide Analyses
Samples Received: November 5, 1996
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
SUMPS	2953407
SS-1	2953408
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for pesticide analyses of the organic TCLP analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - Holding Times
* * - Calibrations
* * - Laboratory Blanks
  - Surrogate Compound Recoveries
* * - Matrix Spike / Matrix Spike Duplicate
  - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

All of the samples, as well as several of the blanks, had one or more surrogates below the quality assurance limits.

No other problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Surrogate Compound Recoveries

Both TCX and DCB were used as surrogates for this analysis. All of the samples, with the one exception of the blank spike, had recoveries of one or more surrogates below the recovery limits:

Sample	TCX % Rec	DCB %Rec	TCX Limits	DCB Limits
GP2811	37%	36%	60 - 120	50% - 140%
GP94-7	33%	34%	60 - 120	50% - 140%
GP80-3	37%	33%	60 - 120	50% - 140%
FD-1	34%	26%	60 - 120	50% - 140%
SUMPS	(ok)	27%	60 - 120	50% - 140%
SS-1	(ok)	24%	60 - 120	50% - 140%
GP94-7MS	27%	31%	60 - 120	50% - 140%
GP94-7MSD	16%	37%	60 - 120	50% - 140%
PTBLK01	22%	32%	60 - 120	50% - 140%
PBLK11	(ok)	39%	60 - 120	50% - 140%
GP1058	(ok)	29%	60 - 120	50% - 140%
GP73-6	(ok)	39%	60 - 120	50% - 140%
PBLK04	(ok)	46%	60 - 120	50% - 140%

The surrogate recoveries were also outside of the quality assurance limits in both the method blank and extraction blank. There should not be a problem with a surrogate recovery in a blank. All of the sample data were flagged with the "J" qualifier and footnoted with #54 in the data validation summary table.

Low concentrations of some pesticides may have been overlooked in some of the samples.

Calibrations

No problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample GP94-7 (Lab. #: 2953403) of this sample delivery group in this project was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits

Blank Spike

All blank spike recoveries were within the required quality assurance limits with the one exception of methoxychlor. The recovery of 40% was just at the lower quality assurance limit of 40%. This was flagged with the "*" qualifier in the summary form by the laboratory.

Method Blanks

No TCLP compounds were detected in the any of the extraction or method blanks.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Herbicide Analyses
Samples Received: October 24th & 25th, 1996
Sample Delivery Group: STONE 5
Laboratory Reference Numbers:

GP2811	2953401
GP94-7	2953402
GP94-7MS	2953403
GP94-7MSD	2953404
GP80-3	2953405
FD-1	2953406
SUMPS	2953407
SS-1	2953408
MSB	2953409
GP1058	2954701
GP73-6	2954702

Soil samples were received for herbicide analyses of the organic TCLP analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
- Calibrations
* - Laboratory Blanks
* - Surrogate Compound Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Surrogate Compound Recoveries

No problems were found with any of the surrogate recoveries.

Calibrations

The %RSD of 2,4-D (24%) in the initial calibration was greater than the 20% quality assurance limit used for the purposes of the data validation. All of the 2,4-D data was flagged with the "J" qualifier and footnoted with #15 in the data validation summary table. 2,4-D was not detected in any of the samples.

No other problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample GP94-7 of this sample delivery group was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits

Blank Spike

All blank spike recoveries were within the required quality assurance limits.

Method Blanks

No TCLP compounds were detected in the any of the extraction or method blanks.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

Data Validation Summary Table
For Designers Woodcraft

TCLP Herbicide Analyses
Soil Samples Received 10/24 and 10/25, 1996
Sample Delivery Group: Stone 5

Sample / Analyte	Method Blank Conc. (PPM)	Lab. Reported Conc. (PPM)	QA Validation Reported Conc. Decision		Qualifiers	Footnotes
Sample GP2811 (Lab. #: 2953401)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP94-7 (Lab. #: 2953402)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP80-3 (Lab. #: 2953405)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample FD-1 (Lab. #: 2953406)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample SUMPS (Lab. #: 2953407)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample SS-1 (Lab. #: 2953408)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP1058 (Lab. #: 2954701)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP73-6 (Lab. #: 2954702)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Inorganic Analyses
Samples Received: October 24th and 25, 1995
Sample Delivery Group: Stone 5
Laboratory Reference Numbers:

GP2811	953401
GP94-7	953402
GP94-7MS	953403
GP94-7MD	953404
GP80-3	953405
FD-1	953406
SUMPS	953707
SS-1	953408
GP1058	954701
GP73-6	954702

Soil samples were received for TCLP analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

- Chain of Custody and Sample Tracking
- Data Completeness
* - Holding Times
* - Calibration Verification
- CRDL Standard
* - Laboratory Control Sample
* - Serial Dilutions
* - Laboratory Blanks
- Field Blanks
* - Preparation Blanks
- Matrix Spike
- Duplicate Analyses
* - Detection Limit Results
* - Linear Range
* - Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

Severe problems were found with the matrix spike recoveries of barium and lead. The recoveries of the soil TCLP predigestion spikes were greater than 200% and these analytes were detected in all of the samples of this delivery group. The matrix spike for this sample was analyzed in duplicate. Although the matrix of sample GP94-7 may not be similar to all of the other samples of this delivery group, the data for these analytes were technically rejected according to the EPA data validation guidelines referenced in HW-2 (A.1.9.7.4).

No other problems were found which would affect the end use of the data.

Nancy J. Potak
December 28, 1994

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

Two CRDL ICP analytical runs were analyzed with this sample delivery group.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits in the first ICP run with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Cadmium	(ok)	52%
Chromium	(ok)	78%

All of the CRDL standard recoveries in the second analytical run were within the required quality assurance limits.

The data were not flagged for the low CRDL recoveries since the reported CRDL concentrations were much less than the detection limits required in the TCLP analysis.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group in either of the two ICP runs.

Preparation Blank

Two preparation blanks were analyzed with this sample delivery group. None of the TCLP analytes were detected in either of these preparation blanks.

Calibration Blanks

No analytes were detected in any of the calibration blanks at concentrations greater than the CRDL.

Field Blank

Field blanks were not submitted with this sample delivery group.

ICP Interference Check Sample

Concentrations of arsenic thallium and selenium were not added to the ICP check samples. Although the NYS DEC ASP method was implemented before ICPs were routinely used for the low level analyses of these analytes, reasonable concentrations of these parameters should be added to the interference check solutions to verify the lack on interferences.

No other problems were detected with the reported ICP Interference Check Sample recoveries for either of the two ICP runs.

Matrix Spike Recovery

The matrix spike of the TCLP analyses was analyzed in duplicate. Sample GP94-7 of this sample delivery group was used for the matrix spike. All of the recoveries were within the 75% - 125% quality assurance limits with the following exceptions:

Analyte	MS %Rec	Qualifier	
Barium	211%	38	Reject
Lead	450%	38	Reject
Analyte	**MSD %Rec**	**Qualifier**	
Barium	207%	38	Reject
Lead	455%	38	Reject

Severe problems were found with the matrix spike recoveries of these two analytes. The recoveries of the soil predigestion spikes were greater than 200%. Although the matrix of sample GP94-7 may not be similar to all of the other samples of this delivery group, the data for these two analytes were technically rejected according to the EPA data validation guidelines referenced in HW-2 (A.1.9.7.4). The data for these analytes were flagged with the "R" qualifier and footnoted with #38 in the data validation summary table.

Lead was not detected in three of the samples of this delivery group. The lead data for these samples was not rejected since a high lead recovery will not effect the end use of the data if the analyte is not detected in a sample.

All of the post digestion spike recoveries were within the required quality assurance limits.

A sample from another sample delivery group was selected for the mercury matrix spike for samples GP1058 and GP73-6. Even though the mercury recovery of this spike was within the required quality assurance limits, the mercury data for these two samples were qualified against the matrix spike recoveries for sample GP94-7 for the purposes of the data validation since this was from the sample delivery group.

Duplicate Analysis

Sample GP94-7 of this sample delivery group was also used for an unspiked matrix duplicate. Major problems were found with the duplicate analyses:

Analyte	RPD	Qualifier
Barium	41%	45
Lead	55%	45

The data for these two analytes were previously rejected due to the poor matrix spike recoveries.

Laboratory Control Sample

No problems were detected with the recoveries of the soil LCS standards.

Serial Dilutions

Sample GP94-7 was also used for the serial dilution. All of the percent differences which could be calculated were less than 10%.

Instrument Detection Limit

No problems were found with the reported instrument detection limits.

ICP Linear Ranges

No problems were detected with the linear ranges. The reported concentrations of all samples in this delivery group were within their linear range for each analyte. The iron data for some of the samples was reanalyzed at a dilution because it was originally above the linear range of the analyses.

Sample Results

The data for all of the samples was verified from the raw data for all of the analytes. No discrepancies were found between the concentrations reported by the laboratory and those found in the raw data.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Volatile Organic Analyses by GC/MS
Samples Received: November 11, 1996
Sample Delivery Group: STONE 8
Laboratory Reference Numbers:

TB-4	2967901
GP6812	2967902
GP5812	2967903
GP4812	2967904
P12812	2967905
GP11-8	2967906
GP11-8MS	2967906MS
GP11-8MSD	2967906MSD

Water samples were received for analyses of the volatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - GC/MS Tuning
* * - Holding Times
  - Calibrations
* * - Laboratory Blanks
  - Field Blanks
  - Trip Blanks
* * - System Monitoring Compound Recoveries
* * - Internal Standard Recoveries
* * - Matrix Spike / Matrix Spike Duplicate
* * - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No significant problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
January 11, 1997

Holding Times

All samples were analyzed within the required 7 day holding time.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring recoveries were within the quality assurance limits of the NYS DEC's ASP program.

Calibrations

The initial calibration was performed on 7/30/96. The continuing calibration was analyzed on111/08.

The %RSD of bromomethane (28%) was greater than the 20.5% quality assurance limit used by the NYS DEC ASP program for this compound. The percent RSDs of methylene chloride (38%) and acetone (49%) in the initial calibration were greater than 30%. Although these compounds do not have strict limits on the %RSD in the analytical method, the 30% RSD was used for the purposes of the data validation. A low concentration of methylene chloride was found in several of the samples. This was negated due to the presence of this compound in the associated trip blank.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

All internal standard areas and retention times were within the required quality assurance limits.

Matrix Spike / Matrix Spike Duplicate

Sample GP1-1 of this sample delivery group was used for the GC/MS matrix spike and matrix spike duplicate. All of the recoveries and RPDs were within the required quality assurance limits.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits.

Method Blanks

No compounds were detected in the one method blank associated with the analyses of this sample delivery group.

Trip Blanks

A low concentration of acetone (5 ug/l) was detected in the one trip blank collected with this sample delivery group. This compound was not detected in any of the samples of this delivery group.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Semivolatile Organic Analyses by GC/MS
Samples Received: November 11, 1996
Sample Delivery Group: STONE 8
Laboratory Reference Numbers:

GP6812	2967902
GP6812RE	2967902RE
GP5812	2967903
GP4812	2967904
P12812	2967905
GP11-8	2967906

Water samples were received for analyses of the semivolatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - GC/MS Tuning
  - Holding Times
  - Calibrations
  - Laboratory Blanks
  - Field Blanks
  - Surrogate Compound Recoveries
* * - Internal Standard Recoveries
  - Matrix Spike / Matrix Spike Duplicate
  - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The reextraction of sample GP6812, due to poor surrogate recoveries, was performed about 20 days after the receipt of the sample.

No other significant problems were detected which would have a significant effect on the end use of the data.

Nancy J. Potak
January 18, 1997

Holding Times

All samples were initially extracted and analyzed within the required holding times.

The reextraction of sample GP6812, due to poor surrogate recoveries, was performed about 20 days after the receipt of the sample. Low concentrations of semivolatile compounds may have been overlooked and those reported may have been somewhat underestimated. The data for this sample was flagged with the "J" qualifier and footnoted with #81 in the data validation summary table.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Compound Recoveries

All surrogate recoveries were within the quality assurance limits of the NYS DEC's ASP program with the exceptions of the following samples:

The recoveries of five of the eight surrogates in sample GP6812 were less than the required quality assurance limits. The recovery of the last surrogate was less than 10% (1,2-dichlorobenzene-d4 - which is advisory only). This sample was reextracted and reanalyzed outside of holding time. The surrogate recoveries in the reanalysis were outside of the quality assurance limits for the recoveries of the fifth (120%) and eighth (129%) surrogates which were both greater than the upper quality assurance limits of 110%.

The recovery if the first surrogate in sample GP4812 (27%) was less than the 35% quality assurance limit. The recoveries of the first (20%) and eighth (13%) surrogates were less than the 35% and 16% quality assurance limits in sample P12812. The recovery of the eighth surrogate (1,2-Dichlorobenzene-d4) is only advisory.

The NYS DEC ASP program allows the recovery of one surrogate of each fraction to be outside of the quality assurance limits (as long as the recovery of all surrogates is greater than 10%). The data for samples GP4812 and P12812 were not required to be qualified in the data validation summary table.

Calibrations

Two minor problems were found with the initial calibrations:

The percent RSD of 1,2-dichlorobenzene (24%) was greater than the 20.5% quality assurance limit specified for this compound in the initial calibration associated with the initial analyses of all of the samples.

The percent RSD of phenol (27%) was greater than the 20.5% quality assurance limit specified for this compound in the initial calibration associated with the reanalysis of sample GP6812. The %RSD of

hexachlorocyclopentadiene was 37%. Although this compound does not have a percent RSD specified in Method 91-2, a %RSD of 30% was used for the purposes of the data validation.

The data for these compounds in the noted samples were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table. None of these compounds were detected in any of the samples of this delivery group.

Several compounds had percent differences greater than the 25% quality assurance limit used for the purposes of the data validation in the continuing calibrations. These compounds together with their percent differences are detailed in the attached data validation worksheets.

The data for these compounds were also flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

No other problems were detected with the initial calibration and continuing calibrations associated with the samples of this delivery group.

Internal Standards

All internal standard areas and retention times were within the required quality assurance limits.

Matrix Spike / Matrix Spike Duplicate

Sample GP-1 of SDG STONE 4 was reported for the matrix spike and matrix spike duplicate for the water samples. Only the recoveries of 4-nitrophenol and pentachlorophenol were outside of the acceptable limits:

Compound	MS %Rec	MSD %Rec	QC Limits	RPD Limits
Phenol			12 - 110	42
2-Chlorophenol			27 - 123	40
1,4-Dichlorobenzene			37 - 97	28
N-Nitroso-di-n-prop.			41 - 116	38
1,2,4-Trichlorobenzene			39 - 98	28
4-Chloro-3-methylphenol			23 - 97	42
Acenaphthene			46 - 118	31
4-Nitrophenol	90%	101%	10 - 80	50
2.4-Dinitrotoluene			24 - 96	38
Pentachlorophenol		103%	9 - 103	50
Pyrene			26 - 127	31

High recoveries for 4-nitrophenol were also found in the blank spike. 4-Nitrophenol and pentachlorophenol were not detected in any of the samples of this delivery group. The slightly high recoveries do not affect the end use of the data.

Blank Spike

The blank spike was analyzed in duplicate. All blank spike recoveries were within the acceptable quality assurance limits with the one exception of both 4-nitrophenol recoveries (101% & 101%) which were above the quality assurance limit of 80%.

All of the RPDs were within the required quality assurance limits. These high recoveries do not affect the end use of the data.

Method Blanks

Several non-target compounds were detected in each of the two method blanks which were associated with this sample delivery group. These were negated whenever they were found in an associated sample according to the EPA data validation guidelines.

Field Blanks

A field blank was not included with this sample delivery group.

Instrument Detection Limits

No problems were found with the submitted instrument detection limits.

Sample Results

Sample GP6812 (Lab. #: 297902)

This sample was reanalyzed due to problems with both the surrogate recoveries. The reextraction of sample GP6812 was performed about 20 days after the receipt of the sample. Low concentrations of semivolatile compounds may have been overlooked and those reported may have been somewhat underestimated. The data for this sample was flagged with the "J" qualifier and footnoted with #81 in the data validation summary table.

The recoveries of five of the eight surrogates in sample GP6812 were less than the required quality assurance limits. The recovery of the last surrogate was less than 10% (1,2-dichlorobenzene-d4 - which is advisory only). This sample was reextracted and reanalyzed outside of holding time. The surrogate recoveries in the reanalysis were outside of the quality assurance limits for the recoveries of the fifth (120%) and eighth (129%) surrogates which were both greater than the upper quality assurance limits of 110%.

It is recommended that the data from the second analysis be used even though the sample was extracted outside of holding time. A very low concentration of bis(2-ethylhexyl)phthalate (83 ug/l) and several non-target compounds were detected in this sample which were not found in the original analysis.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Water Inorganic Analyses
Samples Received: November 11, 1996
Sample Delivery Group: STONE 8
Laboratory Reference Numbers:

GP6812	2967902
GP5812	2967903
GP4812	2967904
P12812	2967905
GP11-8	2967906

Water samples were received for TCL metals analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
* - Calibration Verification
- CRDL Standard
* - Laboratory Control Sample
* - Serial Dilutions
* - Laboratory Blanks
- Field Blanks
* - Preparation Blanks
- Matrix Spike
- Duplicate Analyses
* - Detection Limit Results
- Linear Range
- Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

All of the iron data, with the one exception of sample GP11-8, was above the 250,000 ug/l linear range. The data was not reanalyzed at a dilution.

No other problems were found with any of the sample data.

Nancy J. Potak
January 14, 1997

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Lead	122%	134%
Selenium	(ok)	141%
Silver	(ok)	79%

All of the lead concentrations were too high to be affected by the high CRDL standard recoveries.

A low concentration of selenium was detected in sample GP11-8. This may have been somewhat overestimated. The data for this sample was flagged with the :J: qualifier and footnoted with #21 in the data validation summary table. The remaining selenium data was not qualified for the high selenium recoveries since a high CRDL standard recovery does not affect an undetected analyte.

Silver was not detected in any of the samples of this delivery group. Low concentrations of this analyte may have been overlooked in this sample delivery group.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group.

Preparation Blank

No compounds were detected in the preparation blank associated with the digestions of these samples at concentrations greater than the CRDL..

Calibration Blanks

Several analytes were found in the continuing calibration blanks at concentrations between the CRDL and instrument detection limit. These very low concentration are not required to be noted in the data validation summary table.

Field Blank

A field blank was not submitted with this sample delivery group.

ICP Interference Check Sample

Arsenic, selenium and thallium were not added to the ICP Interference Check Samples. Although the NYS DEC ASP procedure was written before these

parameters were analyzed by ICP, they should have been added to these solutions at a reasonable concentration.

No other problems were detected with the reported ICP Interference Check Sample recoveries.

Matrix Spike Recovery

Sample XXX or YYY from an unspecified sample delivery group were used for the matrix spike. All recoveries were within the acceptable limits.

Duplicate Analysis

Sample XXX or YYY from an unspecified sample delivery group were used for the matrix duplicate. All RPDs were within the acceptable limits.

Laboratory Control Sample

No problems were detected with the recoveries of the water LCS standards.

Serial Dilutions

Sample XXX from an unspecified sample delivery group was used for the ICP serial dilution. All percent differences which could be calculated were greater than the required 10% quality assurance limit.

Instrument Detection Limit

No problems with the instrument detection limits were found.

ICP Linear Ranges

All of the iron data, with the one exception of sample GP11-8, was above the 250,000 ug/l linear range. The data was not reanalyzed at a dilution. The iron data for these samples was flagged with the "J" qualifier and footnoted with #75 in the data validation summary table. All of the iron data for these samples should be considered to be highly estimated.

No other problems were detected with the linear ranges.

Sample Results

All of the iron data, with the one exception of sample GP11-8, was above the 250,000 ug/l linear range. The data was not reanalyzed at a dilution. The iron data for these samples was flagged with the "J" qualifier and footnoted with #75 in the data validation summary table. All of the iron data for these samples should be considered to be highly estimated.

No other problems were found with any of the sample results.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCL Volatile Organic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for analyses of the volatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
- Laboratory Blanks
- Field Blanks
- Trip Blanks
* - System Monitoring Compound Recoveries
* - Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
- Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were found which would affect the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring compound recoveries were within the NYS DEC's ASP quality assurance limits.

Calibrations

Acetone had a percent difference of 30.1% in the initial calibration associated with the analyses of all of the samples of this delivery group. This compound does not have a quality assurance directly imposed my the NYS DEC's Method 91-1. A quality assurance limit of 20.5% was used for the purposes of the data validation for this compound.

No problems were detected with any of the continuing calibrations associated with the analyses of the samples of this delivery group.

Matrix Spike / Matrix Spike Duplicate

A sample from another sample delivery group was used for the matrix spike and matrix spike duplicate. All recoveries and RPDs were within the acceptable quality control limits.

It cannot be determined if the matrix of this sample is applicable to the matrices of the samples of this delivery group. The raw data for this matrix spike was not included in the analytical report.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits.

The raw data and quality assurance data for this blank spike was not included in the analytical report.

Method Blanks

A low concentration of methylene chloride (4J ug/kg) was detected in the method blank associated with the analysis of sample FD20-4. The low concentration of methylene chloride in this sample was negated due to its presence in this method blank.

No other compounds were detected in any of the other method blanks of this sample delivery group.

Trip Blanks

A trip blank was not collected with this sample delivery group.

Field Blank

A field blank was not associated with this sample delivery group.

Internal Standard Areas and Retention Times

No problems were found with the recoveries or retention times in any of the internal standards associated with the samples of this delivery group.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

Sample GP1258 (Lab. #: 2968005)

A low concentration of an unknown siloxane was detected in the non-target fraction of this sample. This is likely a contaminant as the result of column bleed. The data for this compound was footnoted with #67 in the data validation summary table.

Sample GP65-8 (Lab. #: 2968001)

A low concentration of an unknown siloxane was detected in the non-target fraction of this sample. This is likely a contaminant as the result of column bleed. The data for this compound was footnoted with #67 in the data validation summary table.

No other problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCL Semivolatile Organic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP55-8RE	968002RE
GP65-8	968001
GP65-8RE	968001RE
MSB	

Soil samples were received for semivolatile organic analyses of the organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - GC/MS Tuning
* - Holding Times
- Calibrations
- Laboratory Blanks
- Field Blanks
* - Surrogate Compound Recoveries
- Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The recoveries of the last internal standard were less than the 50% quality assurance limit in the original analyses of samples GP65-8 (49%) and GP55-8 (47%). Both of these samples were reanalyzed (but not re-extracted) and the recoveries of these internal standards were again less than the quality assurance limit (42% & 37%). It is recommended that the data from the initial analyses be used for the final reporting of the data since the recoveries of the last internal standards were slightly better in these initial analyses.

No other problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Compound Recoveries

No problems were found with any of the surrogate recoveries.

Calibrations

The percent RSD of pentachlorophenol (22.7%) was above the 20.5% quality assurance limit in the initial calibration.

Several compounds had percent differences greater than the 25% quality assurance limit in the continuing calibrations. A qualifying limit of 25% was also used for the purposes of the data validation for the compounds that do not have a maximum percent difference requirement in the analytical method. None of these compounds were detected in the samples of this delivery group.

Data for all of the compounds with %RSDs and percent differences above the quality assurance limits were flagged with the "J" qualifier and footnoted with #15 in the data validation summary table.

Matrix Spike / Matrix Spike Duplicate

Sample 2981902, which was not part of this sample delivery group, was used for the matrix spike and matrix spike duplicate. All recoveries and RPDs were within the required quality assurance limits with the one exception of the RPD of 1,4-dichlorobenzene (38%) which was greater than the 27% quality assurance limit. It is not know if the matrix from the sample chosen for the matrix spike is similar to the matrices of the samples of this delivery group.

Blank Spike

The laboratory's blank spike summary form indicated that the recoveries of pentachlorophenol (both reported at 103%) in the matrix spike and matrix spike duplicate were above the 103% quality assurance limit.

All other blank spike recoveries were within the acceptable quality assurance limits.

Method Blanks

Low concentrations of bis(2-ethylhexyl)phthalate (37J ug/kg) and two non-target compounds were detected in the one method blank associated with the samples of this delivery group.

All of these compounds were negated according to standard EPA data validation protocols whenever they were detected in one of the samples.

Field Blank

A field blank was not collected with this sample delivery group.

Internal Standard Recoveries

The recoveries of the last internal standard were less than the 50% quality assurance limit in the original analyses of samples GP65-8 (49%) and GP55-8 (47%).

Both of these samples were reanalyzed (but not re-extracted) and the recoveries of these internal standards were again less than the quality assurance limit (42% & 37%).

It is recommended that the data from the initial analyses be used for the final reporting of the data since the recoveries of the last internal standards were slightly better in these initial analyses.

The compounds which were quantitated against the last internal standards were footnoted with #82 in the data validation summary table.

All other internal standard retention times and recoveries were within the required quality assurance limits.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

With the exceptions of the low internal standard recoveries in samples GP65-8 and GP55-8, no problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TAL Inorganic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for TAL metals analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - Holding Times
* * - Calibration Verification
  - CRDL Standard
  - Laboratory Control Sample
  - Serial Dilutions
* * - Laboratory Blanks
  - Field Blanks
* * - Preparation Blanks
  - Matrix Spike
  - Duplicate Analyses
* * - Detection Limit Results
* * - Linear Range
* * - Percent Solids
* * - Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

A sample from another project was used for the matrix spike, matrix spike duplicate and serial dilution. The recoveries and RPDs for this sample may not be applicable to those of this sample delivery group. Because there were significant problems with the inorganic matrix spike recoveries from earlier samples collected at this site, the absence of site specific quality assurance makes the evaluation of the data very difficult.

The very poor recoveries and RPDs reported for SDG Stone 5 should also be reviewed in relation to this sample delivery group.

The recovery of the sodium LCS (43%) was less than the 64% quality assurance limit reported by the laboratory.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

Two ICP runs were analyzed with this sample delivery group.

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits for the first ICP run with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Selenium	(ok)	145%
Silver	79%	79%
Zinc	(ok)	122%

The analyses of all of the samples of this delivery group were associated with the first ICP run.

Selenium was not detected in any of the samples of this delivery group. The high recovery of this CRDL standard did not affect the data.

Low concentrations of silver may have been underestimated or overlooked in these samples. The silver data was flagged with the "J" qualifier and footnoted with #21 in the data validation summary table.

All of the zinc concentrations in the samples of this delivery group were too high to be affected by the slightly high zinc recoveries in the final CRDL standard. The data were not qualified for the slightly high zinc recoveries.

Three CRDL standard analyses were associated with the analysis of the second ICP run. The recoveries of all of the CRDL standards were within the required quality assurance limits with the following exceptions:

Analyte	Initial % Recovery	Second % Recovery	Final % Recovery
Antimony	79%	68%	(ok)
Lead	(ok)	127%	(ok)
Selenium	128%	73%	74%
Silver	77%	(ok)	77%
Thallium	126%	(ok)	122%

This ICP run was only associated with the analyses of the post digestion spikes, the quality assurance sample (which was not part of this sample delivery group) and the diluted iron analyses. None of the data were required to be qualified for this ICP run.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group.

Preparation Blank

No compounds were detected in the preparation blank which were greater than the CRDL. Several compounds were detected at low concentrations between the IDL and the CRDL. The data were not required to be qualified for these low concentrations. The data for the method blank is noted in the first column of the data validation summary table.

Calibration Blanks

No analytes were detected in any of the calibration blanks at concentrations greater than the CRDL.

Field Blank

Field blanks were not submitted with this sample delivery group.

ICP Interference Check Sample

Concentrations of arsenic, thallium and selenium were not added to the ICP check samples. Although the NYS DEC ASP method was implemented before ICPs were routinely used for the low level analyses of these analytes, reasonable concentrations of these parameters should be added to the interference check solutions to verify the lack of interferences.

No other problems were detected with the reported ICP Interference Check Sample recoveries.

Matrix Spike Recovery

A samples from another sample delivery group was used for the matrix spike. All of the recoveries were within the 75% - 125% quality assurance limits with the following exceptions:

Analyte	MS %Rec	Qualifier
Antimony	31%	35
Mercury	199%	35
Selenium	67%	35
Thallium	67%	35

Because there were significant problems with the inorganic matrix spike recoveries from earlier samples collected at this site, the absence of site specific quality assurance makes the evaluation of the data very difficult.

This very high recovery of the mercury matrix spike is just under the 200% limit commonly used for the rejection of soil. The mercury data for these samples were flagged with the "J" qualifier and footnoted with #35 (in those sample in which mercury was detected).

Low matrix spike recoveries were found for antimony, selenium and thallium.

The reported concentrations of these analytes may have been underestimated and low concentrations may have been overlooked. The data for these analytes were flagged with the "J" qualifier and footnoted with #35 in the data validation summary table.

The antinomy post digestion spike had a recovery of 84%, but neither the selenium or thallium post digestion spikes were recovered (0%). This is very unusual and it may have been possible that the post digestion spikes were omitted for these two analytes.

Duplicate Analysis

A sample from another sample delivery group was also used for the was also used for the matrix duplicate. Many of the analytes had RPDs greater than the quality assurance limit:

Analyte	RPD	Qualifier
Barium	42%	45
Calcium	25%	45
Chromium	24%	45
Copper	21%	45
Iron	47%	45
Lead	21%	45
Manganese	23%	45
Vanadium	33%	45

The reported concentrations for these analytes should be considered to be estimated values due to the poor precision. The data for these analytes were flagged with the "J" qualifier and footnoted with #45 in the data validation summary table.

Laboratory Control Sample

The reported recovery of the sodium laboratory control sample (43%) was less than the 64% quality assurance limit for the recovery of this analyte. All of the sodium data was flagged with the "J" qualifier and footnoted with #46 in the data validation summary table. All of the sodium data should be considered to be estimated.

No other problems were detected with the recoveries of the soil LCS standards.

Serial Dilutions

The sample designated XXXXS from another sample delivery group was also used for the serial dilution. All of the percent differences which could be calculated were less than 10% with the following exceptions:

Analyte	% Difference
Aluminum	18%
Barium	12%
Calcium	11%
Cobalt	13%
Copper	13%
Iron	14%
Lead	18%
Nickel	22%
Potassium	18%

The data reported for these analytes should be considered to be estimated values. The data for these analytes were flagged with the "J" qualifier and footnoted with #51 in the data validation summary table.

Instrument Detection Limit

No problems were found with the reported instrument detection limits.

ICP Linear Ranges

No problems were detected with the linear ranges. The reported concentrations of all samples in this delivery group were within their linear range for each analyte. The iron data for some of the samples was reanalyzed at a dilution because it was originally above the linear range of the analyses.

Sample Results

The data for all of the samples was verified from the raw data for all of the analytes. No discrepancies were found between the concentrations reported by the laboratory and those found in the raw data.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Volatile Organic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for analyses of the volatile organic TCL analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* * - Data Completeness
* * - GC/MS Tuning
* * - Holding Times
* - Calibrations
* * - Laboratory Blanks
* - Field Blanks
* * - System Monitoring Compound Recoveries
* * - Internal Standard Recoveries
* * - Matrix Spike / Matrix Spike Duplicate
* * - Blank Spike
* * - Compound Identification
* * - Compound Quantitation
* * - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were found which would affect the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

System Monitoring Compound Recoveries

All system monitoring compound recoveries were within the NYS DEC's ASP quality assurance limits.

Calibrations

2- Butanone had a %RSD of 23% in the initial calibration associated with the analyses of all of the samples of this delivery group. This compound does not have a quality assurance directly imposed my the NYS DEC's Method 91-1. A quality assurance limit of 20.5% was used for the purposes of the data validation for this compound.

The percent difference of 2-butanone in the one continuing calibration associated with the samples of this delivery group was 27%. This was also over the 25% quality assurance limit used for the purposes of the data validation. 2-Butanone was flagged with the "J" qualifier and footnoted with #15 in the data validation summary table. This compound was not detected in any of the TCLP extracts of the samples.

No other problems were detected with any of the calibrations associated with the analyses of the samples of this delivery group.

Matrix Spike / Matrix Spike Duplicate

Sample GP1258 from this sample delivery group was used for the matrix spike and matrix spike duplicate analyses. All recoveries and RPDs were within the acceptable quality control limits. All of the TLCP compounds were reported in the matrix spike.

Blank Spike

All blank spike recoveries were within the acceptable quality assurance limits.

All of the TCLP compounds were reported in the blank spike analysis.

Method Blanks

No compounds were detected in either the extraction blank or method blank.

Field Blank

A field blank was not associated with this sample delivery group.

Internal Standard Areas and Retention Times

No problems were found with the recoveries or retention times in any of the internal standards associated with the samples of this delivery group.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Semivolatile Organic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for semivolatile organic analyses of the organic TCLP analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

- Chain of Custody
- Data Completeness
* - GC/MS Tuning
* - Holding Times
* - Calibrations
* - Laboratory Blanks
- Field Blanks
* - Surrogate Compound Recoveries
* - Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Tunes

No problems were detected with any of the tunes associated with these analyses.

Surrogate Compound Recoveries

No problems were found with any of the surrogate recoveries.

Calibrations

No problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample GP94-7 (Lab. #: 2953403) was from another sample delivery group in this project was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits with the following exceptions:

Compound	MS %Rec	MSD %Rec	QC Limits	RPD	Limits
1,4-Dichlorobenzene			36 - 97		28%
2-Methylphenol			20 - 150	67%	40%
3&4-Methylphenol			30 - 300	41%	40%
Hexachloroethane			20 - 150		40%
Pyridine			20 - 150		40%
Nitrobenzene			20 - 150		40%
Hexachlorobutadiene			20 - 150		40%
2,4,6-Trichlorophenol			20 - 150		40%
2,4,5-Trichlorophenol			20 - 150		40%
2,4-Dinitrotoluene			20 - 150		40%
Hexachlorobenzene	166%	175%	20 - 150		40%
Pentachlorophenol			20 - 150		40%

None of these compounds were detected in any of the TCLP extracts of this sample delivery group. The data were not qualified for the problems with the matrix spike recoveries and RPDs.

Blank Spike

All blank spike recoveries were within the required quality assurance limits.

Method Blanks

No TCLP compounds were detected in the any of the extraction ot method blanks.

Field Blank

A field blank was not collected with this sample delivery group.

Internal Standard Recoveries

All internal standard retention times and recoveries were within the required quality assurance limits.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

Data Validation Summary Table
For Designers Woodcraft

TCLP Semivolatile Organic Analyses
Soil Samples Received November 5, 1996
Sample Delivery Group: STONE 9

Sample / Analyte	Method Blank Conc. (PPB)	Lab. Reported Conc. (PPB)	QA Validation Reported Conc. Decision	Qualifiers	Footnotes
Sample FD20-4 (Lab. #: 2968004)					
TCL Semivolatile Organics	(Undiluted)				
2-Methylphenol	0.01 U	0.01 U	0.01 U		
3&4-Methylphenol	0.02 U	0.02 U	0.02 U		
2,4-Dinitrotoluene	0.01 U	0.01 U	0.01 U		
Hexachlorobenzene	0.01 U	0.01 U	0.01 U		
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U		
Hexachloroethane	0.01 U	0.01 U	0.01 U		
Nitrobenzene	0.01 U	0.01 U	0.01 U		
Pentachlorophenol	0.05 U	0.05 U	0.05 U		
Pyridine	0.01 U	0.01 U	0.01 U		
2,4,5-Trichlortophenol	0.01 U	0.01 U	0.01 U		
2,4,6-Trichlorophenol	0.01 U	0.01 U	0.01 U		
1,4-Dichlorobenzene	0.01 U	0.01 U	0.01 U		
Sample GP1258 (Lab. #: 2968005)					
TCL Semivolatile Organics	(Undiluted)				
2-Methylphenol	0.01 U	0.01 U	0.01 U		
3&4-Methylphenol	0.02 U	0.02 U	0.02 U		
2,4-Dinitrotoluene	0.01 U	0.01 U	0.01 U		
Hexachlorobenzene	0.01 U	0.01 U	0.01 U		
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U		
Hexachloroethane	0.01 U	0.01 U	0.01 U		
Nitrobenzene	0.01 U	0.01 U	0.01 U		
Pentachlorophenol	0.05 U	0.05 U	0.05 U		
Pyridine	0.01 U	0.01 U	0.01 U		
2,4,5-Trichlortophenol	0.01 U	0.01 U	0.01 U		
2,4,6-Trichlorophenol	0.01 U	0.01 U	0.01 U		
1,4-Dichlorobenzene	0.01 U	0.01 U	0.01 U		
Sample GP45-8 (Lab. #: 2968003)					
TCL Semivolatile Organics	(Undiluted)				
2-Methylphenol	0.01 U	0.01 U	0.01 U		
3&4-Methylphenol	0.02 U	0.02 U	0.02 U		
2,4-Dinitrotoluene	0.01 U	0.01 U	0.01 U		
Hexachlorobenzene	0.01 U	0.01 U	0.01 U		
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U		
Hexachloroethane	0.01 U	0.01 U	0.01 U		
Nitrobenzene	0.01 U	0.01 U	0.01 U		
Pentachlorophenol	0.05 U	0.05 U	0.05 U		
Pyridine	0.01 U	0.01 U	0.01 U		
2,4,5-Trichlortophenol	0.01 U	0.01 U	0.01 U		
2,4,6-Trichlorophenol	0.01 U	0.01 U	0.01 U		
1,4-Dichlorobenzene	0.01 U	0.01 U	0.01 U		
Sample GP55-8 (Lab. #: 2968002)					
TCL Semivolatile Organics	(560 ml - undiluted)				
2-Methylphenol	0.01 U	0.02 U	0.02 U		
3&4-Methylphenol	0.02 U	0.04 U	0.04 U		
2,4-Dinitrotoluene	0.01 U	0.02 U	0.02 U		
Hexachlorobenzene	0.01 U	0.02 U	0.02 U		
Hexachlorobutadiene	0.01 U	0.02 U	0.02 U		
Hexachloroethane	0.01 U	0.02 U	0.02 U		
Nitrobenzene	0.01 U	0.02 U	0.02 U		
Pentachlorophenol	0.05 U	0.09 U	0.09 U		
Pyridine	0.01 U	0.02 U	0.02 U		
2,4,5-Trichlortophenol	0.01 U	0.02 U	0.02 U		
2,4,6-Trichlorophenol	0.01 U	0.02 U	0.02 U		
1,4-Dichlorobenzene	0.01 U	0.02 U	0.02 U		

Data Validation Summary Table
For Designers Woodcraft

TCLP Semivolatile Organic Analyses
Soil Samples Received November 5, 1996
Sample Delivery Group: STONE 9

Sample / Analyte	Method Blank Conc. (PPB)	Lab. Reported Conc. (PPB)	Validation Reported Conc. Decision	Qualifiers	Footnotes
Sample GP65-8 (Lab. #: 2968001)					
TCL Semivolatile Organics	(Undiluted)				
2-Methylphenol	0.01 U	0.01 U	0.01 U		
3&4-Methylphenol	0.02 U	0.02 U	0.02 U		
2,4-Dinitrotoluene	0.01 U	0.01 U	0.01 U		
Hexachlorobenzene	0.01 U	0.01 U	0.01 U		
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U		
Hexachloroethane	0.01 U	0.01 U	0.01 U		
Nitrobenzene	0.01 U	0.01 U	0.01 U		
Pentachlorophenol	0.05 U	0.05 U	0.05 U		
Pyridine	0.01 U	0.01 U	0.01 U		
2,4,5-Trichlortophenol	0.01 U	0.01 U	0.01 U		
2,4,6-Trichlorophenol	0.01 U	0.01 U	0.01 U		
1,4-Dichlorobenzene	0.01 U	0.01 U	0.01 U		

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Pesticide Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for Pesticide analyses of the organic TCLP analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
* - Calibrations
* - Laboratory Blanks
- Surrogate Compound Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

All of the samples, as well as several of the blanks, had one or more surrogates below the quality assurance limits.

No other problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Surrogate Compound Recoveries

Both TCX and DCB were used as surrogates for this analysis. All of the samples had recoveries of one or more surrogates below the recovery limits:

Sample	TCX % Rec	DCB %Rec	TCX Limits	DCB Limits
GP65-8	(ok)	24%	60 - 120	50% - 140%
GP55-8	(ok)	23%	60 - 120	50% - 140%
GP45-8	52%	38%	60 - 120	50% - 140%
FD20-4	(ok)	31%	60 - 120	50% - 140%
GP1258	46%	23%	60 - 120	50% - 140%
PTBLK03	(ok)	42%	60 - 120	50% - 140%
PBLK12	46%	34%	60 - 120	50% - 140%

The surrogate recoveries were also outside of the quality assurance limits in both the method blank and extraction blank. There should not be a problem with a surrogate recovery in a blank. All of the sample data were flagged with the "J" qualifier and footnoted with #54 in the data validation summary table.

Low concentrations of some pesticides may have been overlooked in some of the samples.

Calibrations

No problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample 36030 (Lab. #: 2914104) was from another sample delivery group in this project was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits

Blank Spike

All blank spike recoveries were within the required quality assurance limits.

Method Blanks

No TCLP compounds were detected in the any of the extraction or method blanks.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

Data Validation Summary Table
For Designers Woodcraft

TCLP Pesticide Analyses
Soil Samples Received November 5, 1996
Sample Delivery Group: Stone 9

Sample / Analyte	Method Blank Conc. (PPM)	Lab. Reported Conc. (PPM)	QA Validation Reported Conc. Decision		Qualifiers	Footnotes
Sample FD20-4 (Lab. #: T968004)						
Chlordane	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Endrin	0.0001 U	0.0001 U	0.0001 U	J	Qualify	54
Heptachlor & Heptachlor Epoxide	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
gamma BHC (Lindane)	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
Methoxychlor	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Toxaphene	0.005 U	0.005 U	0.005 U	J	Qualify	54
Sample GP1258 (Lab. #: T968005)						
Chlordane	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Endrin	0.0001 U	0.0001 U	0.0001 U	J	Qualify	54
Heptachlor & Heptachlor Epoxide	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
gamma BHC (Lindane)	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
Methoxychlor	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Toxaphene	0.005 U	0.005 U	0.005 U	J	Qualify	54
Sample GP45-8 (Lab. #: T968003)						
Chlordane	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Endrin	0.0001 U	0.0001 U	0.0001 U	J	Qualify	54
Heptachlor & Heptachlor Epoxide	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
gamma BHC (Lindane)	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
Methoxychlor	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Toxaphene	0.005 U	0.005 U	0.005 U	J	Qualify	54
Sample GP55-8 (Lab. #: T968002)						
Chlordane	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Endrin	0.0001 U	0.0001 U	0.0001 U	J	Qualify	54
Heptachlor & Heptachlor Epoxide	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
gamma BHC (Lindane)	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
Methoxychlor	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Toxaphene	0.005 U	0.005 U	0.005 U	J	Qualify	54
Sample GP65-8 (Lab. #: T968001)						
Chlordane	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Endrin	0.0001 U	0.0001 U	0.0001 U	J	Qualify	54
Heptachlor & Heptachlor Epoxide	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
gamma BHC (Lindane)	0.00005 U	0.00005 U	0.00005 U	J	Qualify	54
Methoxychlor	0.0005 U	0.0005 U	0.0005 U	J	Qualify	54
Toxaphene	0.005 U	0.005 U	0.005 U	J	Qualify	54

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Herbicide Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for herbicide analyses of the organic TCLP analyte list by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
- Calibrations
* - Laboratory Blanks
* - Surrogate Compound Recoveries
- Matrix Spike / Matrix Spike Duplicate
* - Blank Spike
* - Compound Identification
* - Compound Quantitation
* - Method Detection Limit

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

No problems were detected that would have a significant effect on the end use of the data.

Nancy J. Potak
December 28, 1996

Holding Times

All samples were extracted and analyzed within the required holding times.

Surrogate Compound Recoveries

No problems were found with any of the surrogate recoveries.

Calibrations

The %RSD of 2,4-D (28%) in the initial calibration was greater than the 20% quality assurance limit used for the purposes of the data validation. All of the 2,4-D data was flagged with the "J" qualifier and footnoted with #15 in the data validation summary table. 2,4-D was not detected in any of the samples.

No other problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample MW961D (Lab. #: 2963302) was from another sample delivery group in this project was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits

Blank Spike

All blank spike recoveries were within the required quality assurance limits.

Method Blanks

No TCLP compounds were detected in the any of the extraction or method blanks.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

Data Validation Summary Table
For Designers Woodcraft

TCLP Herbicide Analyses
Soil Samples Received November 5, 1996
Sample Delivery Group: Stone 9

Sample / Analyte	Method Blank Conc. (PPM)	Lab. Reported Conc. (PPM)	QA Validation Reported Conc. Decision		Qualifiers	Footnotes
Sample FD20-4 (Lab. #: T968004)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP1258 (Lab. #: T968005)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 J	0.001 U			
Sample GP45-8 (Lab. #: T968003)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP55-8 (Lab. #: T968002)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP65-8 (Lab. #: T968001)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Inorganic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for TCLP analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
* - Calibration Verification
  - CRDL Standard
  - Laboratory Control Sample
* - Serial Dilutions
* - Laboratory Blanks
  - Field Blanks
* - Preparation Blanks
  - Matrix Spike
  - Duplicate Analyses
* - Detection Limit Results
* - Linear Range
* - Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

No problems were found which would affect the end use of the data.

Nancy J. Potak
January 2, 1997

Holding Times

All samples were extracted and analyzed within the required holding times.

Surrogate Compound Recoveries

No problems were found with any of the surrogate recoveries.

Calibrations

The %RSD of 2,4-D (28%) in the initial calibration was greater than the 20% quality assurance limit used for the purposes of the data validation. All of the 2,4-D data was flagged with the "J" qualifier and footnoted with #15 in the data validation summary table. 2,4-D was not detected in any of the samples.

No other problems were found with either the initial or continuing calibrations.

Matrix Spike / Matrix Spike Duplicate

Sample MW961D (Lab. #: 2963302) was from another sample delivery group in this project was used for the matrix spike and matrix spike duplicate. All of the TCLP compounds were included in the matrix spike summary. All recoveries and RPDs were within the required quality assurance limits

Blank Spike

All blank spike recoveries were within the required quality assurance limits.

Method Blanks

No TCLP compounds were detected in the any of the extraction or method blanks.

Instrument Detection Limits

All reported instrument detection limits were less than the CRQL.

Sample Results

No problems were found with the reported results of any of the samples of this delivery group.

Data Validation Summary Table
For Designers Woodcraft

TCLP Herbicide Analyses
Soil Samples Received November 5, 1996
Sample Delivery Group: Stone 9

Sample / Analyte	Method Blank Conc. (PPM)	Lab. Reported Conc. (PPM)	QA Validation Reported Conc. Decision		Qualifiers	Footnotes
Sample FD20-4 (Lab. #: T968004)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP1258 (Lab. #: T968005)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP45-8 (Lab. #: T968003)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP55-8 (Lab. #: T968002)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			
Sample GP65-8 (Lab. #: T968001)						
2,4,-D	0.01 U	0.01 U	0.01 U	J	qualify	15
2,4,5-TP (Silvex)	0.001 U	0.001 U	0.001 U			

SUMMARY OF THE ANALYTICAL DATA VALIDATION
For Designers Woodcraft

Soil TCLP Inorganic Analyses
Samples Received: November 5, 1996
Sample Delivery Group: Stone 9
Laboratory Reference Numbers:

FD-20	968004
GP1258	968005
GP45-8	968003
GP55-8	968002
GP65-8	968001

Soil samples were received for TCLP analyses by NYS DEC ASP protocols. A complete analytical validation was performed based upon the following parameters:

* - Data Completeness
* - Holding Times
* - Calibration Verification
  - CRDL Standard
  - Laboratory Control Sample
* - Serial Dilutions
* - Laboratory Blanks
  - Field Blanks
* - Preparation Blanks
  - Matrix Spike
  - Duplicate Analyses
* - Detection Limit Results
* - Linear Range
* - Sample Results

* - Indicates that all criteria were met for this parameter.

Data Validation Summary

No problems were found which would affect the end use of the data.

Nancy J. Potak
January 2, 1997

Holding Times

All samples were analyzed within the required holding times.

CRDL Standards

The recoveries of all CRDL standards were within the 80% to 120% quality assurance limits in the first ICP run with the following exceptions:

Analyte	Initial % Recovery	Final % Recovery
Cadmium	(ok)	60%
Selenium	62%	(ok)
Silver	62%	77%

The data were not flagged for the low CRDL recoveries since the reported CRDL concentrations were much less than the detection limits required in the TCLP analysis.

Initial and Continuing Calibrations

No problems were detected with any of the calibrations associated with this sample delivery group in either of the two ICP runs.

Preparation Blank

Only a low concentration of cadmium (4.810B ug/l) was detected in the one preparation blank associated with the TCLP analyses. The data were not qualified for the low cadmium concentration since it was less than the CRDL.

Calibration Blanks

No analytes were detected in any of the calibration blanks at concentrations greater than the CRDL.

Field Blank

Field blanks were not submitted with this sample delivery group.

ICP Interference Check Sample

Concentrations of arsenic and selenium were not added to the ICP check samples. Although the NYS DEC ASP method was implemented before ICPs were routinely used for the low level analyses of these analytes, reasonable concentrations of these parameters should be added to the interference check solutions to verify the lack on interferences.

No other problems were detected with the reported ICP Interference Check Sample recoveries for either of the two ICP runs.

Matrix Spike Recovery

The matrix spike of the TCLP analyses was analyzed in duplicate. Sample GP1258 of this sample delivery group was used for the matrix spike. All of the recoveries were within the 75% - 125% quality assurance limits with the following exceptions:

Analyte	MS %Rec	MSD % Rec	Qualifier
	136%	137%	NA

Selenium was not detected in three of the samples of this delivery group. The selenium data for these samples were not qualified since a high selenium recovery will not effect the end use of the data if the analyte is not detected in a sample.

All of the post digestion spike recoveries were within the required quality assurance limits.

Duplicate Analysis

Sample GP1258 of this sample delivery group was also used for an unspiked matrix duplicate. All of the RPDs were less than 2-% with the following exception:

Analyte	RPD
Arsenic	200%

The concentrations reported for the arsenic duplicates were 49U ug/l and 52.6 ug/l. The one concentration of arsenic which was detected was just above the IDL. The data were not qualified for this low concentration. The "*" qualifier was removed from the data validation summary table and the arsenic data was flagged with the "See Text" notation.

Laboratory Control Sample

No problems were detected with the recoveries of the soil LCS standards.

Serial Dilutions

Sample GP1258 was also used for the serial dilution. All of the percent differences which could be calculated were less than 10%.

Instrument Detection Limit

No problems were found with the reported instrument detection limits.

ICP Linear Ranges

No problems were detected with the linear ranges. The reported concentrations of all samples in this delivery group were within their linear range for each analyte. The iron data for some of the samples was reanalyzed at a dilution because it was originally above the linear range of the analyses.

Sample Results

The data for all of the samples was verified from the raw data for all of the analytes. No discrepancies were found between the concentrations reported by the laboratory and those found in the raw data.

Appendix C

APPENDIX C

FIELD NOTES

DVIRKA AND BARTILUCCI

DAILY FIELD ACTIVITY REPORT

Report Number: 1 Project Number: 1390-02C Date: 10/22/96

Field Log Book Page Number: (page 1 – page 4)

Project: Designers Wood Craft

Address: Degraw Street, Brooklyn NY

Weather: (AM) Cloudy overcast (PM): cool sunny

Rainfall: (AM) 0 Inches (PM) 0 Inches

Temperature: (AM) 60 °F (PM) 65 °F

Wind Speed: (AM) 0-5 MPH (PM) 0-5 MPH

Wind Direction: (AM) 0 (PM)

Site Condition: dry

Personnel On Site:

Name	Affiliation	Arrival Time	Departure Time
Keith Robins	D+B	800 am	200 pm
Mike MacCabe	D+B	800 am	200 pm
Shawn	Zebra	8:15 am	200 pm
John	Zebra	8:15 am	200 pm

Subcontractor Work Commencement: (AM) 815 (PM)

Subcontractor Work Completion: (AM) (PM) 200

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 10/22/91

DAILY FIELD ACTIVITY REPORT

General work performed today by D&B: Oversight drilling and sampling of GP-1, GP-3.

List specific inspection(s) performed and results (include problems and corrective actions):

Inspected steam cleaning of equipment sampling procedures. Inspected soil and GW for staining

List type and location of tests performed and results (include equipment used and monitoring results):

Performed air monitoring during sampling water and drilling. Refer to air monitoring and boring logs for results

Verbal comments received from subcontractor (include construction and testing problems, and recommendations/resulting action):

Drillers not comfortable with drilling locations GP-11/GP-12, due to close proximity of GAS main. They will not drill at this time in that area.

Prepared by: Keith Adams Reviewed by: _____

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 10/22/96

DAILY FIELD ACTIVITY REPORT

Work performed today by subcontractor(s) (includes equipment and labor breakdown):

8:15 am Zebra on site
9:00 am Steam clean equipment
10:00 am Drill GP-3
Collect water sample (11-15')
Steam clean
11:00 am drill and collect soil and water
steam clean
Lunch break 12:00 - 1:00 pm
Try to better locate gas pipe at GP-11/GP-12
3:00 pm Drillers left the site

DVIRKA AND BARTILUCCI

DAILY FIELD ACTIVITY REPORT

Report Number: 2 Project Number: 9390-02C Date: 10/23/96

Field Log Book Page Number: Book 1 (page 5 - page 13)

Project: Designers Wood Kraft

Address: Brooklyn, New York

Weather: (AM) Sunny (PM): Sunny

Rainfall: (AM) none Inches (PM) none Inches

Temperature: (AM) 60 °F (PM) 70 °F

Wind Speed: (AM) 0 MPH (PM) 0 MPH

Wind Direction: (AM) (PM)

Site Condition: dry

Personnel On Site:

Name	Affiliation	Arrival Time	Departure Time
Keith Robins	DAB	730 am	330 pm
Mike MacCabe	D&B	730 am	330 pm
Shaun	Zebra	730 am	330 pm
Brian	Zebra	730 am	330 pm
Chris	C.A Rich	800 am	930 am
Erick	C.A Rich	800 am	1100 Am

Subcontractor Work Commencement: (AM) 730 (PM)

Subcontractor Work Completion: (AM) (PM) 330

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 10/23/96

DAILY FIELD ACTIVITY REPORT

General work performed today by D&B: Collect GP-2, GP-8, surficial soil sample under drain, Flood drain sample, Sump water and sediment sample. GP-9, Samples

List specific inspection(s) performed and results (include problems and corrective actions): Inspected steam cleaning equipment and grouting holes

List type and location of tests performed and results (include equipment used and monitoring results): Tested soil with PID screening, no vocs detected in soil or water samples

Verbal comments received from subcontractor (include construction and testing problems, and recommendations/resulting action): Unable to drill FD-2 due to cement inside drain

Prepared by: Keith Rahn Reviewed by: _____

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 10/23/96

DAILY FIELD ACTIVITY REPORT

Work performed today by subcontractor(s) (includes equipment and labor breakdown):

700 am Tetra on site
Collect Flur drum # 1 soil
steam clean
collect sample GP-2
900 am soil
950 am water
steam clean
collect GP-8
1130 am soil
1145 am water
steam clean
Lunch break at 1200 pm
drill GP-9
collect soil
collect water. patch holes with cement
cleanup decon, left site at 330 pm

DVIRKA AND BARTILUCCI

DAILY FIELD ACTIVITY REPORT

Report Number: 3 Project Number: 1390-02C Date: 10/24/96

Field Log Book Page Number: page 14 - page 16

Project: Designers Guild craft

Address: Brooklyn, New York

Weather: (AM) cool Rainfall: (AM) none Inches
(PM): cool cloudy (PM) none Inches

Temperature: (AM) 50 °F Wind Speed: (AM) 0-5 MPH Wind Direction: (AM) —
(PM) 65 °F (PM) 0-5 MPH (PM) —

Site Condition: Dy

Personnel On Site:

Name	Affiliation	Arrival Time	Departure Time
Keith Robins	DIB	730 am	330 pm
Mike Maclabe	DIB	730 am	330 pm
Shaw	Zebra	800 am	330 pm
Braun	Zebra	800 am	330 pm

Subcontractor Work Commencement: (AM) 800 am (PM) _____

Subcontractor Work Completion: (AM) _____ (PM) 330 pm.

DVIRKA AND BARTILUCCI

DATE: 6/24/91

DAILY FIELD ACTIVITY REPORT

General work performed today by D&B: Oversight drilling and collecting soil and gw samples from GP2/U and GP-7.

List specific inspection(s) performed and results (include problems and corrective actions):

Inspected soil for staining during sampling.
Inspected steam cleaning equipment and patching holes with cement

List type and location of tests performed and results (include equipment used and monitoring results):

Performed soil and air screening with PID meter for soil and water samples. Refer to boring logs and air monitoring forms for results

Verbal comments received from subcontractor (include construction and testing problems, and recommendations/resulting action):

No verbal comments

Prepared by: Keith Peters Reviewed by: _____

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 10/24/96

DAILY FIELD ACTIVITY REPORT

Work performed today by subcontractor(s) (includes equipment and labor breakdown):

8:00 Drillers onsite
Steam clean equipment, left to get gas from Mobile 4x4 rig
9:00-10:00 Drill GP-10
collect Soil and GW samples.
Steam clean
11:00-12:00 pm Drill and collect sample (soil) manually and GW sample (5-9)
Drillers lunch break. 12:00-1:00pm
Drillers looking at drilling location GP-11, attempting to hand auger at GP-11., refusal through sidewalk
Drillers left site at 3:30 p.m. patched sidewalk with cement patch

DVIRKA AND BARTILUCCI

DAILY FIELD ACTIVITY REPORT

Report Number: 4 Project Number: 1390 Date: 11/4/96

Field Log Book Page Number: page (18-20)

Project: Designers Woodcraft

Address: Brooklyn New York

Weather: (AM) Cool / windy (PM): Sunny

Rainfall: (AM) 0.0 Inches (PM) 0.0 Inches

Temperature: (AM) 50 °F (PM) 60 °F

Wind Speed: (AM) Calm-5 MPH (PM) Calm MPH

Wind Direction: (AM) N/A (PM) N/A

Site Condition: Cool / Sunny

Personnel On Site:

Name	Affiliation	Arrival Time	Departure Time
Keith Ribins	D+B	715 am	
Mike MacCabe	D+B	715am	
Chris	zebra	830 am	
Shawn	zebra	830	
Chris	CA Rich	730 am	10:00 am

Subcontractor Work Commencement: (AM) 830 (PM) _____

Subcontractor Work Completion: (AM) _____ (PM) _____

DVIRKA AND BARTILUCCI

DATE: 11/4/96

DAILY FIELD ACTIVITY REPORT

General work performed today by D&B: Oversight drilling activities at (GP-4, GP-5, GP-6) vacant lot
Oversight drilling at GP-11 / GP-12 down gradient side street, and collect sediment in Floor Drain #2.

List specific inspection(s) performed and results (include problems and corrective actions):
Inspected decontamination of sampling probes and tools. Oversight backfilling and patching holes.
Inspected soil for visual staining and orders

List type and location of tests performed and results (include equipment used and monitoring results):
screened soil and water samples for precence of vocs with PID meter. NO vocs detected during sampling or drilling activities

Verbal comments received from subcontractor (include construction and testing problems, and recommendations/resulting action):
Unable to collect GW sample from floor drain because at 4 ft below sediment was a solid concrete bottom.

Prepared by: Keith Cohen Reviewed by: _____

DB-DFAR

DVIRKA AND BARTILUCCI

DATE: 11/8/96

DAILY FIELD ACTIVITY REPORT

Work performed today by subcontractor(s) (includes equipment and labor breakdown):

Zebra onsite at 830am
Cut lock at Gate at 900am
930 collect Floor Drain #2 samples
Decon tools.
Mobilize Rig onto vacant lot
Collect GP-6 soil / water samples
collect GP-4 soil / water samples
collect GP-5 soil / water samples
lunch break at 1200 - 1230pm
Decon equipment
100pm Drill GP-10 / collect soil / water samples
200pm Drill GP-11 collect water sample
300pm patch holes. Decon equipment

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-3

FIELD SAMPLE I.D. NUMBER GP-3 (11-15') DATE 10/22/96

TIME 10:00 am WEATHER Mostly Sunny TEMPERATURE 60° F

SAMPLE TYPE:

GROUNDWATER / SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER 11 ft MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD Geoprobe / SS (screen point) 15

FIELD TEST RESULTS:

COLOR pH ODOR

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

(PID/~~FID~~ READING 0.0 ppm VISUAL DESCRIPTION Brown Silty water

CONSTITUENTS TO BE ANALYZED:

TAL Metals TAL SVOCs TCL VOCs

REMARKS: groundwater Sample only, Sampled at 11-15'
Slow recharge, Silty Foundation

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Wondercraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-1

FIELD SAMPLE I.D. NUMBER GP-1 (11-15') DATE 10/22/96

TIME 11:00 Am WEATHER Mostly Sunny TEMPERATURE 60.° F

SAMPLE TYPE:

GROUNDWATER ✓ SEDIMENT

SURFACE WATER ~~✓~~ AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER ≈ 11' MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED 1/2 gallon REMOVAL METHOD Geoprobe

FIELD TEST RESULTS:

COLOR Brown pH ODOR None

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

(PID)/FID READING 0.0 ppm VISUAL DESCRIPTION Brown/silty

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL Metals

REMARKS: Run MS/MSD up gradient

sampled ground water only

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-2

FIELD SAMPLE I.D. NUMBER GP-2 (11'-15') DATE 10/23/96

TIME 9:50 am WEATHER Mostly Sunny TEMPERATURE 55° F

SAMPLE TYPE:

GROUNDWATER ✓ SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER ≈ 11' MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED 1/2 gallon REMOVAL METHOD Geoprobe

FIELD TEST RESULTS:

COLOR Brow pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 ppm VISUAL DESCRIPTION brown and silty

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL metals ~~TCLP~~

REMARKS: Split Samples w/ C.A. Rich
slow recharge to probe

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-2

FIELD SAMPLE I.D. NUMBER GP-2 (8'-11') DATE 10/23/96

TIME 10 30 am WEATHER Mostly Sunny TEMPERATURE 55° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL ✓ (8'-11') OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER ~~_____~~ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR none

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

(PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown Silty Sand, silt, mica

CONSTITUENTS TO BE ANALYZED:

TCL VOCs	TCL SVOCs	TAL Metals	TCLP

REMARKS: Split Samples w/ C.A. Rich
sampled at 8-11 ft - just above landfill

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW ~~GP-8~~ MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-8

FIELD SAMPLE I.D. NUMBER GP-8 (0-3') DATE 10/23/96

TIME 1130 a.m. WEATHER Mostly Sunny TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL ✓ 0-3' OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER 4 ft MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR None

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Clayey Fill, gravel, brick stones.

CONSTITUENTS TO BE ANALYZED:

TCL VOCs	TCL SVOCs	TAL Metals	TCLP

REMARKS: Split sample w/ C.A. Rich
Next to 2 - 55 gallon drums at low area of floor/ground

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Disques Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-8

FIELD SAMPLE I.D. NUMBER GP-8 DATE 10/23/91

TIME 11⁴⁵ am WEATHER Mostly Sunny TEMPERATURE 60° F

SAMPLE TYPE:

GROUNDWATER ✓ 5-9 ft SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER 4' MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD Geoprobe

FIELD TEST RESULTS:

COLOR pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 VISUAL DESCRIPTION Brown silty

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL metals | ~~TCLP~~

REMARKS: Split Sample w/ C.T. Rich

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0784.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-9

FIELD SAMPLE I.D. NUMBER GP-9 (4-7) DATE 10/23/96

TIME 1'20 pm WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X (4'-7') OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR organic odor.

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown Sand, brick, (Fill) silt, concrete.

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL Metals | TCLP

_____ | _____ | _____ | _____

REMARKS: 4-7 ft, Sand/Fill

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-9

FIELD SAMPLE I.D. NUMBER GP-9 (10-14') DATE 10/23/96

TIME 1:45 p.m. WEATHER Sunny / clear TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER 7 ft MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD Geoprobe

FIELD TEST RESULTS:

COLOR pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

(PID)/FID READING 0.0 ppm VISUAL DESCRIPTION Very silty Brown water

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL Metals

REMARKS: Groundwater at 7 ft. (not enough water)
Slow recharge, Sample taken at 10-14 ft
Run MS/MSD on Soil Sample

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-6794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. SS-1

FIELD SAMPLE I.D. NUMBER SS-1 (3"-6") DATE 10/23/96

TIME 1115 a.m. WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL Surficial Soil (3"-6") OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR Dk Black pH _____ ODOR Slight carbon odor ash odor

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm. VISUAL DESCRIPTION appears to be mostly carbon with some sand

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL metals | TCLP

_____ | _____ | _____ | _____

REMARKS: 3" to 6" depth Sample immediately below old broken stack

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0784.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. SUMP

FIELD SAMPLE I.D. NUMBER SUMP DATE 10/23/96

TIME 12⁰⁵ p.m. WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER X Just below Surface of water AIR _____

SOIL _____ OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER NA MEASUREMENT METHOD _____

DEPTH OF WELL NA MEASUREMENT METHOD _____

VOLUME REMOVED NA REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR Yellowish Tint pH _____ ODOR Fuel odor

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

(PID/~~FID~~ READING 0.0 ppm. VISUAL DESCRIPTION Yellowish, Fuel odor

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL Metals _____

_____ _____ _____ _____

REMARKS: sample collected with decontaminated long handled poly scoop.

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. Sump

FIELD SAMPLE I.D. NUMBER Sumps (sediment) DATE 10/23/96

TIME 12:10 pm WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT Sump ✓

SURFACE WATER _____ AIR _____

SOIL _____ OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR DK Black-Grey pH _____ ODOR petroleum odor

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm VISUAL DESCRIPTION looks like A petroleum sludge with a sheen and petroleum odor

CONSTITUENTS TO BE ANALYZED:

TCL VOCs	TCL SVOCs	TAL Metals	TCLP

REMARKS: a lot of sludge/sediment in Sump - organic waste and petroleum odor

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR.0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. FD1

FIELD SAMPLE I.D. NUMBER FD1 (0-3') DATE 10/23/96

TIME 10^05 AM WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT (Soil) in flood drain ✓

SURFACE WATER _____ AIR _____

SOIL _____ OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR Brown pH _____ ODOR none

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

~~PID~~/FID READING 0.0 ppm VISUAL DESCRIPTION Clayey brown sand, gravel and brick fill, wet

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL metals | TCLP

_____ | _____ | _____ | _____

REMARKS: (0-3') Flood drain appears to drain to soil; no piping

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-10

FIELD SAMPLE I.D. NUMBER GP-10 (5-8') DATE 10/24/96

TIME 930 a.m. WEATHER Sunny TEMPERATURE 60° F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X 5-8' OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR _____

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm. VISUAL DESCRIPTION black, sand, moist

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL Metals | TCLP

REMARKS: _____

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-6784.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-10

FIELD SAMPLE I.D. NUMBER GP-10 DATE 10/24/96

TIME 9:45 am WEATHER Sunny TEMPERATURE 50° F

SAMPLE TYPE:

GROUNDWATER X 11-14' SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER ≈ 8 ft MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD

FIELD TEST RESULTS:

COLOR Dk-Brown pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

(PID)/FID READING 0.0 VISUAL DESCRIPTION muddy / silty / Brown

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL Metals

REMARKS: Slow recharge - Set screen at 11-14'

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-7

FIELD SAMPLE I.D. NUMBER GP-7 (3'-4') DATE 10/24/96

TIME 11⁰⁰ a.m. WEATHER Sunny TEMPERATURE 50 °F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR none

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

(PID)/FID READING 0.0 ppm VISUAL DESCRIPTION Brown Clayey gravel fill

CONSTITUENTS TO BE ANALYZED:

TCL VOCs | TCL SVOCs | TAL Metals | TCLP

_____ | _____ | _____ | _____

REMARKS: Manual Probe hit denial four times
Sample at 3-4 ft

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designer Woodcraft SAMPLE CREW MacCabe, Robins

SAMPLE LOCATION/WELLNO. GP-7

FIELD SAMPLE I.D. NUMBER GP-7 DATE 10/24/96

TIME 1100 a.m. WEATHER Sunny TEMPERATURE 50°

SAMPLE TYPE:

GROUNDWATER ✓ SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER 5' MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD PVC well screen

FIELD TEST RESULTS:

COLOR pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Silty

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TCL SVOCs TAL Metals

REMARKS: Slow recharge water Sample ~~at~~ from 5-9'

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Robins/Mike M.

SAMPLE LOCATION/WELLNO. FD2-(0-4)

FIELD SAMPLE I.D. NUMBER FD2(0-4) DATE 11/4/96

TIME 900 am WEATHER Warm/Sunny TEMPERATURE ~60°F

SAMPLE TYPE:

GROUNDWATER ____ SEDIMENT X

SURFACE WATER ____ AIR ____

SOIL X OTHER (Describe, e.g., septage,leachate) ____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER ____ MEASUREMENT METHOD ____

DEPTH OF WELL ____ MEASUREMENT METHOD ____

VOLUME REMOVED ____ REMOVAL METHOD ____

FIELD TEST RESULTS:

COLOR Brown-Black pH ____ ODOR none

TEMPERATURE (°F) ____ SPECIFIC CONDUCTANCE (umhos/cm) ____

TURBIDITY ____

PID/FID READING ____ VISUAL DESCRIPTION sediment and soil mixture

CONSTITUENTS TO BE ANALYZED: TAL metals TCL SVOCs

TCL VOCs TCLP

REMARKS: ____

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith R. / Mike M.

SAMPLE LOCATION/WELLNO. GP-6 (5-8)

FIELD SAMPLE I.D. NUMBER GP-6 (5-8) DATE 11/4/96

TIME 950 am WEATHER Sunny/cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR Brown pH _____ ODOR none

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0 ppm VISUAL DESCRIPTION Brown moist silt

CONSTITUENTS TO BE ANALYZED: TCLP TAL metals _____

_____ TCL SVOCs TCL VOCs _____

REMARKS: _____

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith R./Mike M.

SAMPLE LOCATION/WELLNO. GP-6 (8-12)

FIELD SAMPLE I.D. NUMBER GP-6 (8-12) DATE 11/4/96

TIME 1615 hrs WEATHER Cool/Sunny TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD

FIELD TEST RESULTS:

COLOR Brown pH ODOR None

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown silty

CONSTITUENTS TO BE ANALYZED:

TCL VOCs TAL metals

TCL SVOCs

REMARKS:

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR.0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Robins / Mike M

SAMPLE LOCATION/WELLNO. GP-4 (8-12)

FIELD SAMPLE I.D. NUMBER GP-4 (8-12) DATE 11/4/96

TIME 1050 hrs WEATHER Sunny/cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD

FIELD TEST RESULTS:

COLOR Brown pH ODOR None

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown silty

CONSTITUENTS TO BE ANALYZED: TCL VOCs TAL metals

TCL SVOCs

REMARKS:

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR.0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith R. / Mike M.

SAMPLE LOCATION/WELLNO. GP-4 (5-8)

FIELD SAMPLE I.D. NUMBER GP-4 (5-8) DATE 11/4/96

TIME 1045 am WEATHER Sunny / cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR _____

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING _____ VISUAL DESCRIPTION Brown fine-medium silty sand

CONSTITUENTS TO BE ANALYZED:

	TCLP	TCL Semi VOCs	
	TCL VOCs	TAL metals	

REMARKS: _____

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR.0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith R. / Mike M

SAMPLE LOCATION/WELLNO. GP-5 (5-8).

FIELD SAMPLE I.D. NUMBER GP-5 (5-8) DATE 11/4/96

TIME 1130 am WEATHER Sunny (cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR _____

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown Sand + Silt

CONSTITUENTS TO BE ANALYZED:

	TCLP	TCL SVOCs	
	TCL VOCs	TAL metals	

REMARKS: _____

WELL CASING VOLUMES

GAL/FT	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Robins

SAMPLE LOCATION/WELLNO. GP-5 (8-12)

FIELD SAMPLE I.D. NUMBER GP-5 (8-12) DATE 11/4/96

TIME 1140 am WEATHER Sunny/cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD

FIELD TEST RESULTS:

COLOR Brown pH ODOR

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING 0.0 ppm VISUAL DESCRIPTION Brown silty

CONSTITUENTS TO BE ANALYZED: TCL VOCs TAL metals

TCL SVOCs

REMARKS:

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-8794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Robins / Mike MacCabe

SAMPLE LOCATION/WELLNO. GP-11 (8-12)

FIELD SAMPLE I.D. NUMBER GP-11 (8-12) DATE 11/4/96

TIME 2:15 p.m. WEATHER Sunny/cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT

SURFACE WATER AIR

SOIL OTHER (Describe, e.g., septage,leachate)

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER MEASUREMENT METHOD

DEPTH OF WELL MEASUREMENT METHOD

VOLUME REMOVED REMOVAL METHOD

FIELD TEST RESULTS:

COLOR Brown pH ODOR none

TEMPERATURE (°F) SPECIFIC CONDUCTANCE (umhos/cm)

TURBIDITY

PID/FID READING VISUAL DESCRIPTION Brown silty water

CONSTITUENTS TO BE ANALYZED: TCL VOCs TAL metals

TCL SVOCs TCLP

REMARKS:

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Robins / Mike MacCabe

SAMPLE LOCATION/WELLNO. GP-12 (5-8)

FIELD SAMPLE I.D. NUMBER GP-12 (5-8) DATE 11/4/96

TIME 1000 pm WEATHER Sunny TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER _____ SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL X OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR Brown pH _____ ODOR None

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING _____ VISUAL DESCRIPTION Brown - Redish fine Sand and silt

CONSTITUENTS TO BE ANALYZED:

	TCL VOCs	TAL metals	
	TCL SVOCs	TCLP	

REMARKS: _____

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0784.PM4

DVIRKA AND BARTILUCCI

SAMPLE INFORMATION RECORD

SITE Designers Woodcraft SAMPLE CREW Keith Rubins / mike MacCabe

SAMPLE LOCATION/WELLNO. GP-12 (water)

FIELD SAMPLE I.D. NUMBER GP-12 (8-12) DATE 11/4/96

TIME 1:15 pm WEATHER Sunny / cool TEMPERATURE 60°F

SAMPLE TYPE:

GROUNDWATER X SEDIMENT _____

SURFACE WATER _____ AIR _____

SOIL _____ OTHER (Describe, e.g., septage,leachate) _____

WELL INFORMATION (fill out for groundwater samples):

DEPTH TO WATER _____ MEASUREMENT METHOD _____

DEPTH OF WELL _____ MEASUREMENT METHOD _____

VOLUME REMOVED _____ REMOVAL METHOD _____

FIELD TEST RESULTS:

COLOR _____ pH _____ ODOR None

TEMPERATURE (°F) _____ SPECIFIC CONDUCTANCE (umhos/cm) _____

TURBIDITY _____

PID/FID READING _____ VISUAL DESCRIPTION Brown silty water

CONSTITUENTS TO BE ANALYZED: TCL VOCs TAL metals

TCL SVOCs

REMARKS: _____

WELL CASING VOLUMES

GAL/FT				
	1-1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.10	2-1/2" = 0.24	3-1/2" = 0.50	6" = 1.46

SIR-0794.PM4

DVIRKA AND BARTILUCCI

AIR MONITORING FORM

PROJECT NAME: Designers Wood Craft DATE: 10/22/96

PROJECT NUMBER: 1390-02C INSTRUMENT: PID

RECORDED BY: Keith Robins CALIBRATION DATE: 10/22/96

WEATHER CONDITIONS: Fair/Sunny

TIME	LOCATION	WIND SPEED AND DIRECTION	PID READING	OBSERVATIONS
1100 hrs	GP-1	calm	0.0 ppm	In breathing zone
1100 hrs	GP-3	calm	0.0 ppm	In breathing zone

RECORDING PROCEDURES/REMARKS:

DVIRKA AND BARTILUCCI

AIR MONITORING FORM

PROJECT NAME: Designer Wood Craft DATE: 10/23/96

PROJECT NUMBER: 1390-02C INSTRUMENT: PID

RECORDED BY: Keith Robins CALIBRATION DATE: 10/23/96

WEATHER CONDITIONS: Cloudy cool

TIME	LOCATION	WIND SPEED AND DIRECTION	PID READING	OBSERVATIONS
950 AM	GP-2	Calm	0.0 ppm	In working zone
1220 PM	GP-9	calm	0.0 ppm	In working zone
1130 AM	GP-8	calm	0.0 ppm	In working zone
1005 AM	FD-1	calm	0.0 ppm	In work zone

RECORDING PROCEDURES/REMARKS:

DVIRKA AND BARTILUCCI

AIR MONITORING FORM

PROJECT NAME: Designers Wood Craft DATE: 10/24/96

PROJECT NUMBER: 1390-02c INSTRUMENT: PID

RECORDED BY: Keith Robins CALIBRATION DATE: 10/24/96

WEATHER CONDITIONS: Cloudy cool 65°F

TIME	LOCATION	WIND SPEED AND DIRECTION	(PID) READING	OBSERVATIONS
930am	GP-10	calm	0.0 ppm	Background in breathing zone
1100am	GP-7	calm	0.0 ppm	In breathing zone

RECORDING PROCEDURES/REMARKS:

DVIRKA AND BARTILUCCI

AIR MONITORING FORM

PROJECT NAME: Designers Woodcraft DATE: 11/5/96

PROJECT NUMBER: 1390-02C INSTRUMENT: PID

RECORDED BY: Keith Robins / mike macCabe CALIBRATION DATE: 11/5/96

WEATHER CONDITIONS: Sunny / cool / 50-60°F

TIME	LOCATION	WIND SPEED AND DIRECTION	PID READING	OBSERVATIONS
1140am	GP-5	0-5 mph	0.0 ppm	In breathing zone and soil/water
950am	GP-6	0-5 mph	0.0 ppm	In breathing zone and soil/water
1045am	GP-4	0-5 mph	0.0 ppm	In breathing/soil/water
100pm	GP-11	0-5 mph	0.0 ppm	In breathing zone and ~~soil~~ water
200pm	GP-12	0-5 mph	0.0 ppm	In breathing ~~zone~~ soil/water

RECORDING PROCEDURES/REMARKS:

DVIRKA AND BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Designers Wood Craft
Date: 10/22/96
Project Number: 1390-02C
Calibrated By: Keith Robins

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
PhotoVac PID	99 (ppm) Isobutylene	840 am	Calibrated to 98 ppm
# EDEG-213			

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Designers Wood Craft
Project Number: 1390-02C
Date: 10/23/96
Calibrated By: Keith Robins

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Photovac PID	99 Isobutylene	800 am	Calibrated to 99 ppm
# EDE8-213	(ppm) gas		

DECL

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Designers Wood Craft   Date: 10/24/96
Project Number: 1396   Calibrated By: Keith Robins

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Photo Vac Pidmeter	99 Isobutylene Gas	830 am	Calibrated to 98 ppm
# EDEG-213	(ppm)		

DECL

DVIRKA AND BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Designers Woodcraft Date: 11/14/96

Project Number: 390-02C Calibrated By: Keith Robins

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Photovac PID meter # EDEG-213	99 Isobutylene gas (ppm)	825 am.	Calibrated to 99 ppm ✓

DECL

Appendix D

APPENDIX D

BORING LOGS

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1396-02C
Project Name: Designers Woodcraft

Well/Boring No.: GP-2
Sheet 1 of 1
By: KSR Date: 10/23/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: 2 inch
Date Started: 10/23/96

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 10/23/96

Borehole Completion Depth: 15 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-					PID	No soil sampling (0-7')
-1-						
-2-						
-3-						
-4-						
-5-						(7') Brown silty Sand, some mica moist
-6-						
-7-						
-8-						(8'-11') Brown silty Sand very moist
-9-	1	8-11	36"	—	0.0	------- ▽ ---- at 11'
-10						END OF Boring at 15 FT

Remarks: Collect water Sample at (11-15')

Water Level Measurement 11 FT Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Woodcraft

Well/Boring No.: GP-4
Sheet 1 of 1
By: KSR Date: 11/4/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: 2 inch
Date Started: 11/4/96

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 11/4/96

Borehole Completion Depth: 12 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-5		—	0.0	(0-5') Fill
-2-						
-3-						
-4-						
-5-	2	5-8		—	0.0	(5-8') Brown fine silty Sand
-6-						
-7-						----- water ▽ ---- at 8'
-8-						
-9-	3	8-12		—	0.0	(8-12') collect water sample
-10						END OF Boring at 12 Ft

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Woodcraft

Well/Boring No.: GP-5
Sheet 1 of 1
By: KSK Date: 11/4/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: 2 inch
Date Started: 11/4/96

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 11/4/96

Borehole Completion Depth: 12 Ft
Borehole Diameter: 2"
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						NO samples collected (at 0-5')
-1-						
-2-						
-3-						
-4-						
-5-	1	5-8	36"	—	0.0	(5-8') Brown fine Sand and silt
-6-						
-7-						---- ▽ --- water at 8'
-8-						collect water sample at 8-12'
-9-						
-10						END of Boring at 12'

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Woodcraft

Well/Boring No.: GP-6
Sheet 1 of 1
By: KR Date: 11/4/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shuma
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: 2 inch
Date Started: 11/4/96

Geologist: K. Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 11/4/96

Borehole Completion Depth: 12'
Borehole Diameter: 2"
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	(0-4) Fill, bricks, silt, glass and twigs
-2-						
-3-						
-4-						
-5-	2	4-8	48"	—	0.0	(4-8) Brown silt, damp-moist
-6-						
-7-						
-8-						— — — — wet — — — —
-9-	3	8-12	48"	—	0.0	(8-12) Brown fine Sand and silt (saturated, wet)
-10						

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02-C
Project Name: Designer Wood Craft

Well/Boring No.: GP-7
Sheet 1 of 1
By: KSR Date: 10/24/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn / Brian
Drill Rig: Manual
Sample Spoon I.D.: 2inch
Date Started: 10/24/96

Geologist: Keith Rubens
Drilling Method: Slide Hammer
Drive Hammer Wt.: —
Date Completed: 10/24/96

Borehole Completion Depth: 9 FT
Borehole Diameter: 2inch
Ground Surface El.: NA

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-					PID	
-1-	1	0-3'	None	—	—	cobbles, and Brick Fill unable to collect any soil samples from (0-3')
-2-						
-3-	2	3-4	12"	—	0.0	(3'-4') Brown clayey gravel Fill, wet
-4-						
-5-						(5½-6) Brown - Gray fine Sand - moist
-6-						
-7-						water sample collected at (5-9), very silty low recharge
-8-						
-9-						END OF Boring at 9 Ft
-10						

Remarks: collect water samples from (5'-9')

Water Level Measurement 5' Date 10/24/96
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Wood Craft

Well/Boring No.: GP-8
Sheet 1 of 1
By: KSP Date: 10/23/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn Geologist: Keith Robins
Drill Rig: 4x4 Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: 2 inch Drive Hammer Wt.: —
Date Started: 10/23/96 Date Completed: 10/23/96

Borehole Completion Depth: 8 FT
Borehole Diameter: _____
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-3	36"	—	0.0	0-3' soft soil fill, gravel sand, silt
-2-						---- water ---▽--- (at 4')
-3-						(4-8') wet Brown clayey sand,
-4-	2	4-8	48"	—	0.0	gravel, brick fragments.
-5-						
-6-						
-7-						
-8-						END of Boring at 8 FT
-9-						
-10						

Remarks: Collect water sample from (5'-9')

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Woodcraft Designers

Well/Boring No.: GP-9
Sheet 1 of 1
By: KSR Date: 10/23/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: 4x4 Geoprobe
Drill Rig: Shawn
Sample Spoon I.D.: 2 inch
Date Started: 10/23/96

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: NA
Date Completed: 10/23/96

Borehole Completion Depth: 14 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-					PID	
-1-						
-2-						
-3-						
-4-	1	4-7	36"	—	0.0	(0-4') Fill Black, Brown silty sand, fine to medium gravel, trace brick damp
-5-						
-6-						
-7-	2	4-8	48"	—	0.0	(4-8') Fill, wet at 5 FT (4-5') Brown fine-medium Sand, brick. (5-8') Brown - Black Sand, some Silt, gravel, concrete, glass. at 7.5' Gray - Black Silty fine Sand (Organic odor) compact, moist
-8-						
-9-						
-10						

Remarks: Not recharging, screen set from (8-12') Therefore screen from Geoprobe driven to (10-14') to collect water sample.

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designer Woodcraft

Well/Boring No.: GP-10
Sheet 1 of 1
By: KSR Date: 10/24/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn / Brain
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: 2 inch
Date Started: 10/24/96

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 10/24/96

Borehole Completion Depth: 14'
Borehole Diameter: 2 inch
Ground Surface El.: NA

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-					PID	no soil sampling (0-5')
-1-						
-2-						
-3-						
-4-						
-5-	1	5'-8'	36"	—	0.0	(5-8') Fill, Black Sand, carbon, gravel size f-m, moist
-6-						▽ (water at 8')
-7-						Soil from (8-12') Brown clayey silt and fine Sand, saturated.
-8-	2	8'-12'	48"	—	0.0	
-9-						
-10						END OF Boring at 14 FT

Remarks: collect water sample from 11-14, due to not enough water from screen set at (8-12)

Water Level Measurement 8' Date 10/24/96
Date _____
Date _____
Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers woodcraft

Well/Boring No.: GP-12
Sheet 1 of 1
By: KSR Date: 11/4/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn Geologist: Keith Robins
Drill Rig: 4x4 Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: 2 inch Drive Hammer Wt.: —
Date Started: 11/4/96 Date Completed: 11/4/96

Borehole Completion Depth: 12'
Borehole Diameter: 2"
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-	1	0-4	48"	—	0.0	(0-4') Fill, asphalt
-1-						
-2-	2	4-8	48"	—	0.0	(4-8') Brown fine Sand, some silt, trace gravel
-3-						
-4-						
-5-	3	5-8	36"	—	0.0	(5-8') Brown-Redish fine Sand, and silt
-6-						
-7-						---- ∇ --- water at 8'
-8-						collect water sample at (8-12')
-9-						
-10						END OF Boring at 12'

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Woodcraft

Well/Boring No.: FD-1
Sheet 1 of 1
By: KSR Date:
Chk'd: Date:

Drilling Contractor: Zebra
Driller: Shawn/Brian
Drill Rig: Manual ~~GT [illegible]~~
Sample Spoon I.D.: 2 inch
Date Started: 10/23/96

Geologist: Keith Robins
Drilling Method: manual slide Hammer
Drive Hammer Wt.: Slide Hammer
Date Completed: 10/23/96

Borehole Completion Depth: 3 Ft
Borehole Diameter: 2 inch
Ground Surface El.: N/A

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-					PID	
-1-	1	0-3'	36"	–	0.0	(0-3') Brown clayey Sand, soft, trace brick, wet, Fill
-2-						
-3-						END OF Boring AT 3FT
-4-						
-5-						
-6-						
-7-						
-8-						
-9-						
-10						

Remarks: Collect inside floor drain, beneath staircase inside building

Water Level Measurement ____ Date ____
____ Date ____
____ Date ____
____ Date ____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1390-02C
Project Name: Designers Woodcraft

Well/Boring No.: FD-2
Sheet 1 of 1
By: KSL Date: 11/4/96
Chk'd: _____ Date: _____

Drilling Contractor: Zebra
Driller: Shawn
Drill Rig: 4x4 Geoprobe
Sample Spoon I.D.: Brass Spoon
Date Started: 11/4/96

Geologist: Keith Robins
Drilling Method: hand auger/split spoon
Drive Hammer Wt.: —
Date Completed: 11/4/96

Borehole Completion Depth: 4 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						(0-4)
-1-	1	0-4	48"	—	0.0	Black Brown sediment, gravel, silt, sand - wet.
-2-						
-3-						concrete bottom at 4 FT
-4-						END OF Boring at 4 FT
-5-						
-6-						
-7-						
-8-						
-9-						
-10						

Remarks: (0-4) sent in for 1&6 analysis

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

Appendix E

APPENDIX E

PHASE I SITE ASSESSMENT, UNDEVELOPED LOT 169 COLUMBIA ST., BROOKLYN, NY - OCTOBER 1993 - BY WILLIAM J. PIERRO

NOV 1 2 '993

PHASE-I ENVIRONMENTAL
SITE ASSESSMENT

UNDEVELOPED LOT
169 COLUMBIA ST.
BROOKLYN, NEW YORK

Block 319, L. 5, 6, 7, 8, 9

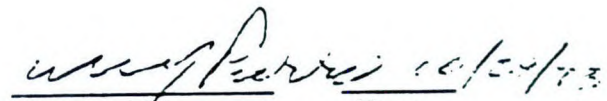
Prepared By:

William J. Pierro
90 Nassau Road
Huntington, New York, 11743
(516) 673-7097

Prepared For:

The New York State Office of Mental Health
275 7th Ave., 16th Floor
New York, New York 10001

Attn: Ms. Sally Greene, Project Manager



William J. Pierro **Date**
Environmental Consultant

TABLE of CONTENTS

EXECUTIVE SUMMARY

Review of historical building documents and personal interviews indicate historical land uses at 169 Columbia Street were residential and commercial *(non-manufacturing)* between the 1940s and the early 1970s. Freedom of Information law requests sent to the NYSDEC, NYCDEP, NYSHD, NYCECB, and NYCFD have not yet been answered. The client will be contacted should pertinent information be revealed.

The Site is within one-quarter mile of six active petroleum spills, one permitted air discharge facility, eleven petroleum bulk storage facilities, four hazardous waste generators, and one solid waste facility.

A Site inspection revealed a heavily overgrown lot, four abandoned cars, piles of household trash, potential construction and demolition fill material, isolated patches of stained soil, and a groundwater monitoring well. Considering this, a Phase-II Environmental Site Assessment, to include the collection of groundwater and soil samples, was recommended.

Upon construction of the new residence, it is recommended that at least two water samples be collected and analyzed for dissolved lead from the main feeder line entering the building.

1.00 INTRODUCTION

The New York State Office of Mental Health *(NYSOMH)* retained WJ Pierro to perform a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York *(Block 319, Lot 5,6,7,8,9; hereafter referred to as "the Site").*

This report's objective is to identify historical and current environmental concerns associated with the Site, and to assess whether off-site properties within a one-quarter mile radius have the potential to impact the Site's environmental integrity. The scope of professional services included a Site/neighborhood inspection by an experienced environmental professional, the review of historical building documents, the review of database records and files maintained at various regulatory agencies, as well as personal inteviews. The database search, One-Quarter Mile Radius Map, and collection of New York City Building Department documents were subcontracted to qualified firms.

Appended to this report are Site Photographs *(Appendix A)*, Site Location & One-Quarter Mile Radius Maps *(Appendix B)*, Historical Building Documents *(Appendix C)*, Foil Request Applications *(Appendix D)*, a completed NYSOMH Phase-I Environmental Site Assessment Checklist *(Appendix E)*, and Boring Logs Per SESI Consulting Engineers *(Appendix F)*.

In the absence of an existing structure, sampling and analyses for asbestos containing materials, lead paint, and dissolved lead in drinking water were not performed.

2.00 SITE HISTORY

Review of historical building records maintained at the New York City Department of Buildings indicate the Site may have included addresses up to 175 Columbia Street as of the early 1930s; at least four three-story apartment houses/commercial stores existed at the Site during this period. According to a neighbor who claimed to live on Columbia Street for more than thirty years, most of the apartment houses were demolished in the 1960's, but 169 Columbia Street was demolished in the mid-1980's; he added that the commercial businesses were limited to grocery stores and non-manufacturing concerns *(see Appendix C for Building Documents)*. Historical aerial photographs were not available for review.

3.00 SITE INSPECTION

On October 16, 1993 WJ Pierro inspected the Site and interviewed a neighboring property owner living at 183 Columbia St. Mr. Charles Ayers, Architect for Liebman Melting Partnership, was present.

3.01 Site Description

The Site is located on the east side of Columbia Street, between Sedwick Street and DeGraw Street. It is level at street grade, and is enclosed with cyclone fencing along the street frontage. The Site is heavily vegetated and has apparently been used for dumping abandoned automobiles and household trash *(see Site Photographs, Appendix A)*. Brick, cement blocks, and other construction debris were observed, a fair amount being mixed with on-site soils. A groundwater monitoring well and areas of stained soil, between five and thirty-six square feet, were observed.

3.02 Site Reconnaisance

A. Industrial Processes: Industrial processes were not observed at the time of the inspection. Review of records maintained at the New York State Department of Environmental Conservation *(NYSDEC)* did not indicate the Site has existing environmental permits for industrial processes *(see Section 6.00)*.

B. Hazardous Chemicals & Waste Inventory: Hazardous chemicals and wastes were not observed at the time of the inspection. Review of records maintained at the NYSDEC did not indicate the site is registered to store, generate, or transport hazardous chemicals or wastes *(see Section 6.00)*.

C. Storage Tank Inventory & Compliance Status: Aboveground storage tanks or underground storage tank fill ports/vent lines were not observed during the inspection. Records maintained at the NYSDEC did not indicate storage tanks are registered to the Site *(see Section 6.00)*. Additional information may be revealed upon receipt of the Freedom of Information Law *(FOIL)* request sent to the New York City Fire Department *(NYCFD)*.

The client should note that storage tanks with a volume of less than 1,100 gallons are not required to be registered with the NYSDEC or the NYCFD.

D. Wastewater Discharge: Records maintained at the New York City Department of Buildings indicate the Site was connected to the New York City sewer system prior to 1945. Processes generating wastewaters were not observed during the inspection. Review of records maintained at the NYSDEC did not reveal wastewater discharge permits registered to the Site *(see Section 6.00)*.

E. Potential Chemical Spills: Isolated patches of surface staining, between five and thirty-six square feet, were observed in three areas of the Site. These stains did not emit a foul odor. Uncharacteristic stressed vegetation or puddles were not observed during the inspection. Review of records maintained at the NYSDEC did not reveal any currently active chemical or petroleum spills registered to the Site *(see Section 6.00)*.

F. Urea Formaldehyde Foam Insulation: Potential urea formaldehyde foam insulation materials were not observed during the inspection.

G. Potential PCB Containing Structures: Potential polychlorinated biphenyl containing structures were not observed during the inspection.

H. High Tension Power Lines: High tension electrical power lines capable of generating a signficant electromagnetic field were not observed during the inspection.

I. Environmental Permits: Industial or commercial processes requiring environmental permits were not observed during the inspection. Review of records maintained at the NYSDEC did not reveal any active environmental permits registered to the Site *(see Section 6.00)*.

3.03 Environmental Setting

A. Hydrogeologic Characterisitics: The Site is situated within a flood zone, as noted in the Flood Insurance Rate Map provided by the Federal Emergency Management Agency. The proximity within a flood zone should not necessarily preclude the residential development of the Site.

Review of hydrogeologic maps maintained at the United States Geologic Survey indicate the Site is underlain by unconsolidated overburden material *(eg: rocks, soil, till material)* and bedrock *(the Manhattan Schist)*. Groundwater occurs at approximately 10 ft. below grade and is assumed to be migrating westerly in the direction of decreasing hydraulic gradient, towards Buttermilk Channel.

Review of boring logs provided by SESI Consulting Engineers *(December 1992)*, indicate the Site is underlain with "red-brown coarse to fine sand and clayey silt". The existence of "bricks, wood, concrete, and demolition rubble" was also noted at a depth of 14 feet below grade *(see Appendix F)*.

B. ***Potential for Naturally Occuring Radon Contamination:*** The action level for Radon gas concentrations set by the NYSDEC is 4.0 pico curies/ltr of air; this is significantly higher than the 1.4 pico curies/ltr noted to be "background levels" for New York City. As such, the potential for on-site and naturally occuring Radon gas contamination exceeding NYSDEC standards is low, and testing is not recommended.

3.04 Preliminary Sampling & Analysis

A. ***Lead Based Paint:*** In the absence of a standing structure, sampling and analysis for lead paint was not performed.

B. ***Asbestos Containing Materials:*** In the absence of a standing structure, sampling and analysis for asbestos containing materials was not performed.

C. ***Dissolved Lead in Drinking Water:*** In the absence of a standing structure and plumbing, sampling and analysis for dissolved lead in drinking water was not performed. It is recommended that when the new structure is connected to the main water line, two samples of water should be analyzed for total dissolved lead.

D. ***Underground Storage Tanks:*** In the absence of any documented or visibly obvious underground storage tanks, integrity testing was not performed.

E. ***Radon:*** Considering New York City has been noted not to exceed NYSDEC's action level for naturally occuring Radon, sampling was not performed and is not recommended.

4.00 NEIGHBORHOOD INSPECTION

4.01 Observed Land Uses Within a One-Quarter Mile Radius

The Site is "spot zoned" R-6 *(residential)* and is surrounded by M1-1 zoned properties *(manufacturing)*. Contiguous properties to the north and south are residential apartment houses and non-manufacturing commercial concerns; the contiguous property to the east, hydraulically upgradient with respect to presumed groundwater flow direction, is Designer Woodcraft Manufacturing Corp., the contiguous property to the west is Columbia Street, with a New York-New Jersey Port Authority Terminal across the street *(see Appendix A)*.

A drive-through neighborhood inspection within one-quarter mile of the Site did not identify areas of landfilling, chemical stockpiling, or other visually obvious environmental concern.

4.02 Site's Proximity to Environmentally Sensitive Areas

The Site is approximately 200 feet east of Buttermilk Channel, part of the Upper New York Bay. It is not believed that the Site's intended residential use will compromise the integrity of this environmentally sensitive area. Other environmentally sensitive areas such as streams, lakes, ponds, groundwater recharge basins, etc. were not observed during the Site inspection.

5.00 FREEDOM OF INFORMATION LAW (FOIL) REQUESTS

Under the provision of the Federal Freedom of Information Law, 5US 552, concerned parties may request access to non-sensitive files maintained by Federal, State and local governmental agencies *(see Appendix D)*. New York City agencies maintaining environmentally related records include:

5.01 New York State Department of Environmental Conservation

A Site specific review of the files maintained at the NYSDEC, conducted under the Freedom of Information Law, has not yet been received. WJ Pierro will contact concerned parties as soon as this information is received.

5.02 New York City Department of Environmental Protection

A Site specific review of the files maintained at the NYCDEP, conducted under the Freedom of Information Law, has not yet been received. WJ Pierro will contact concerned parties as soon as this information is received.

5.03 New York City Environmental Control Board

A Site specific review of the files maintained at the NYCECB, conducted under the Freedom of Information Law, has not yet been received. WJ Pierro will contact concerned parties as soon as this information is received.

5.04 New York City Fire Department

A Site specific review of the files maintained at the NYCFD, conducted under the Freedom of Information Law, has not yet been received. WJ Pierro will contact concerned parties as soon as this information is received.

5.05 New York City Department of Health

A Site specific review of the files maintained at the NYCDH, conducted under the Freedom of Information Law, has not yet been received. WJ Pierro will contact concerned parties as soon as this information is received.

6.00 ONE-QUARTER MILE DATABASE REVIEW

6.01 National Priority List (NPL)

The NPL is a Federal database of known or potential hazardous waste disposal facilities requiring subsurface investigation or remediation. Review of the current files maintained at the USEPA did not indicate the Site is listed on the NPL, nor are any other facilities within one-quarter mile.

6.02 Comprehensive Environmental Responsibility Compensation and Liability Information System (CERCLIS)

The CERCLIS is a computerized database published by the USEPA to communicate the current status of inactive, uncontrolled, and abandoned hazardous waste sites investigated by the Federal government. Review of the current files maintained at the USEPA did not indicate the Site is listed on the CERCLIS, nor are any other facilities within one-quarter mile.

6.03 Inactive Hazardous Waste Disposal Site Directory (IHWDSD)

The NYSDEC compiles a directory of hazardous waste disposal sites currently being investigated by New York State. Review of the current files maintained at the NYSDEC did not indicate the Site is listed on the IHWDSD, nor are any other facilities within one-quarter mile.

6.04 Hazardous Materials & Petroleum Spill Log Registries (HMPSLR)

The USEPA and NYSDEC compile a registry of Federal and New York State investigated surface spills and leaking underground storage tanks. Review of the current files maintained at the USEPA and the NYSDEC did not indicate the Site is listed on any HMPSLR, however it is within one-quarter mile of nine petroleum spills, six of which are still classified by the NYSDEC as "active". An "active" status may require the spiller to perform quarterly sampling, monitoring, plume delineation, and/or remediation. Sites having been remediated to the satisfaction of the NYSDEC are noted with "Remed." With the limited information available, no assessment can be made as to how these petroleum spills have impacted the Site's environmental integrity.

Map Ref. Number	Address	Distance From Site	Volume Discharged	Material	Year	Status
69	106 Union St.	699 ft.	Unknown	#2 Fuel	1993	Remed.
87	B-Q Expressway	726 ft.	Unknown	Unknown	1986	Active
83	51 Sacket St.	771 ft.	Unknown	Petroleum	1990	Remed.
81	Pier 9A	900 ft.	Unknown	Petroleum	1992	Remed.
62	90 Columbia St.	990 ft.	Unknown	Gasoline	1988	Active
63	90 Columbia St.	990 ft.	Unknown	#2 Fuel	1992	Active
66	90 Columbia St.	990 ft.	Unknown	Gasoline	1992	Active
58	75 Warren St.	1,164 ft.	Unknown	Petroleum	1989	Active
56	11 Carroll St.	1,305 ft.	200 gal.	#4 Fuel	1990	Active

6.05 Toxic Chemical Release Inventory Report, Form R (TCRIRFR)

Under Section 313 of the Federal Emergency Planning and Community Right-to-Know Act, certain manufacturing facilities are required to report releases to the atmosphere, water and land of specifically listed toxic chemicals. Form R must be completed for each chemical released which exceeds the annual reporting threshold.

Review of the current files maintained at the USEPA did not indicate the Site is listed on the TCRIRFR, nor is it within one-quarter mile of such a facility.

6.06 Regulatory Compliance Information System for Air Discharge Facilities (RCISADF)

Many industrial processes, such as smelting operations, are permitted to discharge processed air effluents. The RCISADF requires facilities to conduct periodic monitoring and analysis of air effluents.

Review of the current files maintained at the NYSDEC did not indicate the Site is listed on the RCISADF, but it is 889 feet of 434 Hicks St. *(map reference number 43)*. This facility has a registered "stage 2 vapor recovery system". These systems are used at gasoline stations to trap vapors escaping from the fuel pumps. 434 Hicks St. is not expected to impact the Site's environmental integrity.

6.07 State Pollution Discharge Elimination System Directory (SPDESD)

Discharges of wastewater to New York State's surface or groundwaters are required to have a State Pollution Discharge Elimination System *(SPDES)* permit. SPDES permits establish numerical limits for various polluting substances and require periodic monitoring and sampling. Review of the current files maintained at the NYSDEC did not indicate the Site is listed in the SPDESD, nor are any other facilities within one-quarter mile.

6.08 Chemical Bulk Storage Facilities (CBSF)

Pursuant to New York State law 6NYCRR Part 596, this is a directory of facilities storing more 185 gallons of specific carcinogenic, explosive, or otherwise hazardous chemicals in aboveground or underground storage tanks. Review of the current files maintained at the NYSDEC did not indicate the Site is listed as, or within one-quarter mile of, a CBSF facility.

6.09 Petroleum Bulk Storage Facilities (PBSF)

The NYSDEC defines a PBSF as any facility with a combined capacity between 1,100 and 400,000 gallons of stored petroleum. Regulatory requirements for such facilities include registration and periodic tank testing. Review of the current NYSDEC files did not indicate the Site is listed as a PBSF, however eleven facilities are located within one-quarter mile.

Map Ref. Number	Address	Distance From Site	Gal. Vol./ Tank Type	Material	Year Installed
51	129 Degraw St.	201 ft.	7,500 AST	#2 Fuel Oil	1958
48	63 Tiffany Pl.	432 ft.	5,000 AST	#2 Fuel Oil	1990
52	122 Columbia Hts.	462 ft.	45,000 UST	#5 Fuel Oil	1949
47	37 Tiffany Pl.	516 ft.	3,000 UST	#2 Fuel Oil	Unknown
46	93 Van Brunt St.	783 ft.	6,500 A/UST	Petroleum	Unknown
49	445 Hicks St.	879 ft.	3,000 AST	#2 Fuel Oil	1975
54	434 Hicks St.	912 ft.	6,500 UST	Gasoline	1989
44	90 Columbia St.	993 ft.	10,000 UST	Petroleum	Unknown
50	423 Hicks St.	1,000 ft.	5,000 AST	#2 Fuel Oil	1975
45	191 Union St.	1,158 ft.	6,000 UST	#1 Fuel Oil	1961
53	25 Carroll St.	1,215 ft.	2,500 AST	#2 Fuel Oil	1973

The existence of these facilities does not necessarily imply an environmental concern, but rather documents that the Site is in a very developed area.

6.10 Solid Waste Management Facilities (SWMF)

The NYSDEC SWMF database is a listing of permitted facilities involved with landfilling, recycling, incineration, or solid waste transfer. Review of the current files maintained at the NYSDEC did not indicate the Site is listed as a SWMF, but the following facility is within one-quarter mile: The Northeast Marine Terminal, located approximately 996 feet from the Site. This facility used to recycle construction demolition debris, but is presently closed. It is not believed that this facility would impact the Site's environmental integrity.

6.11 Major Oil Storage Facilities (MOSF)

The Major Oil Storage Facility Program of 1977 regulates the transport and storage of petroleum and generates funds to remediate oil spills. NYSDEC defines a MOSF as "a vessesl used to commercially transport petroleum or an on-shore facility with an aggregate storage capacity greater than or equal to 400,000 gallons of petroleum". Review of the current files maintained at the NYSDEC did not indicate the Site is listed as a MOSF, nor are any other facilities within one-quarter mile.

6.12 Hazardous Waste Treatment Storage & Disposal Facilities (HWTSDF)

This database includes hazardous waste treatment, storage and disposal facilities regulated by NYSDEC's Bureau of Hazardous Waste Compliance pursuant to the Federal Resource Conservation and Recovery Act. Review of the current files maintained at the NYSDEC did not indicate the Site is listed as a HWTSDF, nor are any other facilities within one-quarter mile.

6.13 Hazardous Waste Generators & Transporters (HWGT)

This database includes hazardous waste generators and transporters regulated by NYSDEC's Bureau of Hazardous Waste Compliance pursuant to the Federal Resource Conservation and Recovery Act. Review of the current files maintained at the USEPA did not indicate the Site is listed as a HWGT, however the following four facilities are within one-quarter mile:

Map Ref. Number	Address	Distance From Site	Waste Type	Volume	Year Reported
26	90 Columbia St.	992 ft.	Ignitable	668 lbs.	1992
34	110 Warren St.	1249 ft.	Lead	45,760 lbs.	1992
35	110 Warren St.	1249 ft.	Chromium	3,000 lbs.	1992
30	534 Henry St.	1302 ft.	Halo. Solvents	690 lbs.	1992

A facility's inclusion on this list only documents they are permitted to generate and transport hazardous wastes from on-site industial processes; it does not suggest they were involved with the mismanagement of hazardous wastes.

7.00 CONCLUSIONS & RECOMMENDATIONS

To date, responses to NYSDEC, NYCDEP, NYCECB, NYCDH and NYCFD FOIL requests have not been received. The client will be contacted should pertinent information be discovered upon receipt.

Although the Site is located in a flood area, catastrophic flooding is exceptionally rare in New York City.

In the event construction activities excavate abandoned underground storage tanks or potential asbestos containing materials, it is recommended they be removed and disposed of appropriately.

Upon construction of the new residence, it is recommended that at least two water samples be collected from the main feeder line entering the building and analyzed for total dissolved lead. This should cost between $100 and $200, depending whether or not the consultant can schedule the sampling with another New York City inspection.

Brooklyn is a highly developed area and underlying groundwater is non-potable and likely degraded. This should not necessarily affect the manner in which the Site will be developed.

There is a concern that the Site's present condition may have impacted underlying soil and groundwater reserves. Consequently, a Phase-II Environmental Site Assessment, to include the collection and analysis of groundwater and soil samples, is recommended. The Phase-II assessment, which has been authorized by the NYSOMH at this writing, will investigate contaminants such as metals, petroleum hydrocarbons, and volatile organic compounds.

8.00 CONSULTANT'S QUALIFIER

This report is for use by The New York State Office of Mental Health as a supplement to the Feasibility Report of potential real estate acquistions, and is only to be used as a guide in determining the possible presence of toxic materials on the subject property at the time of the inspection. The report is based on the review of historical records relating to past property uses, which may be incomplete, a visual inspection of the property, as well as

personal interviews, and makes no determination with respect to the portions of the premises which were inaccessible. This Phase-I report is not a definitive determination of the presence or absence of toxic substances, which can be made only with testing, and contains no formal plans or recommendations to rectify or remediate the presence of any toxic substance.

APPENDIX A

Site Photographs

Photo One: *A southeast view of the Site.*

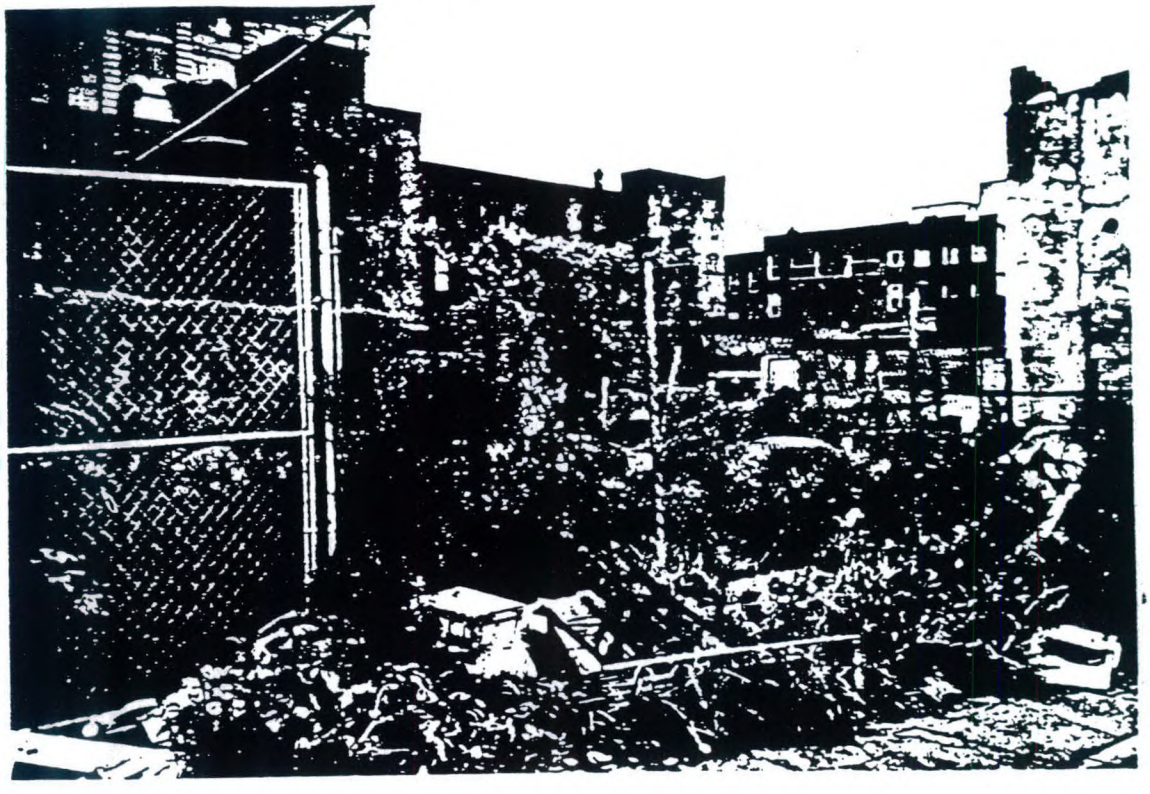


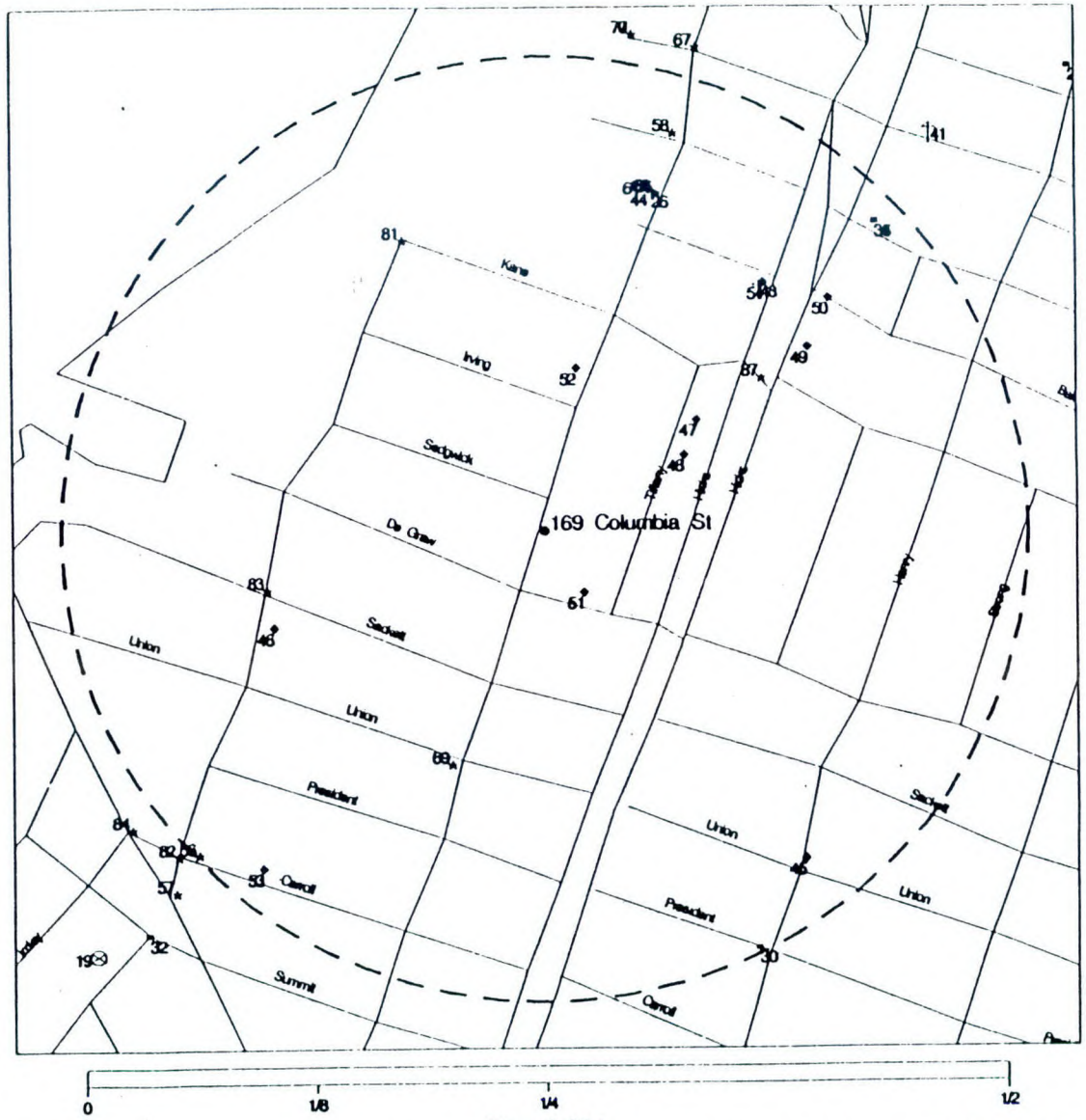
Photo Two: *A southern view of the Site, as seen from the northern property line.*

Photo Three: *Four abandoned automobiles were observed at the Site.*

Photo Four:
A groundwater monitoring well was observed in the southwest corner of the Site.

APPENDIX B

Site Location & One-Quarter Mile Radius Map



Toxics Targeting 1/4 Mile Radius Close up View

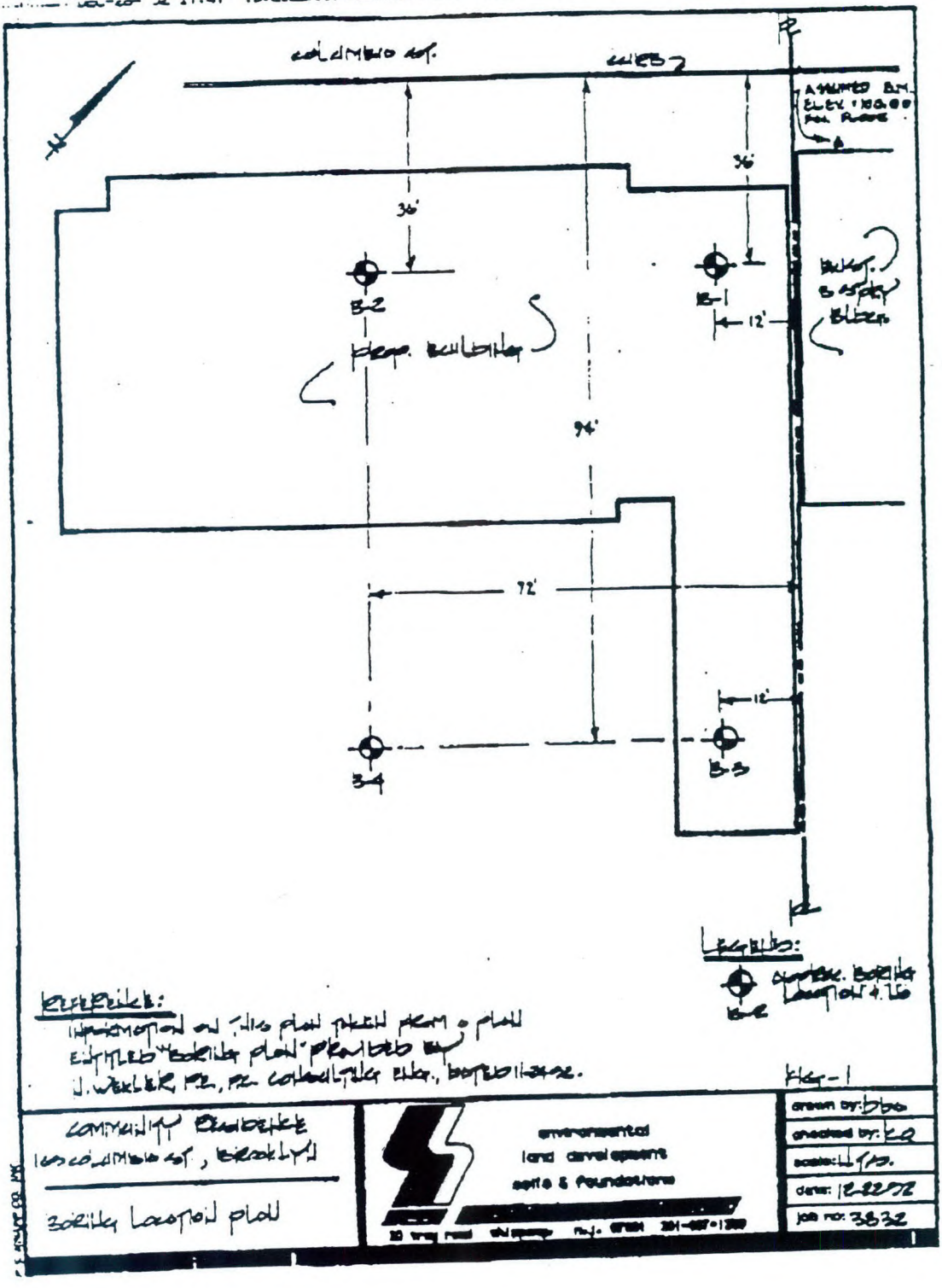
169 Columbia St
Brooklyn, NY 11231

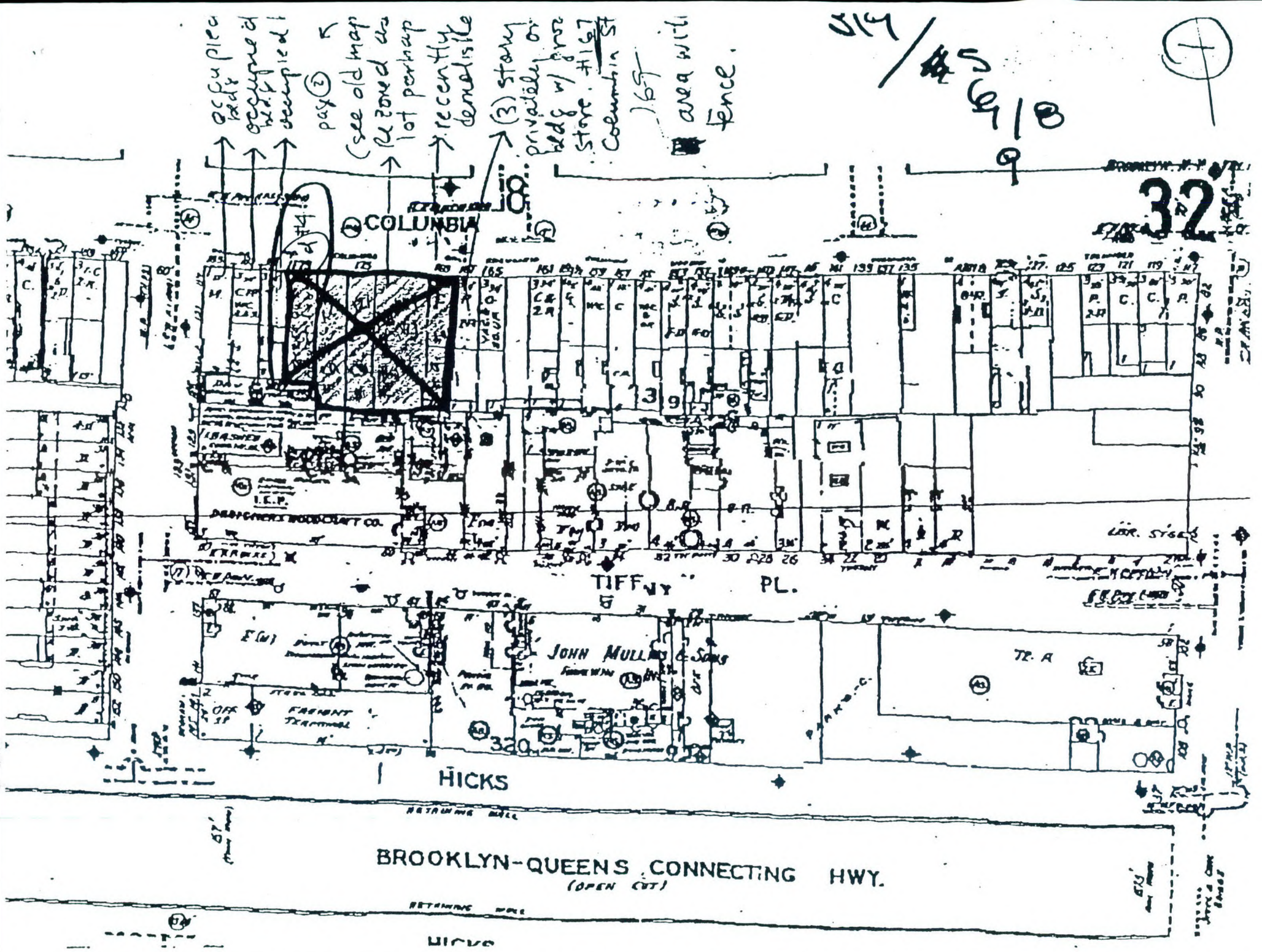
The dot at the center of this map marks the address that is the subject of Toxics Targeting's Computerized Environmental Report. The approximate locations of all toxic sites in this report are identified with a number and a map symbol. Each symbol corresponds to one of the toxic site categories noted below. Each number refers to the accompanying Toxic Site Profile presented in the second section of this report.

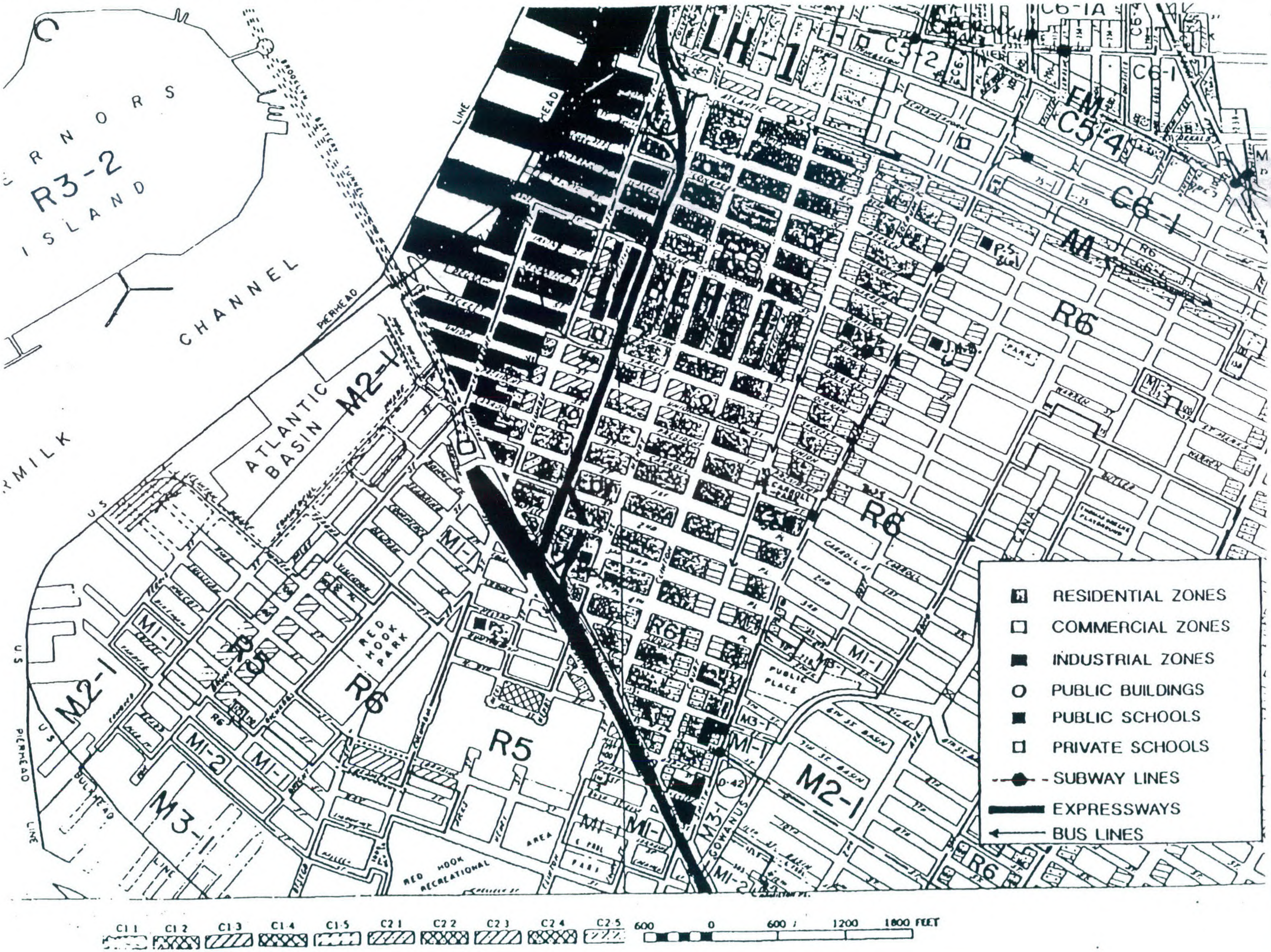
All map locations and distances are approximate.

- Toxic Release **
- Chemical Storage Facility **
- Solid Waste Facility ***
- Hazardous Waste Treater, Storer, Disposer ***
- NPL/CERCLIS/NYSDEC Inactive Hazardous Waste Disposal Site***
- Petroleum Bulk Storage Facility *
- Major Oil Storage Facility ***
- Air Release **
- Hazardous Waste Generator, Transporter **
- Wastewater Discharge **
- Hazardous Material Spill **

* 1/4 Mile Search Radius
** 1/2 Mile Search Radius
*** 1 Mile Search Radius


COLUMBIA ST.
WEST
ASSUMED B.M.
36'
36'
B-2
B-1
12'
94'
72'
12'
B-4
B-3
LEGEND:
BOREHOLE LOCATION
REFERENCE:
INFORMATION ON THIS PLOT PLAN FROM A PLAN
ENTITLED "BOREHOLE PLAN" PREPARED BY
J. WEILER, P.E., P.E. CONSULTING ENG., DATED 11-8-92.
Key-1
COMMUNITY RESIDENCE
166 COLUMBIA ST., BROOKLYN
BOREHOLE LOCATION PLAN
environmental
land development
soils & foundations
drawn by: BBO
checked by: KG
scale: 1"=10'
date: 12-22-92
job no: 3832


COLUMBIA
TIFFANY PL.
HICKS
BROOKLYN-QUEENS CONNECTING HWY.
(OPEN CUT)
JOHN MULL
32
39


R3-2
ISLAND
CHANNEL
ATLANTIC BASIN
M2-1
M3-1
M1-1
M1-2
R6
R5
RED HOOK PARK
RED HOOK RECREATIONAL AREA
LH-1
C5-2
C5-4
C6-1
C6-1A
R6
M1-1
M3-1
M2-1
GOWANUS
PUBLIC PLACE
PIERHEAD
LINE
RESIDENTIAL ZONES
COMMERCIAL ZONES
INDUSTRIAL ZONES
PUBLIC BUILDINGS
PUBLIC SCHOOLS
PRIVATE SCHOOLS
SUBWAY LINES
EXPRESSWAYS
BUS LINES
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
600 0 600 1200 1800 FEET

APPENDIX C

Building Documents

UNRESTRICTED

PERMIT No. 5111

Bureau of Buildings of the Borough of Brooklyn

CITY OF NEW YORK, MUNICIPAL BUILDING, BROOKLYN

APPLICATION No. .....19 WARD No. 6

BOROUGH OF BROOKLYN, CITY OF NEW YORK, ...19

Application for Erection of Illuminated Sign

Application is hereby made to the Superintendent of Buildings for the Borough of Brooklyn for a permit to erect illuminated sign projecting beyond the building line, in accordance with the specifications and plans herewith submitted.

All provisions of the general ordinance of The City of New York providing for the granting of permits for the erection of illuminated signs on a building, shall be complied with in the erection of said illuminated sign, whether specified herein or not.

J. P. Finnegan
COMMISSIONER
JUL 17 1933
APPROVED
PER

Anna E. Leone ..... Owner
142 Montague St. ..... Address
Per Chas. Karsch ..... Agent
1855 Lex. Ave. ..... Address

This sign is not to be placed in position until it has been measured by an inspector of this Bureau and found to be of the dimensions specified in this permit.

1. State how many signs to be erected or altered ..... one
2. State exact location (name of street or avenue and house number, if any; on what side of street, and number of feet from nearest street or avenue).

175 Columbia St. E.s. 101'8" N. of Degraw St.

3. Size of building, 19'11" feet front; 19'11" feet rear; 97'6" feet deep.
4. Material and thickness of walls ..... 12" brick
5. Number of stories in height ..... one
6. State height and width of each proposed sign ..... 5' x 6'
7. Distance from building line to outside of sign ..... 8 ft.
8. State the total number of square feet covered by the signs ..... 30 sq. ft.
9. State distance in the clear between the level of the sidewalk and the extreme bottom of the sign ..... 10. ..... feet.
10. State material of the sign ..... sheet metal
11. Material and size of supports ..... as per plans.
    Of braces ..... "
12. Does the building adjoin a building occupied exclusively as a private residence? ..... no
    If so, state on which side .....
13. State total cost of sign or signs, $ ..... 60.
    Store

SIDEWALK WIDTH SHOULD BE

Date 11/2/8 ... 14-11

House No. 175 ... 175

Signed [signature] Highway Bureau

Width of Street 70'

Distance from Curb To Building Line 18'

Signed [signature] Topographical Bureau

Section 5

Vol. 1

Block 319

Lot 6

Signed [signature] Deputy Tax Commissioner

STATE AND CITY OF NEW YORK, } ss.:
COUNTY OF ~~KINGS~~, N.Y. }

Rheba Reichman being duly sworn deposes and says: That she resides at 1855 Lex. Ave. Borough of Manh. City of New York; that he is the agent for the (owner-lessee) of the premises above described, and is duly authorized to make this application; that the work to be done is duly authorized by the owner.

Deponent further says that the full names and residences of the owners or lessees of said premises are:

Owner Anna E. Leone Residence 175 Columbia St.

Lessee J. Sosa ~~Residence~~

[signature: Rheba Reichman]
Applicant

Sworn to before me this 12th day of July 19

[signature]

Commissioner of Deeds, City of New York,
Residing in the Borough of Brooklyn.
Certificate filed in Kings County.
[stamp] ... 3/35

Permit No.

See Permit No. ... for Plans.

Bureau of Buildings
BOROUGH OF BROOKLYN
New York City

Illuminated Sign Application

Submitted ... 19

Location

Owner

This is to Certify that the within detailed statement of specifications and a copy of the plans relating thereto have been submitted to the Superintendent of Buildings for the Borough of Brooklyn, and are hereby

10A-2058-32-(H)

CONSENT OF ADJOINING PROPERTY OWNERS.

State of New York
City of New York
County of New York

Permission is hereby given to J. Sosa

Tenant of my premises at 175 Columbia Street, Brooklyn, N.Y.

to erect an electric sign.

Owner Anna E. Leone

By

Address 142 Montague St. Brooklyn NY

Lessee

By

Address

This is to certify that I am the Owner or Lessee of the building for which above consent is given.

Sworn to before me this 3rd

day of July 1933

Henry Schultz

NOTE: ALL FIRST NAMES MUST BE SIGNED IN FULL. NO INITIALS.

HENRY SCHULTZ, Commissioner of Deeds of the City of New York
New York County Clerk's Office No. 308, Reg. No. 100-S4 Kings County Clerk's
No. 263 Reg. No. 4103 Queens County Clerk's No. 74
Queens Register No. 761, My Commission Expires Nov. 1st, 1934

State of New York
City of New York } S. S.
County of New York

Premises 175 Columbia St.

Filed:

Rhoda Reichman Agent For:

Brady Sign Corp. being duly sworn deposes and says that he is the contractor erecting sign at the premises described above for which plans and applications have been filed in the Bureau of Buildings, Borough of Brklyn

Deponent alleges that the provisions of the Workmens Compensation Law have been fully complied with, wherefore deponent requests the approval of said plans and applications and the issuance of a permit to commence work.

Name of Ins. Co. State Ins. Fund

Policy No. 89532

Expires Nov. 2-33

Rhoda Reichman

Sworn to before me

this day of 193

COMMISSIONER OF DEEDS
New York County Clerk's No. 145
Commission Expires May 2/35

BUILDING PERMIT

BUREAU OF BUILDINGS
BOROUGH OF BROOKLYN
CITY OF NEW YORK

Date

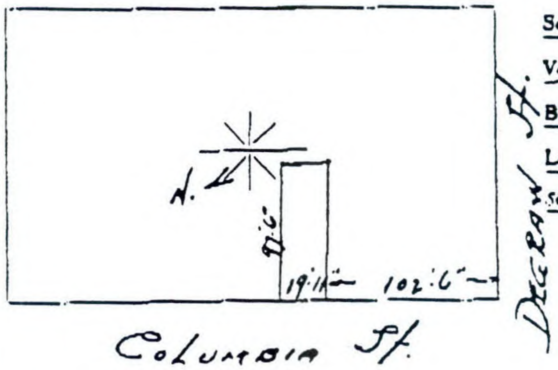
House Number

Signed ______ Highway Bureau

Width of Street

Distance from Curb To Building Line

Signed ______ Topographical Bureau



Section 2

Vol. 1

Block 319

Lot 6

Signed ______ Deputy Tax Commissioner

STATE AND CITY OF NEW YORK, } ss.
COUNTY OF KINGS,

John V Burke being duly sworn

deposes and says: That he resides at 487 State St.

Borough of Brooklyn City of New York; that he is the agent for the (owner-lessee) of the premises above described, and is duly authorized to make this application; that the work to be done is duly authorized by the owner.

Deponent further says that the full names and residences of the owners or lessees of said premises are:

Owner Pasquale Gilibert Residence 175 Columbia St.

Lessee ______ Residence ______

Sworn to before me this 1

1st day of July 1919

John V Burke
Applicant

[illegible]

Commissioner of Deeds, City of New York,
Residing in the Borough of Brooklyn.
Certificate filed in Kings County. No 1024

Date signed off ______ *191*

I Hereby Certify *that the above report is true in every respect and that the work indicated has been done in the manner required by the Rules and Regulations of this Bureau, except where reported adversely.*

Signed ______
Inspector

all

PERMIT No. 5014 ORIGINAL

BUREAU OF BUILDINGS

BOROUGH OF BROOKLYN, CITY OF NEW YORK

NOTICE—This Application must be filed in TRIPLICATE and ONE copy sworn to by Applicant. Plumbing Applications are to be filed separately as amendments.

Application for Minor Structures, Alterations and Repairs

APPLICATION No. 7421 191 WARD No. 6

LOCATION 175 Columbia St. E.S. 102:6" N. Degraw St.

ZONE

HEIGHT

USE

AREA

BOROUGH OF BROOKLYN, CITY OF NEW YORK, 191

TO THE SUPERINTENDENT OF BUILDINGS:

Application is hereby made for approval of the plans and specifications herewith submitted, and made a part hereof, for the erection or alteration of the building therein described,—with the understanding that if no work is performed hereunder within one year from the time of issuance, this approval shall expire by limitation as provided by law; and the applicant agrees to comply with all the rules and regulations of the Bureau of Buildings for the Borough of Brooklyn, all provisions of the Building Code of the City of New York, and with every other provision of law relating to the erection or alteration of said building in effect at this date.

(Sign Here) John P Burke APPLICANT

When properly signed by the Superintendent of Buildings of the Borough of Brooklyn this application becomes a PERMIT as required by the Building Code of the City of New York, to perform such work as is described in the following statement and the attached plans which are a part hereof.

EXAMINED AND RECOMMENDED FOR APPROVAL ON APR 3 1919 191

Examiner

APPROVED 191

Superintendent of Buildings, Borough of Brooklyn

PERMIT MUST BE RECEIVED BEFORE BEGINNING WORK.

Plans must be submitted in duplicate, one set to be filed with the Bureau, and the duplicate set thereof (bearing the approval of the Superintendent of Buildings) shall be kept on the work and exhibited on demand to any Building Inspector of the Borough of Brooklyn.

(HERE STATE DEFINITELY NATURE OF PROPOSED WORK)

I propose to remove front wall at 2nd story and put in show windows as per plan filed herewith.

Fire escapes to be erected as per requirements of bldg bureau.

How occupied at present store & one family

How to be occupied store on 1st fl. & 2nd fl one family 3 fl.

Cost $ 800,

APPENDIX D

FOIL Request Applications & Receipts

October 13, 1993

The New York State Department of Environmental Conservation
Hunters Point Plaza
47-40 21st St.
Long Island City, New York 11101

Attn: Mr. Wm Hewitt

Dear Mr. Hewitt:

I am performing a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York (B. 319, L. 5,6,7,8,9). The Site is currently a vacant lot, and owned by the New York City Housing Preservation Department. Under the provision of the federal Freedom of Information Law, 5 U.S. 552, I am requesting access to any site specific files relating to the following environmental issues:

A) Existing or historical environmental permits *(eg: SPDES, RCRA, Air Discharges, etc.)*.

B) Historical environmental violations, consent orders, or noted public health hazards *(ie: leaking underground storage tanks, unlawful discharges, subsurface investigations, etc.)*.

C) Asbestos abatement projects

D) Chemical storage or generation of hazardous wastes

E) Aboveground/underground storage tanks

I would appreciate your processing this request as quickly as possible. As you know, Section 89 (3) of the Freedom of Information Law requires that you make the information requested herein available, or furnish a written denial, within five business days. If you choose to deny access, I would like to know specifically what is being denied and the legal basis, under Section 87 (2), for such a denial.

If there are any fees for searching or copying the materials I have requested, please inform me (516-673-7097) before filling this request.

Thank you for your attention. Please address all correspondence to Mr. WJ Pierro, 90 Nassau Road, Huntington, New York 11743.

Sincerely,

William J Pierro

October 13, 1993

The New York City Environmental Control Board
1250 Broadway
New York, New York 10007

Attn: Wendy Berman, FOIL Officer

Dear Ms. Berman:

I am performing a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York (B. 319, L. 5,6,7,8,9). Under the provision of the federal Freedom of Information Law, 5 U.S. 552, I am requesting access to any site specific files relating to the following environmental issues:

A) Existing or historical environmental permits *(eg: SPDES, RCRA, Air Discharges, etc.)*.

B) Historical environmental violations, consent orders, or noted public health hazards *(ie: leaking underground storage tanks, unlawful discharges, subsurface investigations, etc.)*.

C) Asbestos abatement projects

D) Chemical storage or generation of hazardous wastes

E) Aboveground/underground storage tanks

I would appreciate your processing this request as quickly as possible. As you know, Section 89 (3) of the Freedom of Information Law requires that you make the information requested herein available, or furnish a written denial, within five business days. If you choose to deny access, I would like to know specifically what is being denied and the legal basis, under Section 87 (2), for such a denial.

If there are any fees for searching or copying the materials I have requested, please inform me (516-673-7097) before filling this request.

Thank you for your attention. Please address all correspondence to Mr. WJ Pierro, 90 Nassau Road, Huntington, New York 11743.

Sincerely,

William J Pierro

October 13, 1993

The New York City Department of Health
125 Worth St.
Room 604A
New York, New York 10007

Attn: Pat Caruso

Dear Pat:

I am performing a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York (B. 319, L. 5,6,7,8,9). The site is presently a vacant lot owned by The New York City Housing Preservation Department. Under the provision of the federal Freedom of Information Law, 5 U.S. 552, I am requesting access to any site specific files relating to the following environmental issues:

A) Existing or historical environmental permits *(eg: SPDES, RCRA, Air Discharges, etc.)*.

B) Historical environmental violations, consent orders, or noted public health hazards *(ie: leaking underground storage tanks, unlawful discharges, subsurface investigations, etc.)*.

C) Asbestos abatement projects

D) Chemical storage or generation of hazardous wastes

E) Aboveground/underground storage tanks

I would appreciate your processing this request as quickly as possible. As you know, Section 89 (3) of the Freedom of Information Law requires that you make the information requested herein available, or furnish a written denial, within five business days. If you choose to deny access, I would like to know specifically what is being denied and the legal basis, under Section 87 (2), for such a denial.

If there are any fees for searching or copying the materials I have requested, please inform me (516-673-7097) before filling this request.

Thank you for your attention. Please address all correspondence to Mr. WJ Pierro, 90 Nassau Road, Huntington, New York 11743.

Sincerely,

William J Pierro

October 13, 1993

The New York City Fire Department
250 Livingston St.
Room 439
Brooklyn, New York 11201

Attn: Records Access Officer

Dear Sir/Madam:

I am performing a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York (B. 319, L. 5,6,7,8,9). The site is currently vacant and owned by the New York City Housing Preservation Department. Under the provision of the federal Freedom of Information Law, 5 U.S. 552, I am requesting access to any site specific files relating to the following environmental issues:

A) Existing or historical environmental permits *(eg: SPDES, RCRA, Air Discharges, etc.)*.

B) Historical environmental violations or consent orders *(ie: leaking underground storage tanks, unlawful discharges, subsurface investigations, etc.)*.

C) Chemical storage or generation of hazardous wastes

D) Aboveground/underground storage tanks

I would appreciate your processing this request as quickly as possible. As you know, Section 89 (3) of the Freedom of Information Law requires that you make the information requested herein available, or furnish a written denial, within five business days. If you choose to deny access, I would like to know specifically what is being denied and the legal basis, under Section 87 (2), for such a denial.

If there are any fees for searching or copying the materials I have requested, please inform me (516-673-7097) before filling this request.

Thank you for your attention. Please address all correspondence to Mr. WJ Pierro, 90 Nassau Road, Huntington, New York 11743.

Sincerely,

William J Pierro

October 13, 1993

The New York City Department of Environmental Protection
59-17 Junction Blvd.
Elmhurst, New York

Attn: Ms. marie Dooley

Dear Ms. Dooley:

I am performing a Phase-I Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York (B. 319, L. 5,6,7,8,9). Under the provision of the federal Freedom of Information Law, 5 U.S. 552, I am requesting access to any site specific files relating to the following environmental issues:

A) Existing or historical environmental permits *(eg: SPDES, RCRA, Air Discharges, etc.)*.

B) Historical environmental violations, consent orders, or noted public health hazards *(ie: leaking underground storage tanks, unlawful discharges, subsurface investigations, etc.)*.

C) Asbestos abatement projects

D) Chemical storage or generation of hazardous wastes

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I would appreciate your processing this request as quickly as possible. As you know, Section 89 (3) of the Freedom of Information Law requires that you make the information requested herein available, or furnish a written denial, within five business days. If you choose to deny access, I would like to know specifically what is being denied and the legal basis, under Section 87 (2), for such a denial.

If there are any fees for searching or copying the materials I have requested, please inform me (516-673-7097) before filling this request.

Thank you for your attention. Please address all correspondence to Mr. WJ Pierro, 90 Nassau Road, Huntington, New York 11743.

Sincerely,

William J Pierro

DEP

New York City
Department of
Environmental
Protection

October 19, 1993

William J. Pierro

90 Nassau Road
Huntington, New York 11743

59-17 Junction Blvd.
Corona, New York
11368 - 5107
718-595-6555

RE: 169 Columbia Street

Dear Mr. Pierro:

ALBERT F. APPLETON
Commissioner

We hereby acknowledge receipt of your **Freedom of Information Law** request dated October 13, 1993.

NANCY B. LEWSON
Deputy Commissioner
General Counsel
Legal & Legislative
Affairs

Your request is currently being reviewed by our agency, and will be granted or denied in approximately two weeks.

Very truly yours,

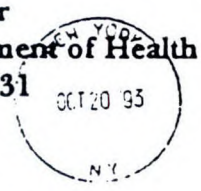
Charlotte Abo for
Marie A. Dooley

Marie A. Dooley
Assistant Counsel

dt

Log # 921669

Records Access Officer
New York City Department of Health
125 Worth Street, Box 31
New York, NY 10013



TO: William J. Pierro
90 Nassau Road
Huntington, NY
11743

Dear Sir/Madam:

This is to acknowledge receipt of your Freedom of Information request received in this office on 10-18-93.

Please be advised that your request has been forwarded to Mary Walker, Bureau of EHS, telephone number (212) 788-4706 for processing.

The control number assigned to your request is 00 30H3.

Sincerely,

Patricia J. Caruso
Records Access Officer

APPENDIX E

Phase-I Environmental Site Assessment Checklist

APPENDIX F

SESI Engineering Boring Logs

PROJECT NO. N-3832-92 INSPECTED BY DG BORING NO. B-4

LOCATION SEE FIGURE 1 APPROX. ELEV. ± 97.5 DATE DEC. 21, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
40		N/S		NO SAMPLE ATTEMPT DUE TO "RUNNING SANDS"
45		18		Red brown coarse to fine Sand, and Clayey Silt
50		13		N.Y.C. Building Code Class 7-85
55		28		
				END OF BORING @ 57 FEET
60				
65				
70				
75				

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER - 18' DATE 12/21/92

REMARKS: AT COMPLETION OF BORING

Fig. 8

SESI CONSULTING ENGINEERS

PROJECT NO. N-3832-92	INSPECTED BY DG	BORING NO. B-4
LOCATION SEE FIGURE 1	APPROX. ELEV. ± 97.5	DATE DEC. 21, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
0		14		FILL: Brown coarse to fine Sand, and Silt, little medium to fine Gravel; Bricks, wood, concrete, demolition rubble
5		1	8	N.Y.C. Building Code Class 11-GS
10		2	14	Brown coarse to fine SAND, little Silt, trace Gravel N.Y.C. Building Code Class 7-GS
15		1	28	Dark gray organic SILT, little fine Sand, trace Root fibers N.Y.C. Building Code Class 11-GS
20		16		Gray coarse to fine SAND, trace Silt
25		11		N.Y.C. Building Code Class 7-GS
30		13		
35		17	38	
				Red brown coarse to fine SAND, little Silt N.Y.C. Building Code Class 7-GS

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER - 18' DATE 12/21/92
REMARKS: AT COMPLETION OF BORING

Fig. 8 SESI CONSULTING ENGINEERS

PROJECT NO. N-3832-92	INSPECTED BY DG/KG	BORING NO. B-3
LOCATION SEE FIGURE 1	APPROX. ELEV. ± 98.5	DATE DEC. 21, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
40		22	42	Gray coarse to fine SAND, trace Silt N.Y.C. Building Code Class 7-65
45		36		Red brown coarse to fine SAND, and Silt N.Y.C. Building Code Class 7-65
50		11	51	Gray varved SILT and CLAY, with lenses of fine Sand N.Y.C. Building Code Class 9-65
55		18		END OF BORING @ 57 FEET
60				
65				
70				
75				

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER 18 ft DATE 12/21/92
REMARKS: AT COMPLETION OF BORING

Fig. 7 SESI CONSULTING ENGINEERS

PROJECT NO. N-3832-92	INSPECTED BY DO/KW	BORING NO.	B-3
LOCATION SEE FIGURE 1	APPROX. ELEV. ± 98.5	DATE	DEC. 21. 1992

DEPTH FT.	SAMPLES	*BLOWS PER SAMPLING	RESISTANCE	DEPTH FT.	DESCRIPTION
0		15			FILL: Black, brown coarse to fine Sand, and Silt, some medium to fine Gravel; Bricks, wood demolition rubble
5		9		9	N.Y.C. Building Code Class 11-65
10		19			Red brown coarse to fine SAND, little Silt, trace Gravel
15		3			N.Y.C. Building Code Class 7-65
20		2		23	
25		0		27	Dark gray Organic Silt, little roots N.Y.C. Building Code Class 11-65
30		10			Gray fine SAND, and Silt, trace roots N.Y.C. Building Code Class 8-65
35		11			... grading to Gray coarse to fine SAND, trace Silt N.Y.C. Building Code Class 7-65

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER 19 ft DATE 12/21/92
REMARKS: AT COMPLETION OF BORING

Fig. 6 SEST CONSULTING ENGINEERS

PROJECT NO. N-3852-92 INSPECTED BY. DG/KQ BORING NO. B-2

LOCATION SEE FIGURE 1 APPROX. ELEV. ± 98 DATE DEC. 22, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
40		N/S	43	NO SAMPLE ATTEMPTED DUE TO "RUNNING SANDS"
45		19	47	Gray Clayey SILT, trace fine Sand N.Y.C. Building Code Class 1B-6S
50		42		Red brown fine SAND, and Silt ... grading to Red brown coarse to fine SAND, trace Silt N.Y.C. Building Code Class 7-6S
55		43		END OF BORING @ 57 FEET NOTE: Monitoring well set and casing
60				
65				
70				
75				
80				

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER - 7' DATE 12/22/92
REMARKS: AT COMPLETION OF BORING

Fig. 5 SESI CONSULTING ENGINEERS

PROJECT NO. N-3832-92 INSPECTED BY DG/KQ BORING NO. B-2

LOCATION SEE FIGURE 1 APPROX. ELEV. ± 9ft DATE DEC. 22, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
0		11		FILL: Brown coarse to fine SAND, some Silt, trace Gravel; Bricks, concrete, wood, demolition rubble
5		13	9	N.Y.C. Building Code Class 11-65
10		1	18	Gray coarse to fine SAND, trace Silt, trace Gravel N.Y.C. Building Code Class 7-65
15		9		Black Organic SILT, trace fine Sand N.Y.C. Building Code Class 11-65
20		6	26	Brown coarse to fine SAND, little medium to fine Gravel, little Silt N.Y.C. Building Code Class 7-65
25		14		Gray coarse to fine SAND, trace Silt N.Y.C. Building Code Class 7-65 NOTE: Monitoring well set with casing
30		13		
35		16		

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER - 7' DATE 12/22/92

REMARKS: AT COMPLETION OF BORING

Fig. 9

SEGI CONSULTING ENGINEERS

PROJECT NO. N 3832-92 | INSPECTED BY DG | BORING NO. B-1

LOCATION SEE FIGURE 1 | APPROX. ELEV. ± 99 | DATE DEC. 21, 1992

DEPTH FT.	SAMPLES	*SAMPLING RESISTANCE	DEPTH FT.	DESCRIPTION
40		W/S	48	NO SAMPLE ATTEMPTED DUE TO "RUNNING SANDS"
45		19		Red brown fine SAND. and Silt N.Y.C. Building Code Class 8-65
50		12		
55		21		END OF BORING @ 57 FEET
60				
65				
70				
75				

SAMPLER: 2-INCH O.D. SPLIT BARREL
140 LB. HAMMER, 30 INCH DROP.
*BLOWS/FOOT

DEPTH TO WATER - 18' DATE 12/21/92

REMARKS: AT COMPLETION OF BORING

Fig. 3 SESI CONSULTING ENGINEERS

Appendix F

APPENDIX F

PHASE II SITE ASSESSMENT, UNDEVELOPED LOT 169 COLUMBIA ST., BROOKLYN, NY - MARCH 1994 - BY WILLIAM J. PIERRO

con-test®
ENVIRONMENTAL CONSULTING–TESTING

PHASE-II ENVIRONMENTAL SITE ASSESSMENT

UNDEVELOPED LOT
169 COLUMBIA ST.
BROOKLYN, NEW YORK

Block 319, L. 5, 6, 7, 8, 9

Prepared By:

Con-Test Corp.
45 Seaman Ave.
Bethpage, New York

Mr. WJ Pierro, Senior Project Manager

Prepared For:

The New York State Office of Mental Health
275 7th Ave., 16th Floor
New York, New York 10001

Attn: Ms. Sally Greene, Project Manager

Original Copy: November 20, 1993
Revised Copy: March 18, 1994

4/1/94
William J. Pierro **Date**
Senior Project Manager

Reviewed by:
4/1/94
Mr. Paul Manske **Date**
Certified Industrial Hygienist #4095
American Board of Industrial Hygienists

TABLE of CONTENTS

EXECUTIVE SUMMARY

On-site soils have been impacted with lead and total petroleum hydrocarbons. There is evidence to reasonably conclude that on-site groundwater has been impacted with volatile organic compounds *(MEK)* and total petroleum hydrocarbons from an off-site source.

Lead was detected at 9, 668, 795 and 965 ppm in the four soil samples collected from the Site. According to the USEPA, lead occurs naturally in US soils at concentrations between 2 and 200 ppm. Discussion with NYSDEC and NYCDEP officials indicated the concentrations are common within urban areas, and do not warrant a concern.

On-site groundwater has been impacted with Methyl Ethyl Ketone *(MEK)* to 175,100 ppb, signficantly higher than the NYSDOH's drinking water standard of 50 ppb. Analysis of on-site soils did not detect MEK, leading Con-Test to conclude the source is likely off-site. Since groundwater will not be used as the potable water supply, the concern is minimized. Discussion with NYSDEC and NYCDEP officials indicated the concentrations are significantly high, but not uncommon within urban areas. Con-Test believes the identified concerns can be minimized with the recommendations made herein.

NYSDEC and NYCDEP officials stated that concerned parties are not "legally obligated" to report the findings contained within this report. As a precaution however, Con-Test recommends that the NYSOMH provide the NYSDEC and NYCDEP with this report.

No further investigation is recommended at this time.

1.00 INTRODUCTION

The New York State Office of Mental Health *(NYSOMH)* retained Con-Test, Inc. to perform a limited Phase-II Environmental Site Assessment of the property located at 169 Columbia St., Brooklyn, New York *(Block 319, Lot 5,6,7,8,9; hereafter referred to as "the Site")*. This investigation was prompted by recommendations made in a Phase-I Environmental Site Assessment *(October 28, 1993)* which noted isolated areas of stained soil and stressed vegetation, isolated areas of dumping, potential fill material, a groundwater monitoring well, as well as a contiguous furniture manufacturing factory located hydraulically upgradient with respect to assumed groundwater flow.

This Phase-II Environmental Site Assessment includes: analyses of groundwater samples for volatile organic compounds and total petroleum hydrocarbons; analyses of soil samples for volatile organic compounds, metals, and total petroleum hydrocarbons; and "head-space" analysis of all soil samples for volatile organic compounds.

Appended to this report are Site Photographs *(Appendix A)* and Laboratory Data *(Appendix B)*.

2.00 SITE HISTORY & DESCRIPTION

Review of historical building records maintained at the New York City Department of Buildings indicate the Site may have included addresses up to 175 Columbia Street as of the early 1930s; at least four three-story apartment houses/commercial stores existed at the Site during this period. According to a neighbor who claimed to live on Columbia Street for more than thirty years, most of the apartment houses were demolished in the 1960's, but 169 Columbia Street was demolished in the mid-1980's. The neighbor added that the commercial businesses were limited to grocery stores and non-manufacturing concerns.

The Site is located on the east side of Columbia Street, between Sedwick and DeGraw Streets. It is level at street grade, and is enclosed with cyclone fencing along the street frontage. The Site is heavily vegetated and has apparently been used for dumping abandoned automobiles and trash *(see Photograph One, Appendix A)*. Brick, cement blocks, and other construction debris were observed, a fair amount being mixed with on-site soils. A groundwater monitoring well and areas of stained soil, between five and thirty-six square feet, were also observed.

3.00 FIELD WORK

Considering the concerns identified in the Phase-I Environmental Site Assessment, this investigation was designed to assess the existence of metal, hydrocarbon, and volatile organic compounds commonly used in commercial and industrial processes.

A. WORK PERFORMED

On the morning of Friday, October 29, 1993, a Con-Test Project Geologist and Environmental Technician arrived on-site with a subcontracted drilling rig capable of providing hollow-stem auger and split-spoon sampling services. All public utilities, including electric, cable TV, gas, water, and sewer were previously marked out to avoid damage to subsurface lines. A temporary field station, which included a sampling and decontamination area, was set up near the drilling rig. A total of four borings, B-1 through B-4, were installed to a depth of five feet below the groundwater table, a total of fifteen feet.

SOIL SAMPLING: Split-spoon soil samples were collected at two foot intervals, generating six soil samples per boring *(see Appendix A, Photos Two and Three)*. All soil samples were logged by the Project Geologist, and screened for volatile organic compounds via "head-space" analysis with a Foxboro 128 Organic Vapor Analyzer *(OVA)*. Borings B-1, B-2, B-3, and B-4 were located at the northeast, southeast, center, and northwest portions of the Site, respectively *(see Boring Location Map, Appendix B)*. Split-spoon samples consisted of native soils and fill *(brick, ash, wood, glass, etc.)*.

One soil sample from each of the four borings was sent to Con-Test Laboratories of East Longmeadow MA., a New York State certified laboratory and analyzed for eight metals *(silver, arsenic, barium, cadmium, chromium, lead, selenium, mercury)* via EPA Method 6010, volatile organic compounds via EPA Method 8240, and total petroleum hydrocarbons via NYSDOH Method 418.1

HEAD-SPACE ANALYSIS: Head-space analysis was conducted by placing approximately eight ounces of soil from each split-spoon into a ten ounce mason jar, covering it with aluminum foil, and sealing it with a screw-on metal lid *(see Appendix A, Photo Three)*. After a settling period of fifteen minutes, the lids were removed and the aluminum foil punctured with the OVA to detect liberated volatile organic compounds.

GROUNDWATER SAMPLING: Groundwater at the Site occurs at approximately 10 feet below grade. Although the exact groundwater flow direction can only be defined by installing monitoring wells, it is assumed to be migrating from east to west, towards Buttermilk Channel. To assess the quality of groundwater entering and leaving the Site, samples were collected from upgradient borings B-1 and B-2, downgradient boring B-4, as well as the existing downgradient monitoring well at the southwest portion of the Site *(see Appendix A, Photo Four)*.

Four groundwater samples *(B-1, B-2, B-4 and MW-1)* were analyzed for volatile organic compounds via EPA Method 624; three groundwater samples *(B-1, B-2, and MW-1)* were analyzed for total petroleum hydrocarbon via NYSDOH Method 418.1. Groundwater samples were not analyzed for metals via EPA Method 6010.

Health and safety screening in the immediate vicinity of the borehole was performed with the OVA during drilling activities *(see Appendix A, Photo Two)*. No ambient volatile organic compounds were detected.

B. DISCUSSION OF LABORATORY & FIELD DATA

GROUNDWATER DATA: Laboratory analysis of groundwater samples B-1, B-2, and B-4 revealed significant concentrations *(112700, 24900 and 175100 ppb, respectively)* of Methyl Ethyl Ketone *(MEK)*, an organic solvent. Since MEK was detected in upgradient samples B-1 and B-2, and not in on-site soils, the plume may originate from an undocumented off-site spill to the east. These concentrations exceed NYSDOH drinking water standard of 50 ppb.

Additionally, concentrations of Trans-1,2 Dichloroethylene *(16 ppb)*, Trichloroethylene *(<4 ppb)*, Benzene *(2 ppb)* and Tetrachloroethylene *(<4 ppb)* were detected in the groundwater sample collected from the on-site monitoring well MW-1. Of these, in Trans-1,2 Dichloroethylene exceeded the NYSDOH drinking water standard of 5 ppb.

Low concentrations of total petroleum hydrocarbons, to 26 ppm, were also detected in the two upgradient groundwater samples, B-1 and B-2. The NYSDOH does not provide maximum standards for TPHs in groundwater, and regulatory decisions are made on a case by case basis.

SOIL DATA: Laboratory analysis of soil samples B-1, B-2, B-3 and B-4 indicate that, with the exception of lead, free metals exist at background concentrations for New York State *(per USGS Professional Paper 1270, 1984)*. Although elevated lead

concentrations were detected in samples B-1, B-3, and B-4, NYSDEC and NYCDEP officials do not believe there is reason for concern since the Site is in a highly developed area *(telephone conversation November 15, 1993)*. Factors having the potential to impact lead concentrations include the existence of fill material and coal ash, as well as historical automobile emissions. New York State does not publish standards for acceptable soil bound metal concentrations.

TABLE ONE: SUMMARY OF LABORATORY ANALYSES

	SOIL SAMPLES				GROUNDWATER SAMPLES			
ANALYSES	**B-1**	**B-2**	**B-3**	**B-4**	**B-1**	**B-2**	**B-4**	**MW-1**
Total Pet. Hydrocarbons	160	39	120	1100	26	8	NA	ND
Volatile Organics								
MEK	ND	ND	ND	ND	112,700	24,900	175,100	ND
T 1,2 Dichlorethylene	ND	ND	ND	ND	ND	ND	ND	16
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	<4
Benzene	ND	ND	ND	ND	ND	ND	ND	2
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	<4
Metals								
Silver	ND	ND	ND	ND	NA	NA	NA	NA
Arsenic	1	ND	3	ND	NA	NA	NA	NA
Barium	220	19	291	112	NA	NA	NA	NA
Cadmium	3	ND	1	ND	NA	NA	NA	NA
Chromium	16	11	15	12	NA	NA	NA	NA
Lead	795	9	668	965	NA	NA	NA	NA
Selenium	ND	ND	ND	ND	NA	NA	NA	NA
Mercury	2	.02	3	0.5	NA	NA	NA	NA

NOTE: Lab analyses of soil samples are reported in parts per million (ppm), analyses of water samples are reported in parts per billion (ppb); NA = not analyzed by lab, ND = analyzed but not detected.

Laboratory analysis of soil samples B-1, B-2, B-3 and B-4 revealed concentrations of total petroleum hydrocarbons between 39 and 1100 ppm. It appears the soils have been minimally impacted by hydrocarbon compounds, possibly oil from the abandoned

cars. Con-Test does not believe this is reason for concern. New York State does not publish standards for total petroleum hydrocarbons in soil.

Concentrations of less than 5 ppm were detected during head-space analysis of the twenty-four soil samples. Con-Test does not believe these concentrations represent a concern.

C. *DECONTAMINATION & QUALITY CONTROL MEASURES*

Hollow-stem drilling augers provided by the subcontractor were steam cleaned before arriving on-site.

To avoid the possibility of cross contamination, split-spoons and bailers were scrubbed in a three bucket wash of laboratory grade detergent and distilled water before each use *(see Appendix A, Photo Five)*. Clean rubber gloves were used to collect soil samples from each split-spoon.

All groundwater samples were collected with a decontaminated PVC bailer. The groundwater monitoring well was purged of three well volumes of water, approximately twenty gallons, before it was sampled.

All samples were contained in an insulated shuttle and delivered to a New York State certified laboratory under strict Chain-of-Custody control *(see Appendix A, Photo Six)*.

4.00 CONCLUSIONS & RECOMMENDATIONS

A Phase-I Environmental Site Assessment performed at the Site documented potential concerns including: isolated areas of stained soil and stressed vegetation, isolated areas of dumping, potential fill material, a groundwater monitoring well, as well as a contiguous furniture manufacturing factory located hydraulically upgradient with respect to assumed groundwater flow. These concerns prompted the consultant to recommend a limited Phase-II Environmental Site Assessment.

Laboratory analysis of three of four groundwater samples revealed concentrations of Methyl Ethyl Ketone *(MEK)*, an organic solvent, exceeding NYSDOH drinking water standards *(175,100 ppb vs. 50 ppb)*. Since this compound was detected in the hydraulically upgradient samples and not in on-site soils, the plume likely originates from an off-site source to the east. There is no reason to suspect on-site activities contributed to

this concern. Discussion with NYSDEC and NYCDEP officials indicated the concentrations of MEK are significantly high, but not uncommon within urban areas.

Additionally, low concentrations of Trans-1,2 Dichloroethylene, Trichloroethylene, Benzene, and Tetrachloroethylene were detected in the sample collected from the monitoring well. Of these, only 1,2 Dichloroethylene was above the NYSDOH drinking water standard *(16 ppb vs. 5 ppb)*.

Low concentrations *(to 26 ppm)* of total petroleum hydrocarbons *(TPH)* were also detected in two upgradient groundwater samples. The NYSDOH does not provide drinking water standards for TPHs, and all regulatory decisions are made on a case by case basis.

Lead was detected at 9, 668, 795 and 965 ppm in the four soil samples collected from the Site. According to the USEPA, lead occurs naturally in US soils at concentrations between 2 and 200 ppm. Discussion with NYSDEC and NYCDEP officials indicated the concentrations are common within urban areas, and do not warrant concern. The NYSDOH does not provide maximum standards for lead in soil, and all regulatory decisions are made on a case by case basis.

Laboratory analysis of four soil samples revealed concentrations of total petroleum hydrocarbons *(39 ppm - 1100 ppm)*. It appears the soils have been minimally impacted by the on-site use of hydrocarbon compounds, possibly oil from the abandoned cars. Con-Test does not believe this is reason for concern. The NYSDOH does not provide standards for TPH in soil.

According to NYSDEC and NYCDEP officials, concerned parties are not legally obligated to report the findings of this investigation.

Considering the preceding information, Con-Test believes the concerns identified herein can be minimized with the following recommendations:

- Con-Test recommends that excavated soils be stockpiled on plastic sheets and occasionally sprayed with water as a dust suppressant; a plastic cover should be placed upon the soil after working hours. Prior to the disposal of any excavated soil, a minimum of three composite samples should be collected and analyzed for total lead, TCLP lead, and total petroleum hydrocarbons. The data should be reviewed by the soil disposal contractor, and disposal costs should be discussed with OMH prior to transport. At this time there is no reason to suspect the excavated soils are hazardous, as defined under the Resource Conservation and Recovery Act *(RCRA)*.

To minimize the resident's prolonged exposure to soil bound lead and petroleum hydrocarbons, Con-Test recommends that the entire Site be covered with either asphalt or cement. On-site soils should not be used for agricultural or recreational purposes.

The potential of MEK vapors seeping into the structure exists. As such, Con-Test recommends, at a minimum, the construction engineer design a foundation that is impermeable to MEK vapors rising from the water table. It is also recommended that an environmental consultant perform real-time health and safety monitoring when the structure is completed.

Should de-watering be required during construction, the water may need to be treated before being recharged. This will require a NYSDEC permit.

Once the structure has been completed, Con-Test recommends two water samples be collected from the main line and analyzed for total lead.

Although NYSDEC and NYCDEP officials noted that concerned parties are not legally obligated to provide them with the information contained herein, Con-Test recommends that the NYSOMH provide the NYSDEC and NYCDEP a copy of this report for their review.

APPENDIX A

Photographs

PHASE-II ENVIRONMENTAL SITE ASSESSMENT
169 COLUMBIA STREET
BROOKLYN, NEW YORK

Photo One: *The Site is heavily vegetated and has been used to abandon automobiles and various types of trash.*

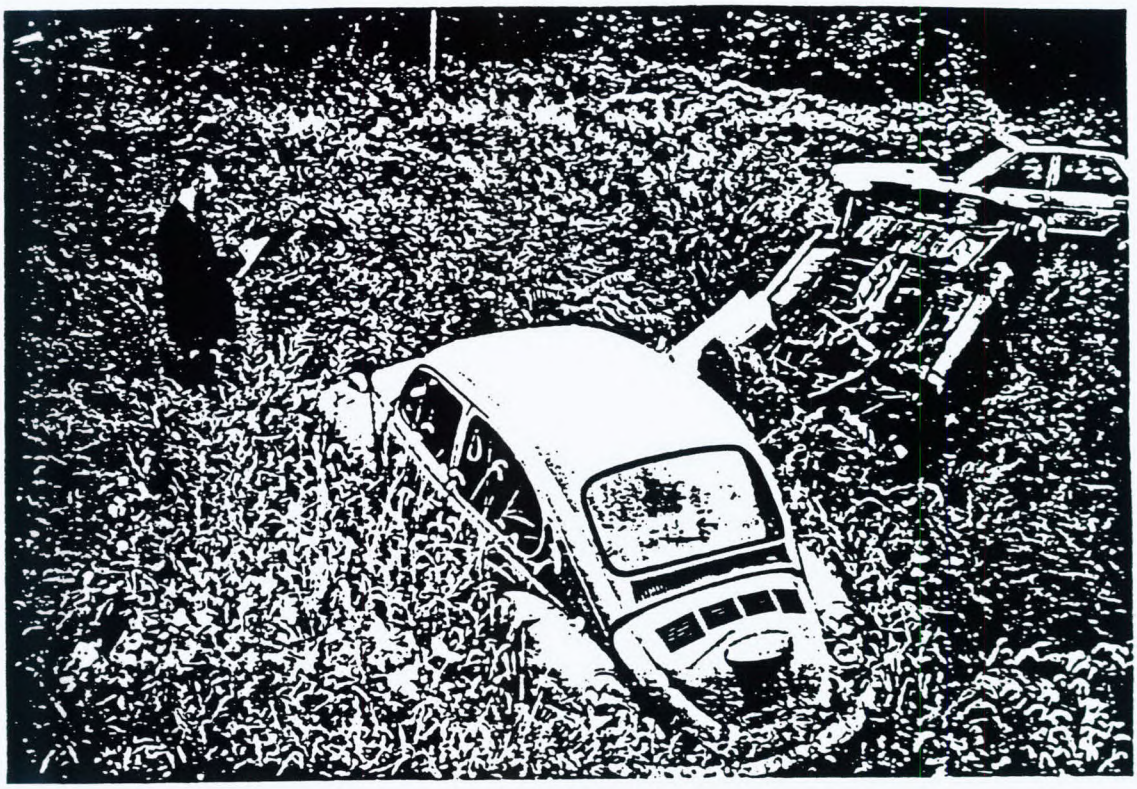


Photo Two:

A hollow-stem auger drilling rig was used to collect split spoon soil samples.

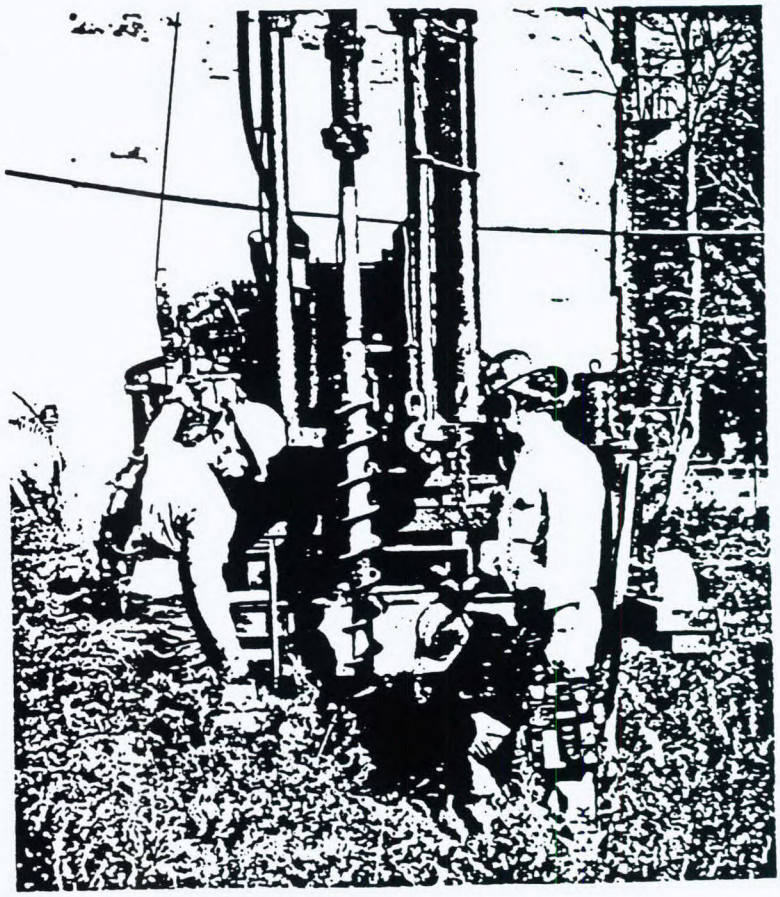


Photo Three: *Soil samples were collected in mason jars and field screened via head-space analysis for volatile organic compounds.*

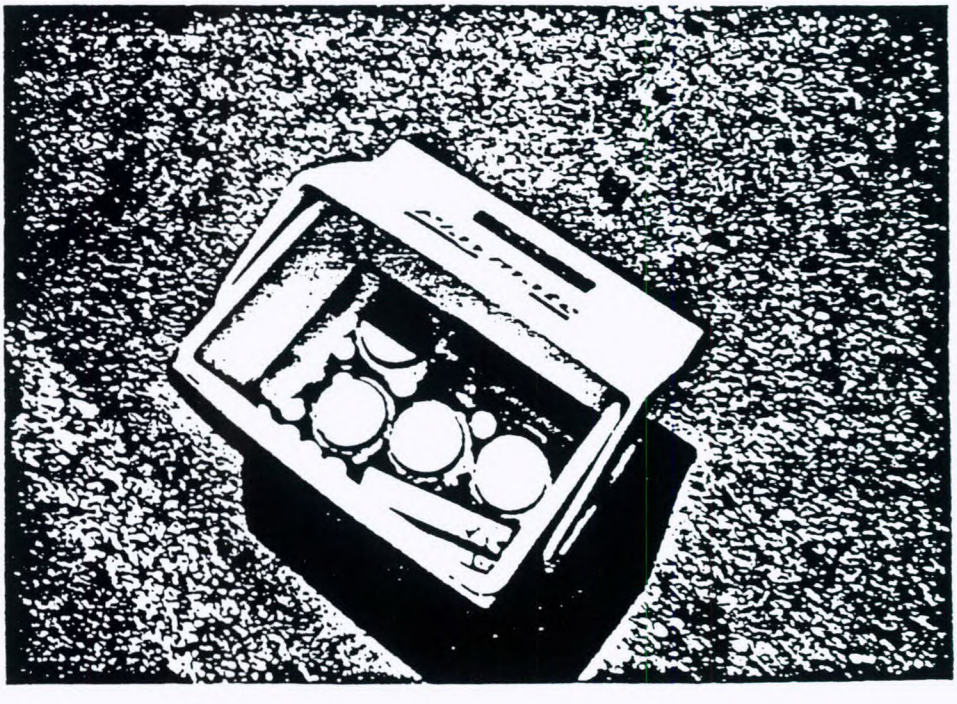
Photo Four:

Groundwater samples were collected with a decontaminated hand bailer.

Photo Five: *All sampling equipment was decontaminated in a three bucket wash between each bore hole.*

Photo Six:

All samples were contained in an insulated cooler and sent to a New York State certified laboratory.

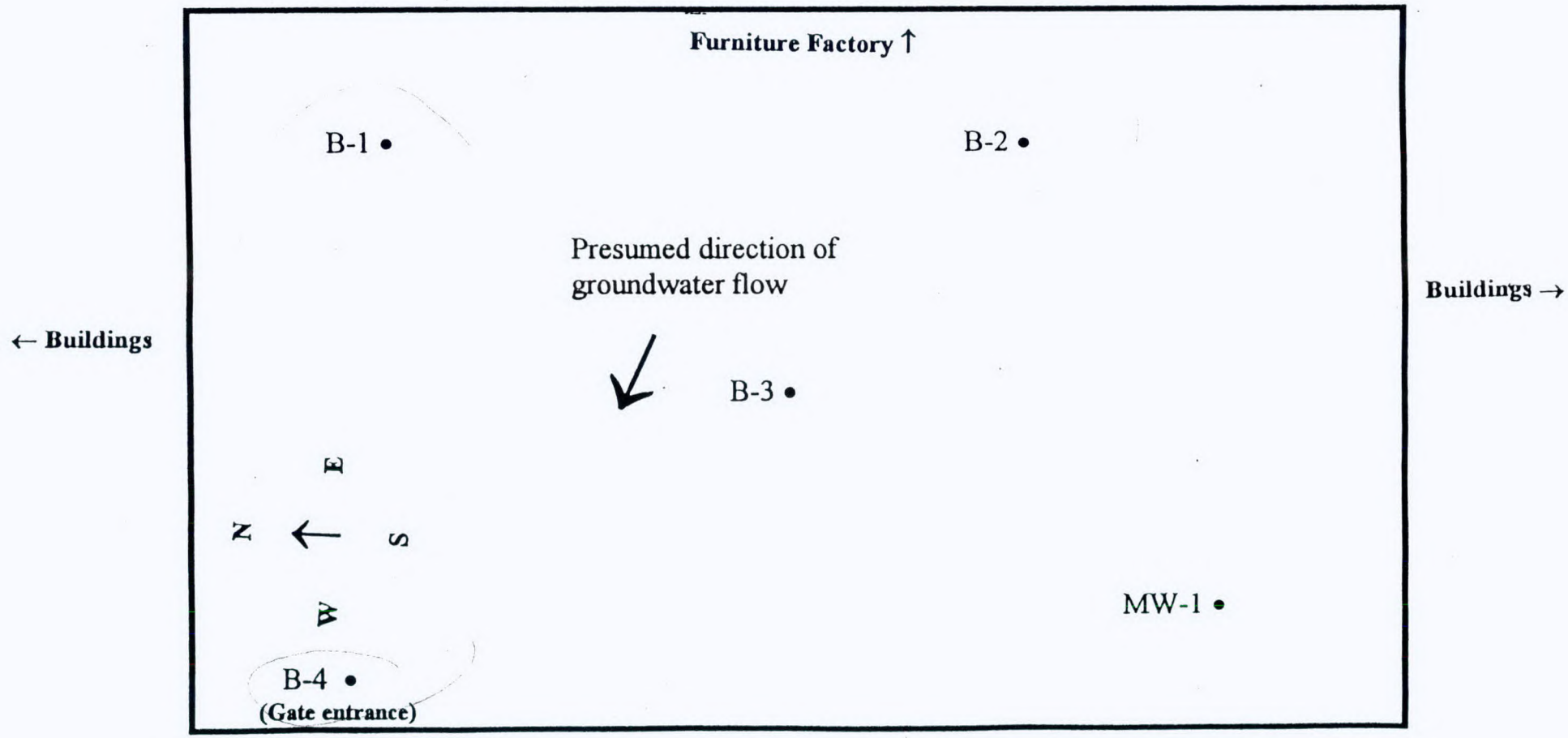


APPENDIX B

Boring Location Map
&
Laboratory Data

Phase-II Environmental Site Assessment Boring Location Map

169 Columbia Street, Brooklyn, New York



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November 16, 1993

George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

mg/kg = ppm

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19404* (B-1)	*93B19405* (B-2)	*LOD*
Chloromethane	ND	ND	0.2
Bromomethane	ND	ND	0.2
Dichlorodifluoromethane	ND	ND	0.2
Vinyl Chloride	ND	ND	0.2
Chloroethane	ND	ND	0.2
Ethanol	ND	ND	4.0
Iodomethane	ND	ND	0.2
Methylene Chloride	ND	ND	0.2
Acrolein	ND	ND	4.0
Acetone	ND	ND	8.0
Acrylonitrile	ND	ND	0.2
Carbon Disulfide	ND	ND	0.2
Trichlorofluormethane	ND	ND	0.2
1,1-Dichloroethylene	ND	ND	0.2
1,1-Dichloroethane	ND	ND	0.2
Trans 1,2-Dichloroethylene	ND	ND	0.2
Chloroform	ND	ND	0.2
2-Butanone (MEK)	ND	ND	0.6

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19404* (B-1)	*93B19405* (B-2)	*LOD*
1,2-Dichloroethane	ND	ND	0.2
Dibromomethane	ND	ND	0.2
1,1,1-Trichloroethane	ND	ND	0.2
Carbon Tetrachloride	ND	ND	0.2
Vinyl Acetate	ND	ND	0.6
Bromodichloromethane	ND	ND	0.2
1,2-Dichloropropane	ND	ND	0.2
Cis-1,3-Dichloropropene	ND	ND	0.2
Trichloroethylene	ND	ND	0.2
Benzene	ND	ND	0.2
Chlorodibromomethane	ND	ND	0.2
Trans 1,3-Dichloropropene	ND	ND	0.2
1,1,2-Trichloroethane	ND	ND	0.2
2-Chloroethylvinylether	ND	ND	0.2
Bromoform	ND	ND	0.2
4-Methyl-2-Pentanone (MIBK)	ND	ND	0.6
2-Hexanone	ND	ND	0.6
1,2,3-Trichloropropane	ND	ND	0.2
Tetrachloroethylene	ND	ND	0.2
1,1,2,2-Tetrachloroethane	ND	ND	0.2
Trans 1,4-Dichloro-2-Butene	ND	ND	0.2

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19404* (B-1)	*93B19405* (B-2)	*LOD*
Ethyl Methacrylate	ND	ND	0.2
Toluene	ND	ND	0.2
Chlorobenzene	ND	ND	0.2
Ethylbenzene	ND	ND	0.2
Styrene	ND	ND	0.2
Xylene	ND	ND	0.2
Cis 1,4-Dichloro-2-Butene	ND	ND	0.2
Dichlorobenzenes	ND	ND	0.2
MTBE	ND	ND	0.2

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19406* (B-3)	*93B19407* (B-4)	*LOD*
Chloromethane	ND	ND	0.2
Bromomethane	ND	ND	0.2
Dichlorodifluoromethane	ND	ND	0.2
Vinyl Chloride	ND	ND	0.2
Chloroethane	ND	ND	0.2
Ethanol	ND	ND	4.0
Iodomethane	ND	ND	0.2
Methylene Chloride	ND	ND	0.2
Acrolein	ND	ND	4.0
Acetone	ND	ND	8.0
Acrylonitrile	ND	ND	0.2
Carbon Disulfide	ND	ND	0.2
Trichlorofluormethane	ND	ND	0.2
1,1-Dichloroethylene	ND	ND	0.2
1,1-Dichloroethane	ND	ND	0.2
Trans 1,2-Dichloroethylene	ND	ND	0.2
Chloroform	ND	ND	0.2
2-Butanone (MEK)	ND	ND	0.6

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19406* (B-3)	*93B19407* (B-4)	*LOD*
1,2-Dichloroethane	ND	ND	0.2
Dibromomethane	ND	ND	0.2
1,1,1-Trichloroethane	ND	ND	0.2
Carbon Tetrachloride	ND	ND	0.2
Vinyl Acetate	ND	ND	0.6
Bromodichloromethane	ND	ND	0.2
1,2-Dichloropropane	ND	ND	0.2
Cis-1,3-Dichloropropene	ND	ND	0.2
Trichloroethylene	ND	ND	0.2
Benzene	ND	ND	0.2
Chlorodibromomethane	ND	ND	0.2
Trans 1,3-Dichloropropene	ND	ND	0.2
1,1,2-Trichloroethane	ND	ND	0.2
2-Chloroethylvinylether	ND	ND	0.2
Bromoform	ND	ND	0.2
4-Methyl-2-Pentanone (MIBK)	ND	ND	0.6
2-Hexanone	ND	ND	0.6
1,2,3-Trichloropropane	ND	ND	0.2
Tetrachloroethylene	ND	ND	0.2
1,1,2,2-Tetrachloroethane	ND	ND	0.2
Trans 1,4-Dichloro-2-Butene	ND	ND	0.2

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/10/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab # / *Sample #*	*93B19406* (B-3)	*93B19407* (B-4)	*LOD*
Ethyl Methacrylate	ND	ND	0.2
Toluene	ND	ND	0.2
Chlorobenzene	ND	ND	0.2
Ethylbenzene	ND	ND	0.2
Styrene	ND	ND	0.2
Xylene	ND	ND	0.2
Cis 1,4-Dichloro-2-Butene	ND	ND	0.2
Dichlorobenzenes	ND	ND	0.2
MTBE	ND	ND	0.2

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab #	*93B19411*	*93B19412*	
Sample #	*(B-1)*	*(B-2)*	*LOD*
Chloromethane	ND	ND	400
Bromomethane	ND	ND	700
Dichlorodifluoromethane	ND	ND	700
Vinyl Chloride	ND	ND	800
Chloroethane	ND	ND	600
Ethanol	ND	ND	15000
Iodomethane	ND	ND	500
Methylene Chloride	ND	ND	300
Acrolein	ND	ND	19700
Acetone	ND	ND	40000
Acrylonitrile	ND	ND	600
Carbon Disulfide	ND	ND	300
Trichlorofluormethane	ND	ND	600
1,1-Dichloroethylene	ND	ND	600
1,1-Dichloroethane	ND	ND	500
Trans 1,2-Dichloroethylene	ND	ND	700
Chloroform	ND	ND	700
2-Butanone (MEK)	112700	24900	3100

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19411* (B-1)	*93B19412* (B-2)	*LOD*
1,2-Dichloroethane	ND	ND	500
Dibromomethane	ND	ND	300
1,1,1-Trichloroethane	ND	ND	800
Carbon Tetrachloride	ND	ND	700
Vinyl Acetate	ND	ND	2100
Bromodichloromethane	ND	ND	200
1,2-Dichloropropane	ND	ND	300
Cis-1,3-Dichloropropene	ND	ND	300
Trichloroethylene	ND	ND	400
Benzene	ND	ND	100
Chlorodibromomethane	ND	ND	300
Trans 1,3-Dichloropropene	ND	ND	300
1,1,2-Trichloroethane	ND	ND	300
2-Chloroethylvinylether	ND	ND	200
Bromoform	ND	ND	200
4-Methyl-2-Pentanone (MIBK)	ND	ND	2800
2-Hexanone	ND	ND	2400
1,2,3-Trichloropropane	ND	ND	100
Tetrachloroethylene	ND	ND	400
1,1,2,2-Tetrachloroethane	ND	ND	200
Trans 1,4-Dichloro-2-Butene	ND	ND	200

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19411* (B-1)	*93B19412* (B-2)	*LOD*
Ethyl Methacrylate	ND	ND	300
Toluene	ND	ND	200
Chlorobenzene	ND	ND	200
Ethylbenzene	ND	ND	100
Styrene	ND	ND	300
Xylene	ND	ND	400
Cis 1,4-Dichloro-2-Butene	ND	ND	500
Dichlorobenzenes	ND	ND	500
MTBE	ND	ND	500

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19413* (B-4)	*LOD*
Chloromethane	ND	400
Bromomethane	ND	700
Dichlorodifluoromethane	ND	700
Vinyl Chloride	ND	800
Chloroethane	ND	600
Ethanol	ND	15000
Iodomethane	ND	500
Methylene Chloride	ND	300
Acrolein	ND	19700
Acetone	ND	40000
Acrylonitrile	ND	600
Carbon Disulfide	ND	300
Trichlorofluormethane	ND	600
1,1-Dichloroethylene	ND	600
1,1-Dichloroethane	ND	500
Trans 1,2-Dichloroethylene	ND	700
Chloroform	ND	700
2-Butanone (MEK)	175100	3100

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19413* (B-4)	*LOD*
1,2-Dichloroethane	ND	500
Dibromomethane	ND	300
1,1,1-Trichloroethane	ND	800
Carbon Tetrachloride	ND	700
Vinyl Acetate	ND	2100
Bromodichloromethane	ND	200
1,2-Dichloropropane	ND	300
Cis-1,3-Dichloropropene	ND	300
Trichloroethylene	ND	400
Benzene	ND	100
Chlorodibromomethane	ND	300
Trans 1,3-Dichloropropene	ND	300
1,1,2-Trichloroethane	ND	300
2-Chloroethylvinylether	ND	200
Bromoform	ND	200
4-Methyl-2-Pentanone (MIBK)	ND	2800
2-Hexanone	ND	2400
1,2,3-Trichloropropane	ND	100
Tetrachloroethylene	ND	400
1,1,2,2-Tetrachloroethane	ND	200
Trans 1,4-Dichloro-2-Butene	ND	200

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19413* (B-4)	*LOD*
Ethyl Methacrylate	ND	300
Toluene	ND	200
Chlorobenzene	ND	200
Ethylbenzene	ND	100
Styrene	ND	300
Xylene	ND	400
Cis 1,4-Dichloro-2-Butene	ND	500
Dichlorobenzenes	ND	500
MTBE	ND	500

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # *Sample #*	*93B19414* *(MW-1)*	*LOD*
Chloromethane	ND	4
Bromomethane	ND	7
Dichlorodifluoromethane	ND	7
Vinyl Chloride	ND	8
Chloroethane	ND	6
Ethanol	ND	150
Iodomethane	ND	5
Methylene Chloride	ND	3
Acrolein	ND	197
Acetone	ND	400
Acrylonitrile	ND	6
Carbon Disulfide	ND	3
Trichlorofluormethane	ND	6
1,1-Dichloroethylene	ND	6
1,1-Dichloroethane	ND	5
Trans 1,2-Dichloroethylene	16	7
Chloroform	ND	7
2-Butanone (MEK)	ND	31

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19414* (*MW-1*)	*LOD*
1,2-Dichloroethane	ND	5
Dibromomethane	ND	3
1,1,1-Trichloroethane	ND	8
Carbon Tetrachloride	ND	7
Vinyl Acetate	ND	21
Bromodichloromethane	ND	2
1,2-Dichloropropane	ND	3
Cis-1,3-Dichloropropene	ND	3
Trichloroethylene	<4	4
Benzene	2	1
Chlorodibromomethane	ND	3
Trans 1,3-Dichloropropene	ND	3
1,1,2-Trichloroethane	ND	3
2-Chloroethylvinylether	ND	2
Bromoform	ND	2
4-Methyl-2-Pentanone (MIBK)	ND	28
2-Hexanone	ND	24
1,2,3-Trichloropropane	ND	1
Tetrachloroethylene	<4	4
1,1,2,2-Tetrachloroethane	ND	2
Trans 1,4-Dichloro-2-Butene	ND	2

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/09/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

MICROGRAMS/LITER

Lab # / *Sample #*	*93B19414* *(MW-1)*	*LOD*
Ethyl Methacrylate	ND	3
Toluene	ND	2
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Styrene	ND	3
Xylene	ND	4
Cis 1,4-Dichloro-2-Butene	ND	5
Dichlorobenzenes	ND	5
MTBE	ND	5

LOD = Limit of Detection
ND = Not Detected

Analytical Method(s): EPA 8240

Analyzed By: WSD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: SEE BELOW

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM mg/Kg ppm
DRY WEIGHT

Lab# *Sample#*	*93B19404* *(B-1)*	*LOD*	*Analyst/ Date Analyzed*	*Analytical Method*
Silver	ND	0.5	DC/RFF/11/12/93	SW846-6010
Arsenic	1.4	1	RFF/11/12/93	SW846-6010
Barium	220	0.5	DC/11/12/93	SW846-6010
Cadmium	2.7	0.5	RFF/11/12/93	SW846-6010
Chromium	16.4	0.5	RFF/11/12/93	SW846-6010
Lead	795	0.5	RFF/11/12/93	SW846-6010
Selenium	ND	10	RFF/11/12/93	SW846-6010
Mercury	1.8	0.002	JGD/11/11/93	SW846-7470

Lab# *Sample#*	*93B19405** *(B-2)*	*LOD*	*Analyst/ Date Analyzed*	*Analytical Method*
Silver	ND	0.6	DC/RFF/11/12/93	SW846-6010
Arsenic	ND	10	RFF/11/12/93	SW846-6010
Barium	19.2	0.6	DC/11/12/93	SW846-6010
Cadmium	ND	0.6	RFF/11/12/93	SW846-6010
Chromium	11	0.6	RFF/11/12/93	SW846-6010
Lead	9.5	0.6	RFF/11/12/93	SW846-6010
Selenium	ND	0.6	RFF/11/12/93	SW846-6010
Mercury	0.019	0.002	JGD/11/11/93	SW846-7470

Comment(s): * = Sample calculated on a dry weight basis.

LOD = Limit of Detection
ND = Not Detected

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: SEE BELOW

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

MILLIGRAMS/KILOGRAM

Lab# / *Sample#*	*93B19406** (B-3)	*LOD*	*Analyst/ Date Analyzed*	*Analytical Method*
Silver	ND	0.6	DC/RFF/11/12/93	SW846-6010
Arsenic	3.2	1	RFF/11/12/93	SW846-6010
Barium	291	0.6	DC/11/12/93	SW846-6010
Cadmium	0.8	0.6	RFF/11/12/93	SW846-6010
Chromium	15.4	0.6	RFF/11/12/93	SW846-6010
Lead	668	0.6	RFF/11/12/93	SW846-6010
Selenium	ND	6	RFF/11/12/93	SW846-6010
Mercury	2.9	0.002	JGD/11/11/93	SW846-7470

Lab# / *Sample#*	*93B19407* (B-4)	*LOD*	*Analyst/ Date Analyzed*	*Analytical Method*
Silver	ND	0.5	DC/RFF/11/12/93	SW846-6010
Arsenic	ND	1	RFF/11/12/93	SW846-6010
Barium	112	0.5	DC/11/12/93	SW846-6010
Cadmium	ND	0.5	RFF/11/12/93	SW846-6010
Chromium	11.9	0.5	RFF/11/12/93	SW846-6010
Lead	965	0.5	RFF/11/12/93	SW846-6010
Selenium	ND	0.5	RFF/11/12/93	SW846-6010
Mercury	0.51	0.002	JGD/11/11/93	SW846-7470

Comment(s): * = Sample calculated on a dry weight basis.

LOD = Limit of Detection
ND = Not Detected

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Analyzed: 11/05/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

Lab# *Sample#*	*% Solids* *(%)*
93B19405 (B-2)	78.7
93B19406 (B-3)	81.4

Analytical Method: SM2540G

Analyst: PMD

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Extracted: 11/05/93
Date Analyzed: 11/05/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Soil

The results of analyses requested are listed below:

Lab# *Sample#*	*Total Petroleum Hydrocarbons* *(mg/kg)*
93B19404 (B-1)	160
93B19405 (B-2)	39
93B19406 (B-3)	120
93B19407 (B-4)	1100

Limit of Detection = 25 mg/kg

Analytical Method: EPA 418.1

Analyst(s): DMQ/RMT

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George Tyers
Con-Test Environmental

Invoice #93-318-022
Date Sampled: 10/29/93
Date Received: 11/02/93
Date Extracted: 11/03/93
Date Analyzed: 11/03/93

Ref: 169 Columbia Street
Brooklyn, NY

Matrix: Water

The results of analyses requested are listed below:

Lab# *Sample#*	*Total Petroleum Hydrocarbons* *(mg/l)*	*LOD* *(mg/l)*
93B19408 (B-1)	26	0.40
93B19409 (B-2)	7.9	0.20
93B19410 (MW-1)	ND	0.20

LOD = Limit of Detection
ND = Not Detected

Analytical Method: EPA 418.1

Analyst(s): DMQ/RMT

Tod Kopyscinski
Signature

Tod Kopyscinski
Laboratory Supervisor

Edward Denson
Laboratory Director

HFD\93318022

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TOTAL PETROLEUM HYDROCARBONS QA/QC SUMMARY

DATE: 11/03/93

MATRIX: AIR: ___ WATER: X SOIL: ___ OTHER: ___

MBL	1.59
CONC. SPIKE	20 MG/L
SAMPLE RESULT	—
CONC. MS	15
% RECOVERY	75%
CONC. MSD	17 MG/L
% RECOVERY	85%
RANGE	10%

LABORATORY ESTABLISHED CONTROL LIMITS		
WATER	% RECOVERY (71-101)	RANGE (0-17.2)
SOIL	% RECOVERY (59-109)	RANGE (0-23.0)

COMMENT(S): RUN WITH 93B19077, 19252-254, 19408-410

ANALYST: DMQ/RMT QC APPROVAL: Gregory J. Fiske

DATE: 11/04/93

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TOTAL PETROLEUM HYDROCARBONS QA/QC SUMMARY

DATE: 11/05/93

ANALYST/ DATE	REFERENCE MATERIAL	TRUE VALUE MG/KG	RANGE MG/KG	VALUE REPORTED MG/KG
DMQ/RMT 11/04/9	ERA 91024 QC #1	1070	642-1340	800

COMMENTS: RUN WITH 93B19404-407, 10649-653, 18967-978

APPROVAL: Gregory J. Falvo

DATE: 11/05/93

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >V9404::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 13:48
CLIENT SAMPLE INFORMATION : 93B19404 100UL
5UL IS&SURR C2 10G/4ML

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	22.745	91
d-8 TOLUENE	25.000	24.208	97
BROMOFLUOROBENZENE	25.000	25.783	103

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >V9405::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 14:39
CLIENT SAMPLE INFORMATION : 93819405 100UL
5UL IS&SURR C3 10G/4ML

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	23.061	92
d-8 TOLUENE	25.000	23.647	95
BROMOFLUOROBENZENE	25.000	25.654	103

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >V9406::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 15:29
CLIENT SAMPLE INFORMATION : 93B19406 100UL
5UL IS&SURR C4 10G/4ML

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	23.027	92
d-8 TOLUENE	25.000	23.273	93
BROMOFLUOROBENZENE	25.000	25.775	103

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >V9407::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 16:20
CLIENT SAMPLE INFORMATION : 93B19407 100UL
5UL IS&SURR C5 10G/4ML

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	22.793	91
d-8 TOLUENE	25.000	23.849	95
BROMOFLUOROBENZENE	25.000	26.448	106

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >R9411::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 1:16
CLIENT SAMPLE INFORMATION : 93B19411 1:100
5UL IS&SURR C3

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	26.211	105
d-8 TOLUENE	25.000	19.993	80
BROMOFLUOROBENZENE	25.000	22.613	90

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >R9412::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 2:26
CLIENT SAMPLE INFORMATION : 93B19412 1:100
5UL IS&SURR C4

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	26.508	106
d-8 TOLUENE	25.000	18.861	75
BROMOFLUOROBENZENE	25.000	21.531	86

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >R9413::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 5:36
CLIENT SAMPLE INFORMATION : 93B19413 1:100
5UL IS&SURR C5

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	26.308	105
d-8 TOLUENE	25.000	19.450	78
BROMOFLUOROBENZENE	25.000	22.863	91

CON-TEST, INC.
39 SPRUCE STREET
P.O.BOX 591
EAST LONGMEADOW MA 01028
(413)-525-1198

DATA FILE : >V9414::A1
OPERATOR : WD SUPER GRP
SAMPLE INJECTED TIME : 11/10/93 11:56
CLIENT SAMPLE INFORMATION : 93819414 5ML
5UL IS&SURR C1

EPA 624/8240 SURROGATE % RECOVERY REPORT

SURROGATE COMPOUND	LABORATORY DETERMINED CONTROL LIMITS (% RECOVERY)
d4-1,2-DICHLOROETHANE (SUR #1)	56 - 128
d-8 TOLUENE (SUR #2)	65 - 113
BROMOFLUOROBENZENE (SUR #3)	62 - 137

SURROGATE COMPOUND	EXPECTED CONCENTRATION (PPB)	ANALYZED CONCENTRATION (PPB)	ANALYZED % RECOVERY
d4-1,2-DICHLOROETHANE	25.000	22.236	89
d-8 TOLUENE	25.000	23.811	95
BROMOFLUOROBENZENE	25.000	25.722	103

Proj. No. 93-318-022 | Project Name 169 Columbia St. Brooklyn, NY

Samplers (Signature) George Iyer Bill Piero

Sample Location	Date	Time	Comp.	Grab	Sample Description	No. of Containers	CPA 8240	TPH (418.1)	8 RCRA Metals	Analysis Required	Remarks – lab #'s
B1	10/29			✓	soil 6-8 ft interval	1	✓	✓	✓	16oz. glass/ss split spoons	93B 19404
B2	10/29			✓	soil 9-11	1	✓	✓	✓	" "	19405
B3	10/29			✓	soil 6-8	1	✓	✓	✓	" "	19406
B4	10/29			✓	Soil 0-2	1	✓	✓	✓	8oz glass jar " "	19407
B1	10/29			✓	Groundwater	1		✓		1 Ltr. amber - pres. H_2SO_4	19408
B2	10/29			✓	Groundwater	1		✓			19409
MW1	10/29			✓	Groundwater	1		✓			19410
B1	10/29			✓	Ground Water	2	✓			(3) 40ml vials	19411
B2	10/29			✓	Ground Water	2	✓				19412
B4	10/29			✓	Ground Water	2	✓				19413
MW1	10/29			✓	Ground Water	2	✓				19414

Relinquished by: (Signature)	Date Time	Received by: (Signature)
George Iyer	11/1/93	[illegible] 11/2/93 10:00am
Relinquished by: (Signature)	Date Time	Received by: (Signature)
Relinquished by: (Signature)	Date Time	Received for Laboratory by: (Signature)

Lab Remarks: due: 11/11/93

1 - Lab 2 - Client 3 - Billing

Appendix G

APPENDIX G

BROOKHAVEN NATIONAL LABORATORIES

PRECIPITATION 1949 TO PRESENT

Brookhaven National Laboratory

Precipitation

1949-present

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Avg
1949	5.55	4.71	2.88	3.63	3.32	Trace	3.07	5.21	3.49	1.74	2.96	3.36	39.92
1950	2.80	4.28	3.98	2.41	5.23	2.72	3.22	4.26	1.38	1.69	4.34	4.36	40.67
1951	3.75	4.99	5.02	3.42	3.68	2.64	2.08	4.50	1.06	5.48	6.01	6.17	48.80
1952	7.10	3.54	5.44	3.61	7.64	2.78	1.00	7.61	1.35	0.31	3.56	4.45	48.39
1953	6.73	4.16	10.36	5.59	3.34	1.66	2.76	2.40	0.90	3.17	5.03	6.43	52.53
1954	2.74	2.18	4.21	5.36	4.08	1.69	0.94	11.98	10.47	2.44	5.42	6.39	57.90
1955	0.62	3.26	4.79	4.28	0.95	2.53	1.65	9.04	3.96	11.43	7.19	0.82	50.52
1956	3.52	6.32	5.47	2.97	2.63	3.00	5.79	1.50	3.64	2.95	4.63	6.03	48.45
1957	2.36	2.53	3.20	4.44	1.46	0.42	2.84	4.25	3.57	3.86	4.41	8.45	41.79
1958	7.96	4.58	6.65	6.34	5.81	2.28	3.42	5.37	4.24	7.39	2.88	2.68	59.60
1959	2.60	2.06	6.71	3.93	1.75	5.35	6.85	3.72	1.36	3.13	4.46	5.12	47.04
1960	3.59	5.48	3.38	3.27	2.54	2.13	6.03	1.79	7.49	3.94	2.62	4.31	46.57
1961	3.56	4.10	4.60	5.70	6.17	2.30	5.61	4.23	6.23	3.06	2.89	3.70	52.15
1962	4.38	5.77	3.63	3.31	1.12	3.55	1.64	7.64	4.07	4.62	5.04	2.83	47.60
1963	3.27	3.88	4.27	2.56	3.08	5.51	2.65	2.10	3.66	0.18	6.89	2.78	40.83
1964	5.89	4.76	3.56	8.37	0.63	1.41	4.40	1.16	3.02	4.29	3.07	6.63	47.19
1965	4.88	3.03	2.74	4.20	1.63	1.69	3.43	5.15	1.51	2.15	1.83	2.11	34.35
1966	4.57	5.18	1.73	2.13	6.55	1.40	1.12	3.23	6.53	4.45	2.89	4.15	43.93
1967	1.65	3.98	8.18	4.14	7.98	5.30	6.01	5.43	2.24	2.11	4.00	7.60	58.62
1968	3.00	2.21	7.54	2.00	4.95	4.24	0.50	3.10	2.08	3.01	8.09	8.22	48.94
1969	1.04	4.03	3.62	5.15	2.44	2.06	8.62	5.51	3.60	3.69	4.48	7.83	52.07
1970	0.81	4.37	5.44	4.57	3.44	1.77	3.10	6.08	2.42	1.41	6.52	3.73	43.66
1971	2.95	6.45	3.55	3.30	3.80	0.92	5.03	3.86	2.12	3.41	6.86	2.57	44.82
1972	2.41	6.12	5.40	4.53	6.10	7.30	1.03	1.29	3.08	7.64	7.51	6.22	58.63
1973	4.44	4.36	4.38	7.77	5.46	3.25	4.45	3.11	2.51	2.79	2.22	8.00	52.74
1974	4.96	2.82	5.06	3.49	3.13	2.50	0.81	2.55	5.10	2.66	1.94	6.78	41.80
1975	6.50	4.06	4.27	3.89	3.45	5.37	3.33	2.01	5.58	3.61	5.89	4.92	52.88
1976	5.98	3.57	3.30	2.27	3.89	3.27	4.32	7.57	2.07	5.42	0.54	2.96	45.16
1977	3.09	2.46	5.47	4.28	2.04	4.31	1.51	5.49	5.73	6.12	6.39	6.93	53.82
1978	10.72	2.60	3.33	2.39	6.47	0.81	4.63	5.22	4.26	4.11	2.79	6.12	53.45
1979	13.01	5.27	3.53	4.96	4.09	2.15	0.61	7.76	3.20	4.57	3.95	3.02	56.12
1980	2.02	1.18	7.20	6.16	1.52	3.60	1.92	1.56	0.98	3.59	4.20	1.06	34.99
1981	1.15	5.16	1.80	4.59	2.17	3.14	2.69	0.96	5.17	4.49	3.16	5.55	40.03
1982	7.20	2.90	3.38	5.44	1.71	12.85	1.77	3.45	1.40	2.07	3.87	2.38	48.42
1983	4.07	4.36	8.68	11.09	4.22	2.63	4.20	4.48	2.09	3.67	8.68	5.67	63.84
1984	2.87	6.38	6.92	5.41	8.08	6.68	7.06	1.02	4.16	3.20	2.40	2.98	57.16
1985	1.07	1.82	2.62	1.56	4.87	6.38	2.30	4.89	1.54	1.53	6.85	1.10	36.53
1986	3.96	3.46	3.17	2.35	1.09	1.66	5.02	5.69	0.86	2.25	6.72	7.50	43.73
1987	6.74	1.21	5.95	4.32	1.83	1.86	1.48	4.38	4.05	2.22	3.55	3.20	40.79
1988	3.59	4.81	4.22	2.17	2.58	1.43	3.93	1.36	3.52	3.87	9.05	2.52	43.05
1989	2.23	4.09	5.20	4.66	10.47	7.24	5.84	9.17	4.45	8.90	5.16	1.25	68.66
1990	5.24	2.92	2.14	4.96	6.52	3.95	2.64	6.75	3.04	7.17	1.78	5.90	53.01
1991	4.41	1.86	5.45	4.30	2.78	1.87	2.11	9.19	4.45	2.61	1.80	4.30	45.13
1992	2.40	2.18	3.34	1.78	3.05	4.90	4.76	5.61	3.51	1.07	5.96	6.60	45.16
1993	2.47	4.10	7.11	3.81	1.71	1.37	1.84	1.61	4.36	4.69	3.72	6.11	42.90
1994	5.78	4.04	6.55	2.26	2.93	0.51	0.91	5.04	4.41	1.09	6.34	4.30	44.16
1995	2.93	3.74	1.53	2.52	2.79	3.12	1.78	0.54	4.91	5.97	5.83	3.74	39.40
1996													
Average	4.14	3.86	4.70	4.16	3.77	3.25	3.25	4.46	3.51	3.73	4.60	4.68	48.04
Maximum	13.01	6.45	10.36	11.09	10.47	12.85	8.62	11.98	10.47	11.43	9.05	8.45	68.66
Minimum	0.62	1.18	1.53	1.56	0.63	Trace	0.50	0.54	0.86	0.18	0.54	0.82	34.35

Appendix H

APPENDIX H

FIRM FLOOD INSURANCE RATE MAP

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

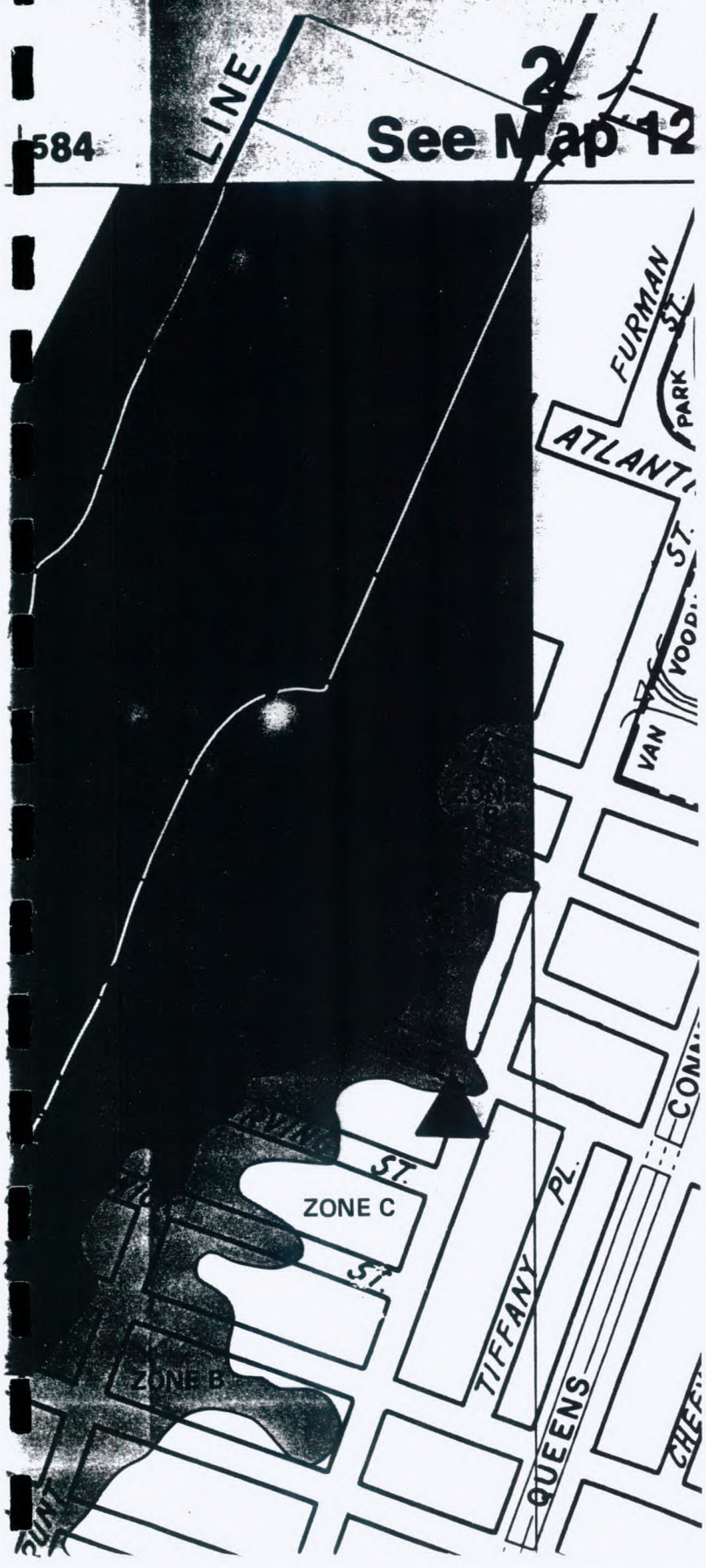
CITY OF
NEW YORK,
NEW YORK
BRONX, RICHMOND,
NEW YORK, QUEENS
AND KINGS COUNTIES

PANEL 62 OF 131
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
360497 0062 B

EFFECTIVE DATE:
NOVEMBER 16, 1983

Federal Emergency Management Agency



KEY TO MAP

500-Year Flood Boundary	
100-Year Flood Boundary	
Zone Designations*	
100-Year Flood Boundary	
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	ERM 7 ▲
Zone D Boundary	
River Mile	•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.