

# Sampling Report and Recommendations - Site 13 NCBC Davisville, Rhode Island

*Prepared for:*

Department of the Navy  
Northern Division  
Naval Facilities Engineering Command  
Lester, Pennsylvania

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*Under contract with:*

EA Engineering, Science, and Technology  
Sparks, Maryland

22 May 1996  
Contract No. N62472-92-D-1296  
Contract Task Order No. 0041

**FINAL  
SAMPLING REPORT AND RECOMMENDATIONS  
FOR  
IR PROGRAM SITE 13  
AT  
NCBC DAVISVILLE, RI**

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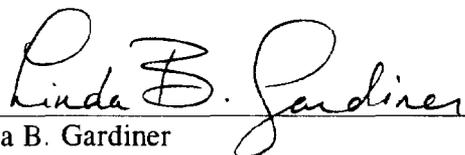
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EA Project No. 296.0040  
S&W Project No. 04291.0910

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22 May 1996  
FINAL  
EA Project No. 296.0040  
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## TABLE OF CONTENTS

<b>ES.0 EXECUTIVE SUMMARY</b>	1
<b>1.0 INTRODUCTION</b>	3
1.1 AUTHORIZATION	3
1.2 SITE LOCATION	3
1.3 OBJECTIVES AND SCOPE OF INVESTIGATION	3
1.4 PROJECT SCHEDULE	4
<b>2.0 BACKGROUND INFORMATION</b>	5
2.1 SITE HISTORY/DESCRIPTION	5
2.1.1 Site History	5
2.1.2 Site Description	5
2.2 PREVIOUS INVESTIGATIONS	5
<b>3.0 PCB GRID SAMPLING FIELD ACTIVITIES</b>	7
3.1 INTRODUCTION	7
3.2 FIELD PROGRAM	7
3.2.1 Round I Sampling	7
3.2.2 Round II Sampling	8
<b>4.0 LABORATORY ANALYSIS AND QUALITY EVALUATION</b>	10
4.1 FINDINGS AND LABORATORY ANALYSIS	10
4.2 LABORATORY QUALITY EVALUATION	11
4.2.1 Round I Samples	11
4.2.2 Round II Samples	12
<b>5.0 SUMMARY AND RECOMMENDATIONS</b>	14
5.1 SUMMARY	14
5.2 RECOMMENDATIONS FOR FUTURE ACTIONS	15
<b>6.0 REFERENCES</b>	16
<b>APPENDIX A</b> List of Acronyms and Abbreviations	
<b>APPENDIX B</b> Laboratory Data and Chains of Custody	

## LIST OF TABLES AND FIGURES

### LIST OF TABLES

Table 1-1	Site 13 - Proposed Schedule
Table 4-1	Analytical Results

### LIST OF FIGURES

Figure 1-1	Site Locus Map
Figure 1-2	Site Plan - Site 13
Figure 3-1	Site 13 - PCB Grid Sampling Locations, Round I and Round II
Figure 3-2	Site 13 - TRC and PCB Grid Sampling Locations
Figure 4-1	Site 13 - PCB Sampling Results

## EXECUTIVE SUMMARY

### Study Objectives

The objectives of this study were to determine the extent of polychlorinated biphenyls (PCB) in soil at IR Program Site 13 (Site 13) and to provide recommendations with regards to results of soil sampling. The soil sampling and PCB analysis was conducted at Site 13, at the former Naval Construction Battalion Center (NCBC) Davisville focusing on surface and near surface soils. The results of the soil sampling and PCB analysis will be used to determine the extent of soil excavation required for the proposed removal action. Two rounds of soil sampling were performed. Sampling in the first round was conducted in the possible area of PCB in soil at a portion of Site 13 as originally defined by prior investigations conducted by TRC Environmental Corporation (TRC) for the Navy which was used as a starting point for this study. Sampling in the second round was based on the analytical results for the first round, and was performed primarily in an area south of the first round sampling grid. Additional samples were collected adjacent to both the eastern and western borders of the first round sampling grid as recommended by the U.S. Environmental Protection Agency (EPA).

The interpretation of the laboratory results, as they relate to response objectives, included comparisons to the PCB cleanup level for soil of 10 parts per million (ppm) to highlight any elevated levels of PCB in soil. It was assumed that if none of the samples exceeded the proposed cleanup standard for PCB in soil of 10 ppm, then a removal action with respect to PCB at Site 13 would not be required at this time. If elevated PCB concentration were detected, then further evaluation would be anticipated during future removal actions or additional investigation.

### Field Sampling

The first round of surface and near surface soil sampling was performed on the possible area of PCB in soil, previously identified by TRC, in order to determine the extent of PCB in soil in that area. The second round of sampling was performed primarily to the south of the first round of sampling. The soil samples were obtained using a Geoprobe hydraulic sampling unit. Thirty-seven (37) locations were sampled in the first round and twenty-eight (28) locations were sampled in the second round of sampling. The open-tube sampler was driven at each location and separated into one-foot interval samples. A total of seventy-four (74) samples were collected in the first round, and sixty-one (61) samples were collected in the second round, excluding those taken for quality assurance.

## Results

Results of laboratory analysis of the first round samples revealed that elevated levels of PCB were detected in eleven (11) of the seventy-four (74) samples taken in the first round at Site 13. Most of these fell into the range of 12 to 54 ppm. PCB concentrations at one location (location 16), however, totalled 4900 ppm in the 0-1 foot bgs sample. The total PCB concentration detected in the duplicate collected at this location was 2380 ppm. This was the only location sampled in the first round which exhibited elevated PCB concentrations in the 1-2 foot bgs sample (230 ppm total PCB). Concentrations detected in all other 1-2 foot bgs interval samples were under 10 ppm in the first round, most being non-detect.

Analytical results from the second round of sampling revealed that twenty-one (21) of the sixty-one (61) samples collected in the second round contained elevated levels of PCB. Most of these fell into the range of 10 to 50 ppm. PCB existed down to the 4 foot bgs sampling depth at the sampling location at the center of the second grid (location 16). This sampling location in the second round was moved slightly from the location in the first round. The total PCB concentration was 2150 ppm in the 0-1 foot bgs sample, 770 ppm in the 1 to 2 foot bgs sample, 393 ppm in the 2 to 3 foot bgs sample, and 39.2 ppm in the 3-4 foot bgs sample. PCB concentrations at one location (location 47), adjacent to the south of center of the second grid, totalled 4700 ppm in the 0-1 foot bgs sample. PCB at this location was also detected in the 1-2 foot bgs sample at a concentration of 58 ppm, but the 2-3 foot bgs sample had a total PCB concentration of less than 1 ppm. Total PCB concentrations in all other 1-2 foot bgs interval samples and below were under the 10 ppm cleanup level in the second round, most being non-detect.

## SECTION ONE

### INTRODUCTION

#### 1.1 AUTHORIZATION

Under Contract No. N62472-92-D-1296, Northern Division, Naval Facilities Engineering Command (Northern Division) issued Contract Task Order (CTO) No. 0041 to EA Engineering, Science and Technology (EA). EA has authorized Stone & Webster Environmental Technology & Services (Stone & Webster) to perform surface and near surface soil sampling and PCB analysis and to prepare this Sampling Report for IR Program Site 13 (Site 13) of the Naval Construction Battalion Center (NCBC) Davisville, Rhode Island.

Stone & Webster performed all soil sampling and was responsible for coordination and oversight of Zebra Environmental Corporation (Zebra), who was subcontracted to perform Geoprobe work. Mitkem Corporation (Mitkem) of Warwick, Rhode Island was subcontracted by Stone & Webster for analytical services.

#### 1.2 SITE LOCATION

NCBC Davisville is located in the northeast section of the Town of North Kingstown, Rhode Island, approximately 18 miles south of the state capital, Providence. A significant portion of NCBC Davisville is adjacent to Narragansett Bay. Adjoining NCBC Davisville's southern boundary is the decommissioned Naval Air Station (NAS) Quonset Point which was transferred by the Navy to the Rhode Island Economic Development Corporation (RIEDC) during the period 1974 through 1978. A site locus map is included as Figure 1-1.

The subject site, Site 13 is located in NCBC Davisville, northwest of Buildings W-3, W-4 and T-1, and is bounded on the south by "A" Street, on the east by Exeter Street and on the north by Foster Road. A site plan is provided as Figure 1-2.

#### 1.3 OBJECTIVES AND SCOPE OF INVESTIGATION

The objectives of this study were to determine the extent of PCB in surface and near surface soil at Site 13 and to provide recommendations with regards to results of soil sampling. The soil sampling and PCB analysis was conducted at Site 13, NCBC Davisville, focusing on surface and near surface soils. The results of the soil sampling and PCB analyses will be used to determine the extent of soil excavation required for the proposed removal action. Figure 1-2 presents the possible area of PCB in soil at Site 13 as originally defined by prior investigations conducted by TRC Environmental Corporation (TRC) for the Navy which was used as a starting point for this study.

The original scope of this investigation included using a three-dimensional grid consisting of 90 soil samples including quality assurance/quality control (QA/QC) and performing multiple-level sampling by collecting composite samples for 0 to 1 foot bgs below ground surface (bgs) interval and for 1 to 2 feet bgs. The number of samples required for the first round of grid sampling and the location of each was presented in the *Sampling Plan for PCB Grid Sampling - Site 13, NCBC Davisville, Rhode Island* (the Sampling Plan), dated 09 February 1996, prepared by Stone & Webster.

The interpretation of the laboratory results, as they relate to response objectives, included numerical comparisons to the PCB cleanup level for soil of 10 parts per million (ppm) to highlight elevated levels of PCB detected in soil samples collected from the site. It was assumed that if none of the samples exceeded the proposed cleanup standard for PCB in soil of 10 ppm, then a removal action with respect to PCB at Site 13 would not be required at this time. If elevated PCB concentration were detected, then further evaluation would be anticipated during future removal actions or additional investigation.

#### **1.4 PROJECT SCHEDULE**

A proposed project schedule showing field activities, regulatory review, and activity duration is presented in Table 1-1.

## SECTION TWO

### BACKGROUND INFORMATION

#### 2.1 SITE HISTORY/DESCRIPTION

##### 2.1.1 Site History

From 1945 to 1955, NCBC Davisville Construction Equipment Division (CED) was located in Buildings W-3, W-4 and T-1. Overhaul and repair activities of construction equipment were conducted in these buildings, vehicles were stored in the fields to the north and west, and drums of oils, thinner and solvents were stored adjacent to the buildings. Approximately 300 gallons of waste oils per month for the ten-year period were reportedly spread on the fields north of the three buildings.

##### 2.1.2 Site Description

Site 13 is approximately six acres in size and consists of a large grassy field bounded on three sides by paved roads. The portion of Site 13 under investigation for PCB is approximately 1/6 acre in size.

The Comprehensive Base Reuse Plan for NCBC Davisville specifies that the area in which Site 13 is located is to be used for economic and industrial development.

#### 2.2 PREVIOUS INVESTIGATIONS

Previous investigations at NCBC Davisville reported that a surface soil sample from Site 13, taken from 0-2 feet bgs, had detected PCB concentrations that were in excess of State and Federal recommended limits for industrial soil. Data collected at Site 13 by TRC in both the Phase I and II Remedial Investigation (RI) was examined for PCB concentration in soil samples. Samples were collected from surface and subsurface soil, soil borings, catch basin sediments, and one test pit. None of the samples collected during the Phase II RI contained PCB concentrations in soil exceeding the 10 ppm clean-up level. Three catch basin sediment samples were collected. All three samples contained detectable levels of PCB.

TRC reported in the Detailed Analysis of Alternatives (DAA) that one sample collected in the eastern portion of the site during the Phase I Remedial Investigation Report (RI) contained PCB-1260 at a concentration of 12000 ppm during its original analysis. Due to laboratory QA/QC problems, the sample and a duplicate were recollected and reanalyzed, exhibiting 970 ppm and 720 ppm PCB, respectively. The average of these three concentrations (4,563 ppm) was considered by TRC to be representative of that sample location, and was in turn used to determine the possible area of PCB in soil at Site 13. Figure 1-2 illustrates Site 13 and the

possible area exceeding action levels for PCB in soils. Refer to the Phase II RI and the DAA, both prepared by TRC, for more detailed information on the analytical findings of those investigations. Figure 3-2 shows the locations of samples collected by TRC during the Phase I and Phase II RI, the possible area of PCB in soils at Site 13, and the Stone & Webster soil sampling locations. The results of the past investigations will be used in conjunction with the results obtained from the current investigation to define the area of excavation for the proposed removal action.

## SECTION THREE

### SOIL SAMPLING FIELD ACTIVITIES

#### 3.1 INTRODUCTION

The objective of the first round of the sampling program was to implement the soil sampling and PCB analysis for Site 13 described the Sampling Plan to determine whether or not an area of elevated PCB exists in soil at a portion of Site 13 previously identified by TRC, and to investigate the extent of PCB in soil.

The location of the first round sampling grid was determined by the possible area of PCB in soils as previously identified by TRC, as no additional field activity was included in the original project scope. Grid sampling was performed in the area identified by TRC as shown in Figure 3-1, and samples were analyzed for PCB concentration. Analytical results from the first round of sampling, which occurred on 22 February 1996, identified relatively high levels of PCB in the soil along the southern perimeter of the grid. A second round of sampling was performed primarily in an area south of the area sampled on 22 February 1996 to further delineate the lateral extent of PCB in Site 13 surface and near surface soils. Samples were also collected in four locations adjacent to the western perimeter and a two locations adjacent to the eastern perimeter of the first round sampling grid in order to define the boundary of the area to be proposed for removal action.

#### 3.2 FIELD PROGRAM

##### 3.2.1 Round I Sampling

Surface and near surface soil sampling was performed on the target area in order to verify the extent of PCB in soil in an area previously identified by TRC at Site 13. A sample grid was established using a surveyor's tape as described in the Sampling Plan. The soil samples were obtained using a Geoprobe unit. Thirty-seven (37) sampling locations were designated in the first round of sampling. One 2-foot open-tube sampler was driven at each location designated in the first round and separated into 0 to 1 foot bgs and 1 to 2 foot bgs interval samples by the field staff. The field procedures followed were presented in further detail the Sampling Plan.

The distance between adjacent sample points along a row in the grid was approximately 16.5 feet, and the distance between successive rows of samples was approximately 14 feet. The number of samples required and the location of each was determined using the U.S. Environmental Protection Agency (EPA) report, *Field Manual for Grid Sampling of PCB Spill*

*Sites to Verify Cleanup*, EPA-560/5-86-017, dated May 1986. The sampling locations are shown on Figure

3-1. Each sample collected was designated with a unique alpha-numeric identification code according to the following format:

Sample Identification Number:           aa bb cc d

where:

- aa = site number (13 for this investigation)
- bb = medium/matrix (SS = soil sample)
- cc = sample location at a given site (numbered 1 through 64)
- d = sample depth, feet bgs (A = 0-1, B = 1-2, C = 2-3, D = 3-4)

Example:

13SS21A

represents a Site 13 soil sample, location 21, depth 0-1 foot bgs

In addition, field samples were collected for QA/QC including the following:

- ▶ 10% duplicates/replicates (8 for round I)
- ▶ 10% matrix spike/matrix spike duplicates (MS/MSD, 8 for round I)
- ▶ One rinsate blank per day of sampling

Methodology used to determine the number of field QA/QC samples is modified level D from the *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program*, June 1988.

A Geoprobe unit was used to obtain the soil samples. The Geoprobe unit consisted of an open-tube sampler within the unit which was mounted on a carrier vehicle. The sampler was driven to 2 feet bgs by the hydraulically-powered Geoprobe unit. The probe rods were retracted from the hole and the sampler tube recovered. The field team divided each sampler tube into two composite samples using hand trowels, representative of the 0 to 1 foot bgs interval and the 1 to 2 foot bgs interval. A new disposable sampler tube was used for each location.

All field activities including sampling, labelling, preservation, equipment decontamination, containerization of investigation-derived wastes, and documentation procedures were performed in accordance with the methods outlined in the Sampling Plan.

### 3.2.2 Round II Sampling

Following a review of the soil sampling results for the first round of grid sampling, an additional sampling effort was performed to further delineate the lateral extent of PCB in soil at Site 13. This second sampling effort was performed in accordance with the Sampling Plan, which was

used for the first round sampling event. Analysis performed, PCB by Method 8080, did not change, nor did the EPA PCB protocol for sampling, which was included in the Sampling Plan.

The sampling grid was extended southward so that the southernmost sampling location of the first round, also the location which yielded the highest PCB concentrations in the first round (location 16, total 4900 ppm), became the center of the grid, as shown on Figure 3-1. Locations which were sampled in the first round were not re-sampled, with the exception of location 16.

In general, the total depth sampled at each location was 2 feet bgs in accordance with the Sampling Plan. However, sampling at the locations adjacent to the center of the second grid (location 16) were performed to total depths of 3 feet bgs and sampling at the grid center itself was performed to a total depth of 4 feet bgs.

Additional samples taken included:

- ▶ four samples outside the western perimeter of the first round sampling grid; samples were collected approximately 28 feet west of sampling locations 29, 30, 31 and 36.
- ▶ two samples outside the eastern perimeter of the first round sampling grid, adjacent to sampling location 3.

These sampling locations are shown on Figure 3-1 and were included to assist in delineating the soil removal area adjacent to the eastern and western perimeters of the first round sampling grid.

All other procedural items, including those in the Safety, Health, and Emergency Response Plan, remained as stated in the Sampling Plan.

## SECTION FOUR

### LABORATORY ANALYSIS AND QUALITY EVALUATION

#### 4.1 FINDINGS AND LABORATORY ANALYSIS

Results of laboratory analysis for the first round of samples revealed that elevated concentrations (over the 10 ppm cleanup standard) of PCB were detected in eleven (11) of the seventy-four (74) samples taken at Site 13. Most of these fell into the range of 12 to 54 ppm. PCB concentrations at one location (location 16), however, were 3300 ppm for Aroclor 1248, and 1600 ppm for Aroclor 1254 (total PCB concentration 4900 ppm) in the 0-1 foot bgs sample. The total PCB concentration detected in the duplicate sample for this location was 2380 ppm. In addition, this was the only location which exhibited elevated PCB concentrations in the 1-2 foot bgs sample interval including: 120 ppm for Aroclor 1248, 87 ppm for Aroclor 1254, and 23 ppm for Aroclor 1260 (total PCB concentration 230 ppm). Concentrations in all other 1-2 foot bgs samples were under 10 ppm, most being non-detect.

As illustrated on Figure 4-1, six (6) of the sample locations (location numbers 15, 16, 17, 18, 28, and 29) which resulted in concentrations over 10 ppm appear to be localized along the southern perimeter of the sampling grid. Samples 13SS16A and 13SS16B (see sample location 16 on Figure 4-1), which exhibited the highest PCB concentrations, were taken at the southern-most corner of the grid. The remaining four referenced sample locations appear to be scattered as shown on Figure 4-1.

Analytical results for the second round of soil sampling revealed that twenty-one (21) of the sixty-one (61) samples contained elevated concentrations of PCB. The range of total PCB greater than 10 ppm was 10.2 to 4700 ppm. More than half of the samples with concentrations exceeding the 10 ppm cleanup level fell into the range of 10 to 50 ppm. PCB concentrations at one location (location 47), adjacent to location 16, were 3400 ppm for Aroclor 1254 and 1300 ppm for Aroclor 1260 (total 4700 ppm) in the 0-1 foot bgs sample. This sample contained the highest levels of PCB detected in the second round of sampling, but was less than the highest level of 4900 ppm detected in the first round. At the same location, the PCB concentration in the 1-2 foot bgs sample also exceeded 10 ppm, at a level of 58 ppm. The PCB concentrations detected in the sample collected from the 2-3 foot bgs interval at this location were below the cleanup level of 10 ppm for PCB in soil. Location 16, which was re-sampled in the second round to a depth of 4 feet bgs, contained elevated levels of PCB to the depth sampled. This location was moved slightly during the second round of sampling. The concentrations of PCB in each sample depth interval at this location were the following:

<u>Sample Depth (feet bgs)</u>	<u>Aroclor 1254 (ppm)</u>	<u>Aroclor 1260 (ppm)</u>	<u>Total PCB (ppm)</u>
0-1	1700	450	2150
1-2	630	140	770
2-3	320	73	393
3-4	31	8.2	39.2

All 0-1 foot bgs samples at locations 44 through 55 and location 16, with the exception of location 51, contained total PCB concentrations in excess of 10 ppm. Locations 46, 47 and 52 are adjacent to location 16 and the PCB area identified from the first round of sampling results. The results from the second round of sampling seem to extend the PCB area to the southern perimeter of the second sampling grid. Locations 44, 49, 50 and 55 are on the southern perimeter of the sampling grid as shown in Figure 4-1.

Additionally, of the six sampling locations along the eastern and western perimeters of the first round sampling grid, added to the second round of sampling, five contained elevated levels of PCB in the 0-1 foot bgs sample (locations 59, 60, 61, 63 and 64). Locations 59, 60, 61, and 64 are located west of the western perimeter of the first round sampling grid and location 63 is located east of location 7. The concentration of PCB in the 0-1 foot bgs sample at location 62, located east of location 6, was 9.5 ppm.

PCB Aroclors 1016, 1221, 1232, and 1242 were not detected in any of the samples. Results of laboratory analyses are summarized on Table 4-1. The laboratory reports are included as Appendix B.

## 4.2 LABORATORY QUALITY EVALUATION

### 4.2.1 Round I Samples

Laboratory quality evaluation has been completed for the data packages generated by Mitkem concerning samples collected during the soil sampling program. Sample data were evaluated with regard to holding time compliance, rinsate blank analysis, laboratory blank contamination, duplicate sample results, laboratory blank spikes, surrogate recoveries, and MS/MSD results. Samples associated with this project were analyzed for PCB by Method 8080 as defined in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*.

All samples were extracted using SW-846 Method 3500 and analyzed using SW-846 Method 8080. All samples met the SW-846 required holding times for extraction and analysis of 14 and 40 days, respectively. PCB levels were below the method specific detection limit of 33 ug/kg (66 ug/kg for Aroclor-1221) in the five method blanks analyzed. All five laboratory blank spike recoveries were acceptable with four values ranging from 94 to 100% and one value of 113%.

No PCB were detected in the rinsate blank sample which was taken in the field, indicating that decontamination procedures were sufficient.

Most of the field duplicate detected PCB levels were near or below 20% different. However, values obtained for sample 13SS29A and its duplicate 13SS29AD varied by approximately 30%, and those of 13SS16A and 13SS16AB differed by 69% for Aroclor-1248 and for Aroclor-1254. Results for 13SS21A and 13SS21AD indicated high percentage variance (approximately 90%) for Aroclor 1254 only. As results for this sample were well below the cleanup standard level of 10 ppm, the high variance should not affect the decision-making process. Required validation

actions were to qualify as estimated (J) those sample results for which duplicate values differ by more than 50%. Therefore, results for Aroclor-1248 and -1254 in sample 13SS16A and Aroclor-1254 in 13SS21A were qualified as estimated (J).

Several samples were analyzed at dilution due to high PCB concentration. When diluted samples were analyzed, any errors associated with the sampling and analysis, including those that may cause deviations from ideal surrogate recoveries, became multiplied by the dilution factor. In this case, the surrogate recovery limits of 30-150%, which are typically applied to undiluted sample results, were advisory only. No action was required if these limits were exceeded. Samples were spiked with two surrogate compounds, decachlorobiphenyl and 2,4,5,6-tetrachloro-m-xylene. The decachlorobiphenyl surrogate recoveries for 13SS02B, 13SS20A, 13SS21AD, and 13SS27A exceeded the advisory limits, ranging from 153% to 189%. The decachlorobiphenyl recovery from sample 13SS37A had a low value of 25%. As stated above, no action was required if these limits were exceeded. All 2,4,5,6-tetrachloro-m-xylene recoveries were within limits.

Ten percent of the samples were split into replicate portions and spiked in duplicate (MS/MSD) with Aroclor-1260. High MS and MSD recoveries of 206 and 210%, respectively were observed for 13SS10A due to co-eluting Aroclor 1254 interferences from the unspiked sample. Due to dilutions, both the surrogate recoveries and matrix spike recoveries could not be determined for 13SS16B. Most of the relative percent differences (RPD) between MS and MSD percent recoveries range from 1 to 16 percent. For the MS/MSD results associated with sample 13SS29B, an RPD value of 42%, as well as an MSD percent recovery of 140% may be due to inhomogeneities in the samples caused by small pebbles or gravel.

#### 4.2.2 Round II Samples

Laboratory quality evaluation was completed for the second round of data packages generated by Mitkem from analysis of samples collected on April 25, 1996. Similar to the first round, sample data were evaluated with regard to holding time compliance, rinsate blank analysis, laboratory blank contamination, duplicate sample results, laboratory blank spikes, surrogate recoveries, and MS/MSD results. Samples were analyzed for PCB by Method 8080 as defined in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846.

All samples met the SW-846 required holding times for extraction and analysis of 14 and 40 days, respectively. PCB levels were below the method specific detection limit of 33 ug/kg (66 ug/kg for Aroclor-1221) in the four method blanks analyzed for soil and below the method specific detection limit of 1.0 ug/L (2.0 ug/L for Aroclor-1221) in the one method blank analyzed for water. All four laboratory blank spike recoveries were acceptable with values ranging from 114% to 120%.

No PCB were detected in the rinsate blank sample which was taken in the field, indicating that decontamination procedures were sufficient.

Of the six field duplicates collected in this round, the percent differences between each result within a pair were 3% or less in three of the sample pairs: 13SS40B, 13SS41A, and 13SS16-2B. The percent difference between the Aroclor-1254 results in samples 13SS46B and -13SS46B-DP was 42%. The percent differences in some of the results obtained from the sample 13SS52B duplicate pair and the SS1358B duplicate pair exceeded 50% as follows:

- ▶ 13SS52B - 159% for Aroclor 1254 and 138% for Aroclor-1260
- ▶ 13SS58B - 82% for Aroclor-1254

Since results for these two sample pairs were well below the cleanup standard level of 10 ppm, the high variance should not affect the decision-making process. Required validation actions were to qualify as estimated (J) those sample results for which duplicate values differed by more than 50%. Therefore, results for Aroclor-1260 and -1254 in sample 13SS52B and Aroclor-1254 in 13SS58B were qualified as estimated (J).

The advisory surrogate percent recovery limits for PCB were 30-150%. No action was required if these limits were exceeded. Samples were spiked with two surrogate compounds, decachlorobiphenyl and 2,4,5,6-tetrachloro-m-xylene. Only one surrogate recovery for decachlorobiphenyl in sample 13SS16-2A exceeded limits with a value of 156%. The decachlorobiphenyl recovery in sample 13SS47A could not be determined due to coeluting interferences. Finally, the surrogate recoveries in sample 13SS46B-DP were not reported.

Ten percent of the samples were split into replicate portions and spiked in duplicate (MS/MSD) with between 330 and 370 ug/kg of Aroclor-1260. Due to the high concentration of Aroclor-1260 (relative to the spiking concentration) in samples 13SS42A, 13SS54A, and 13SS16-2C the corresponding matrix spike recoveries could not be determined. For the other three samples, MS/MSD results were excellent with recoveries ranging from 98 to 107% and RPD from 3 to 6%.

All data from both the first and second sampling rounds were useable, although some of the data are qualified as estimated. The analytical data is presented in Table 4-1.

## SECTION FIVE

### SUMMARY AND RECOMMENDATIONS

#### 5.1 SUMMARY

Results of laboratory analysis revealed that elevated levels of PCB were detected in eleven (11) of the seventy-four (74) round I samples taken at Site 13. Most of these fell into the range of 12 to 54 ppm. PCB concentrations at one location (location number 16), however, totalled 4900 ppm in the 0-1 foot bgs sample. This was the only location which exhibited elevated PCB concentrations in the 1-2 foot bgs sample and was detected at 230 ppm total PCB. Concentrations detected in all other 1-2 foot bgs interval samples were under 10 ppm, most being non-detect.

Analytical results for the second round of grid sampling revealed that twenty-one (21) of the sixty-one (61) round II samples contained elevated concentrations of PCB. The range of total PCB greater than 10 ppm was 10.2 to 4700 ppm. More than half of the samples with concentrations exceeding the 10 ppm cleanup level fell into the range of 10 to 50 ppm. Re-sampling and analysis of location 16 detected elevated PCB to the depth sampled (4 feet bgs). Only one other second round sample contained elevated PCB in the 1-2 foot bgs interval.

Six of the sample locations which resulted in detected concentrations over 10 ppm in the first round of sampling appear to be located in the southern portion of the first round sampling grid. Samples 13SS16A and 13SS16B, which exhibited the highest PCB concentrations in the first round, were taken at the southern-most corner of the original grid. The remaining four first round sample locations containing elevated levels of PCB appear to be scattered in the eastern and western portions of the first round sampling grid. The results from the second round of sampling seem to extend this area of PCB in soil to the southern perimeter of the second sampling grid. Additionally, of the six sampling locations beyond the eastern and western perimeters of the first round sampling grid, added to the second round of sampling as confirmatory excavation boundary planning samples, five contained elevated levels of PCB in the 0-1 foot bgs sample interval.

PCB Aroclors 1016, 1221, 1232, and 1242 were not detected in any of the samples.

## 5.2 RECOMMENDATIONS FOR FUTURE ACTIONS

Results of the second soil sampling effort at Site 13 have not provided sufficient information to determine the extent of soil excavation required in support of the proposed removal action. It is recommended that the removal action include the area of excavation shown on Figure 4-1. The dashed lines on the figure represent the areas for which the excavation boundary has not yet been defined. It is recommended that confirmatory sampling by a certified laboratory be performed in accordance with 40 CFR 761, Section 130. This Federal regulation requires that a minimum of three (3) and a maximum of forty (40) samples be taken to verify the level of cleanup. Therefore, a maximum thirty-one (31) random soil samples should be taken, in addition to nine (9) QA/QC samples, along the perimeter and at the base of the excavation. PCB analysis should be performed on these samples. The excavation should be considered complete when PCB levels in remaining soil are below 10 ppm. The QA/QC samples proposed include four (4) field duplicate samples, four (4) MS/MSD samples, and one (1) rinsate blank per day of sampling (assumed one rinsate blank total), in accordance with *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program*, June 1988.

As the PCB at location 16 extends to a depth of 4 feet bgs, the maximum depth sampled, and the ground water level is at approximately 5 feet bgs, it is recommended that a ground water sample, by hydro-punch or similar method, be collected at this location. Both filtered and unfiltered samples should be taken for PCB analysis. It is assumed that if levels of PCB in the ground water at this location are less than established water quality standards, no further sampling is necessary. However, if elevated levels of PCB are detected in the ground water at this location, it is recommended that ground water samples be collected from the existing monitoring wells at Site 13 and analyzed for PCB concentration. It should be noted that as determined in the Draft Basewide Ground Water Inorganics Study Report, dated 04 April 1996, prepared by Stone & Webster, a ground water mound exists at Site 13. Therefore, ground water flows in several directions from this area.

It is further recommended that the new and existing data sets, including TRC data, be compared for analytical and spatial similarities and differences. Results from previous Phase I and II sampling results should be considered when evaluating clean areas.

## **SECTION SIX**

### **REFERENCES**

Draft Detailed Analysis of Alternatives, Naval Construction Battalion Center, Volume III, Site 13 - Disposal Area Northwest of Buildings W-3, W-4 and T-1, TRC Environmental Corporation, April 1994.

Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup, EPA-560/5-86-017, dated May 1986.

Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, June 1988.

Sampling Plan for PCB Grid Sampling - Site 13, NCBC Davisville, Rhode Island, February 9, 1996, Stone & Webster Environmental Technology & Services.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Volume I, Section B, 4.3.1, November 1990.

**TABLES**

<b>TABLE 1-1 SITE 13 PROPOSED SCHEDULE</b>	
<b>ACTIVITY</b>	<b>DATE</b>
Notice to Proceed	01 November 1995
Draft Sampling Plan including SHERP Submission to Navy, EPA, RIDEM	13 November 1995
Comments by Navy, EPA, RIDEM to Stone & Webster	15 December 1995
Final Sampling Plan including SHERP Submission to Navy, EPA, RIDEM	09 February 1996
Field Program completed	29 February 1996
Draft Sampling Report and Recommendations to Navy	21 March 1996
Comments by Navy to Stone & Webster, Response to Comments and Resolution	28 March 1996
Draft Revised Final Action Memorandum to Navy, EPA, RIDEM *	04 April 1996
Second Field Program Completed	25 April 1996
Comments on Action Memorandum by Navy, EPA, RIDEM to Stone & Webster *	03 May 1996
Response to Comments - Action Memorandum *	10 May 1996
Draft Final Sampling and Analysis Report and Recommendations	16 May 1996
Comment Resolution - Action Memorandum *	17 May 1996
Final Sampling and Analysis Report and Recommendations	23 May 1996
Final Revised Final Action Memorandum *	24 May 1996
Public Comment Period Begins	25 May 1996
Comments on the Final Sampling Report	31 May 1996
Public Comment Period Complete	25 June 1996

Note: An asterisk (\*) denotes Sites 02 & 13 and Study Area 4 included.

**Table 4-1. Analytical Results**

<u>Grid Location #</u>	<u>Sample ID #</u>	<u>Aroclor-1016</u>	<u>Aroclor-1221</u>	<u>Aroclor-1232</u>	<u>Aroclor-1242</u>	<u>Aroclor-1248</u>	<u>Aroclor-1254</u>	<u>Aroclor-1260</u>	<u>Total PCB</u>
<b>Round I</b>									
1	13SS01A	ND	ND	ND	ND	0.14	ND	ND	0.14
1	13SS01B	ND	0						
2	13SS02A	ND	ND	ND	ND	1.5	ND	ND	1.5
2	13SS02B	ND	0						
2	13SS02B (DUP)	ND	0						
3	13SS03A	ND	ND	ND	ND	0.41	1.6	ND	2.01
3	13SS03B	ND	0						
4	13SS04A	ND	ND	ND	ND	0.57	1.4	ND	1.97
4	13SS04B	ND	0						
5	13SS05A	ND	ND	ND	ND	1.3	2.6	ND	3.9
5	13SS05B	ND	0						
6	13SS06A	ND	ND	ND	ND	32	19	ND	<b>51</b>
6	13SS06A (DUP)	ND	ND	ND	ND	24	15	ND	<b>39</b>
6	13SS06B	ND	0						
7	13SS07A	ND	ND	ND	ND	26	28	ND	<b>54</b>
7	13SS07B	ND	0						
8	13SS08A	ND	ND	ND	ND	3.2	4.2	ND	7.4
8	13SS08A (DUP)	ND	ND	ND	ND	3.5	4.4	ND	7.9
8	13SS08B	ND	ND	ND	ND	0.04	0.06	ND	0.097
9	13SS09A	ND	ND	ND	ND	0.15	0.3	ND	0.45
9	13SS09B	ND	0						
10	13SS10A	ND	ND	ND	ND	0.21	0.66	ND	0.87
10	13SS10B	ND	0						
10	13SS10B (DUP)	ND	0						
11	13SS11A	ND	ND	ND	ND	0.28	0.66	ND	0.94
11	13SS11B	ND	0						
12	13SS12A	ND	ND	ND	ND	5.8	8.1	ND	<b>13.9</b>
12	13SS12B	ND	0						
13	13SS13A	ND	ND	ND	ND	1.8	2.3	ND	4.1
13	13SS13A (DUP)	ND	ND	ND	ND	1.6	1.9	ND	3.5
13	13SS13B	ND	ND	ND	ND	ND	0.05	ND	0.049
14	13SS14A	ND	ND	ND	ND	2.5	4.30	ND	6.8
14	13SS14B	ND	0						
15	13SS15A	ND	ND	ND	ND	7.4	13	ND	<b>20.4</b>
15	13SS15B	ND	0						
16	13SS16A	ND	ND	ND	ND	3300 J	1600 J	ND	<b>4900 J</b>
16	13SS16A (DUP)	ND	ND	ND	ND	1600 J	780 J	ND	<b>2380 J</b>
16	13SS16B	ND	ND	ND	ND	120	87	23	<b>230</b>
17	13SS17A	ND	ND	ND	ND	5.4	7	ND	<b>12.4</b>
17	13SS17B	ND	0						
18	13SS18A	ND	ND	ND	ND	18	17	ND	<b>35</b>
18	13SS18B	ND	ND	ND	ND	1	0.90	ND	1.9

**Table 4-1. Analytical Results**

<u>Grid Location #</u>	<u>Sample ID #</u>	<u>Aroclor-1016</u>	<u>Aroclor-1221</u>	<u>Aroclor-1232</u>	<u>Aroclor-1242</u>	<u>Aroclor-1248</u>	<u>Aroclor-1254</u>	<u>Aroclor-1260</u>	<u>Total PCB</u>
19	13SS19A	ND	ND	ND	ND	4.2	2.1	1.5	7.8
19	13SS19B	ND	ND	ND	ND	ND	0.05	ND	0.051
20	13SS20A	ND	ND	ND	ND	2.1	2	1.3	5.4
20	13SS20B	ND	ND	ND	ND	ND	0.05	ND	0.046
21	13SS21A	ND	ND	ND	ND	0.06	0.19 J	0.075	0.327 J
21	13SS21A (DUP)	ND	ND	ND	ND	0.054	0.072 J	0.061	0.187 J
21	13SS21B	ND	0						
22	13SS22A	ND	ND	ND	ND	0.28	0.69	0.180	1.15
22	13SS22B	ND	0						
23	13SS23A	ND	ND	ND	ND	ND	0.04	ND	0.044
23	13SS23B	ND	0						
24	13SS24A	ND	ND	ND	ND	1.2	1.3	1.5	4
24	13SS24B	ND	0						
25	13SS25A	ND	ND	ND	ND	0.41	0.97	0.460	1.84
25	13SS25B	ND	0						
26	13SS26A	ND	ND	ND	ND	0.41	1.1	1.2	2.71
26	13SS26B	ND	0						
27	13SS27A	ND	ND	ND	ND	1.6	1.7	2.2	5.5
27	13SS27B	ND	ND	ND	ND	ND	0.08	ND	0.082
28	13SS28A	ND	ND	ND	ND	ND	8.2	17.0	<b>25.2</b>
28	13SS28B	ND	ND	ND	ND	ND	0.33	0.280	0.61
29	13SS29A	ND	ND	ND	ND	9	8.1	9.3	<b>26.4</b>
29	13SS29A (DUP)	ND	ND	ND	ND	12	11.0	12.0	<b>35</b>
29	13SS29B	ND	ND	ND	ND	ND	0.88	0.650	1.53
30	13SS30A	ND	ND	ND	ND	ND	0.20	0.230	0.43
30	13SS30B	ND	0						
31	13SS31A	ND	ND	ND	ND	0.41	1	0.540	1.95
31	13SS31B	ND	ND	ND	ND	ND	0.04	ND	0.039
32	13SS32A	ND	ND	ND	ND	1.5	1.5	1.5	4.5
32	13SS32B	ND	ND	ND	ND	0.23	0.56	0.210	1
33	13SS33A	ND	ND	ND	ND	0.49	1.7	0.750	2.94
33	13SS33B	ND	ND	ND	ND	ND	2.5	1.1	3.6
34	13SS34A	ND	ND	ND	ND	1.1	1.1	1.8	4
34	13SS34B	ND	ND	ND	ND	ND	0.31	0.087	0.397
35	13SS35A	ND	ND	ND	ND	1.6	2.3	3.0	6.9
35	13SS35B	ND	0						
36	13SS36A	ND	ND	ND	ND	4.8	4.8	7.8	<b>17.4</b>
36	13SS36B	ND	ND	ND	ND	0.05	0.05	0.061	0.167
37	13SS37A	ND	ND	ND	ND	0.24	0.38	1.0	1.62
37	13SS37B	ND	0						
Number of round I samples with Total PCB concentration exceeding 10 ppm (duplicates excluded)									11

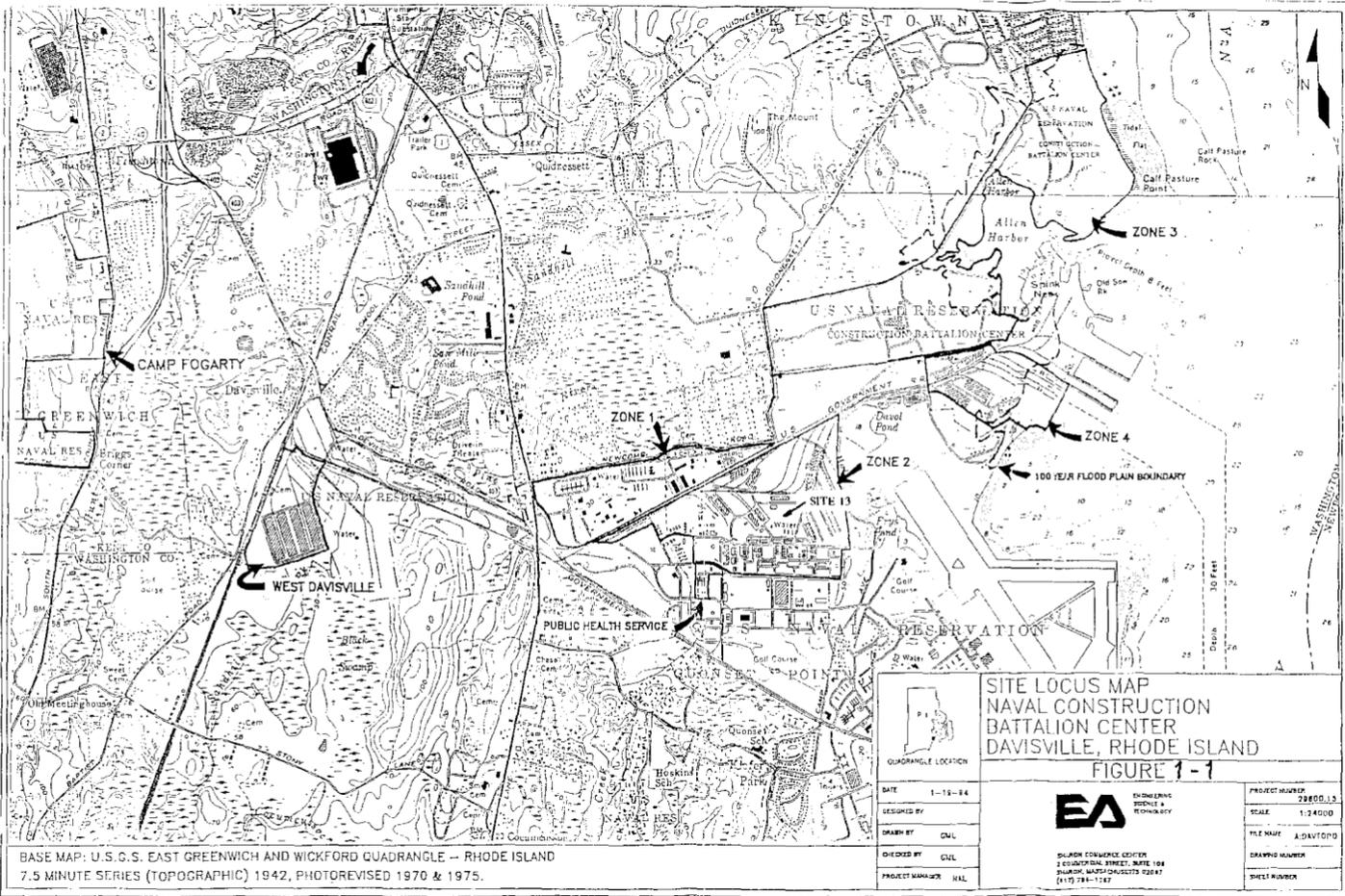
**Table 4-1. Analytical Results**

<u>Grid Location #</u>	<u>Sample ID #</u>	<u>Aroclor-1016</u>	<u>Aroclor-1221</u>	<u>Aroclor-1232</u>	<u>Aroclor-1242</u>	<u>Aroclor-1248</u>	<u>Aroclor-1254</u>	<u>Aroclor-1260</u>	<u>Total PCB</u>
<b>Round II</b>									
38	13SS-38A	ND	ND						
38	13SS-38B	ND	ND						
39	13SS-39A	ND	ND	ND	ND	ND	0.98	1.2	2.18
39	13SS-39B	ND	ND						
40	13SS-40A	ND	ND	ND	ND	ND	0.53	0.58	1.11
40	13SS-40B	ND	ND						
40	13SS-40B (DUP)	ND	ND						
41	13SS-41A	ND	ND	ND	ND	ND	0.98	1	1.98
41	13SS-41A (DUP)	ND	ND	ND	ND	ND	1	1	2
41	13SS-41B	ND	ND	ND	ND	ND	ND	0.041	0.041
42	13SS-42A	ND	ND	ND	ND	ND	2.7	2.4	5.1
42	13SS-42B	ND	ND						
43	13SS-43A	ND	ND	ND	ND	ND	1.4	1.4	2.8
43	13SS-43B	ND	ND						
44	13SS-44A	ND	ND	ND	ND	66	72	46	<b>184</b>
44	13SS-44B	ND	ND	ND	ND	0.12	0.12	0.063	0.303
45	13SS-45A	ND	ND	ND	ND	ND	44	30	<b>74</b>
45	13SS-45B	ND	ND						
46	13SS-46A	ND	ND	ND	ND	ND	340	160	<b>520</b>
46	13SS-46B	ND	ND	ND	ND	ND	0.055	ND	0.055
46	13SS-46B (DUP)	ND	ND	ND	ND	ND	0.036	ND	0.036
46	13SS-46C	ND	ND						
16	13SS-16 2A	ND	ND	ND	ND	ND	1700	450	<b>2150</b>
16	13SS-16 2B	ND	ND	ND	ND	ND	630	140	<b>770</b>
16	13SS-16 2B (DUP)	ND	ND	ND	ND	ND	610	140	<b>750</b>
16	13SS-16 2C	ND	ND	ND	ND	ND	320	73	<b>393</b>
16	13SS-16 2D	ND	ND	ND	ND	ND	31	8.2	<b>39.2</b>
47	13SS-47A	ND	ND	ND	ND	ND	3400	1300	<b>4700</b>
47	13SS-47B	ND	ND	ND	ND	ND	43	15	<b>58</b>
47	13SS-47C	ND	ND	ND	ND	ND	0.24	0.086	0.326
48	13SS-48A	ND	ND	ND	ND	ND	14	16	<b>30</b>
48	13SS-48B	ND	ND	ND	ND	ND	0.041	ND	0.041
49	13SS-49A	ND	ND	ND	ND	ND	220	71	<b>291</b>
49	13SS-49B	ND	ND	ND	ND	ND	0.2	0.078	0.278
50	13SS-50A	ND	ND	ND	ND	ND	7.5	9.9	<b>17.4</b>
50	13SS-50B	ND	ND						
51	13SS-51A	ND	ND	ND	ND	ND	2.3	2.2	4.5
51	13SS-51B	ND	ND	ND	ND	ND	0.18	0.13	0.31

**Table 4-1. Analytical Results**

Grid Location #	Sample ID #	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCB
52	13SS-52A	ND	ND	ND	ND	ND	6.7	3.5	<b>10.2</b>
52	13SS-52B	ND	ND						
52	13SS-52B (DUP)	ND	ND	ND	ND	ND	0.51 J	0.2 J	0.71 J
52	13SS-52C	ND	ND						
53	13SS-53A	ND	ND	ND	ND	ND	12	4.4	<b>16.4</b>
53	13SS-53B	ND	ND	ND	ND	ND	0.11	0.069	0.179
54	13SS-54A	ND	ND	ND	ND	ND	13	6.7	<b>19.7</b>
54	13SS-54B	ND	ND						
55	13SS-55A	ND	ND	ND	ND	ND	7.8	5.4	<b>13.2</b>
55	13SS-55B	ND	ND	ND	ND	ND	0.16	0.18	0.34
56	13SS-56A	ND	ND	ND	ND	ND	0.27	0.59	0.86
56	13SS-56B	ND	ND						
57	13SS-57A	ND	ND	ND	ND	ND	0.23	0.26	0.49
57	13SS-57B	ND	ND						
58	13SS-58A	ND	ND	ND	ND	ND	1.1	3.6	4.7
58	13SS-58B	ND	ND						
58	13SS-58B (DUP)	ND	ND	ND	ND	ND	0.079 J	ND	0.079 J
59	13SS-59A	ND	ND	ND	ND	ND	5.7	17	<b>22.7</b>
59	13SS-59B	ND	ND						
60	13SS-60A	ND	ND	ND	ND	ND	6.4	8.1	<b>14.5</b>
60	13SS-60B	ND	ND						
61	13SS-61A	ND	ND	ND	ND	ND	9.2	34	<b>43.2</b>
61	13SS-61B	ND	ND						
62	13SS-62A	ND	ND	ND	ND	ND	8.1	1.4	9.5
62	13SS-62B	ND	ND						
63	13SS-63A	ND	ND	ND	ND	ND	24	3.6	<b>27.6</b>
63	13SS-63B	ND	ND						
64	13SS-64A	ND	ND	ND	ND	ND	6.5	38	<b>44.5</b>
64	13SS-64B	ND	ND	ND	ND	ND	0.16	0.14	0.3
Number of round II samples with Total PCB concentration exceeding 10 mg/Kg (duplicates excluded)									21
<p>Notes: All samples are soil samples  All concentrations in mg/Kg (ppm)  A - In sample ID # denotes sample taken at 0' - 1' interval bgs  B - In sample ID# denotes sample taken at 1' - 2' interval bgs  C - In sample ID# denotes sample taken at 2' - 3' interval bgs  D - In sample ID# denotes sample taken at 3' - 4' interval bgs  J - Estimated Value  ND - PCB not detected in sample  Total PCB concentrations exceeding 10 mg/Kg are shaded  For map of sampling locations, refer to Figure 4-1  Sampling performed 22 February and 25 April 1996</p>									

**FIGURES**





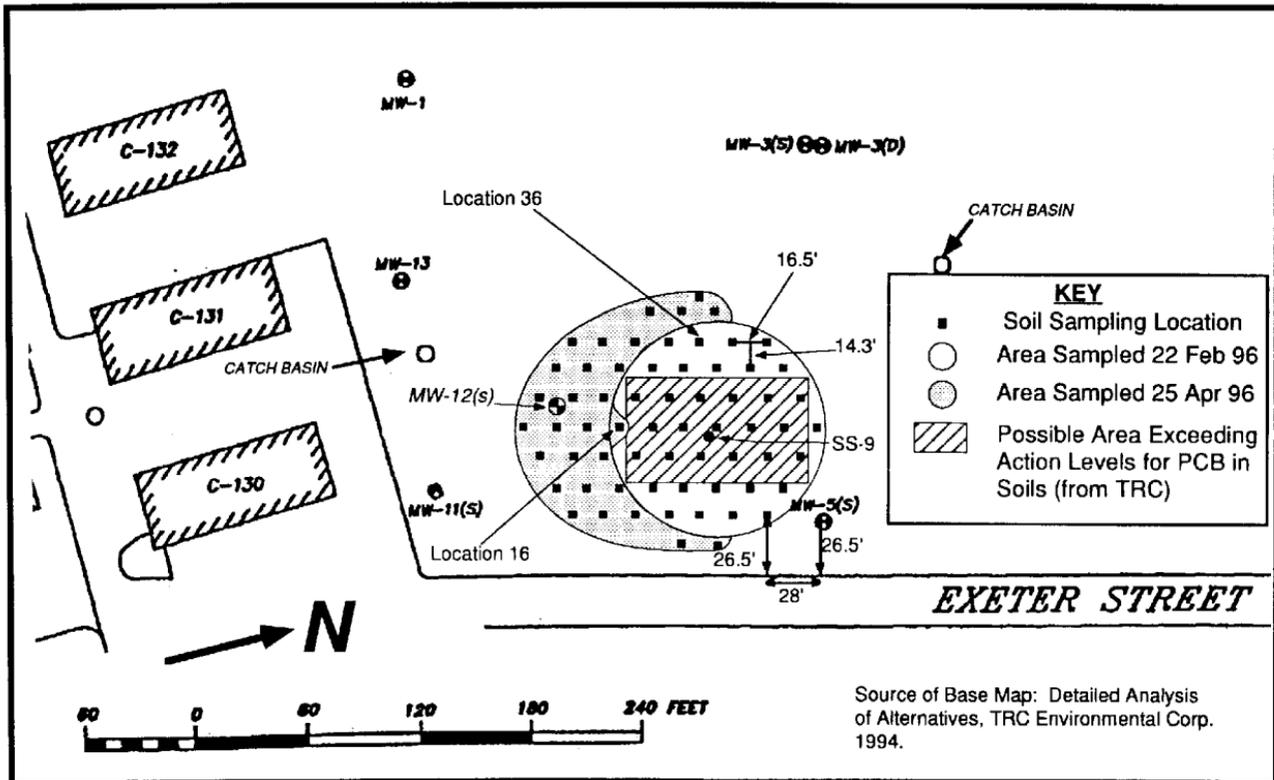


Figure 3-1  
 Site 13  
 Soil Sampling Locations  
 Round I and Round II



Stone & Webster  
 Environmental Technology & Services

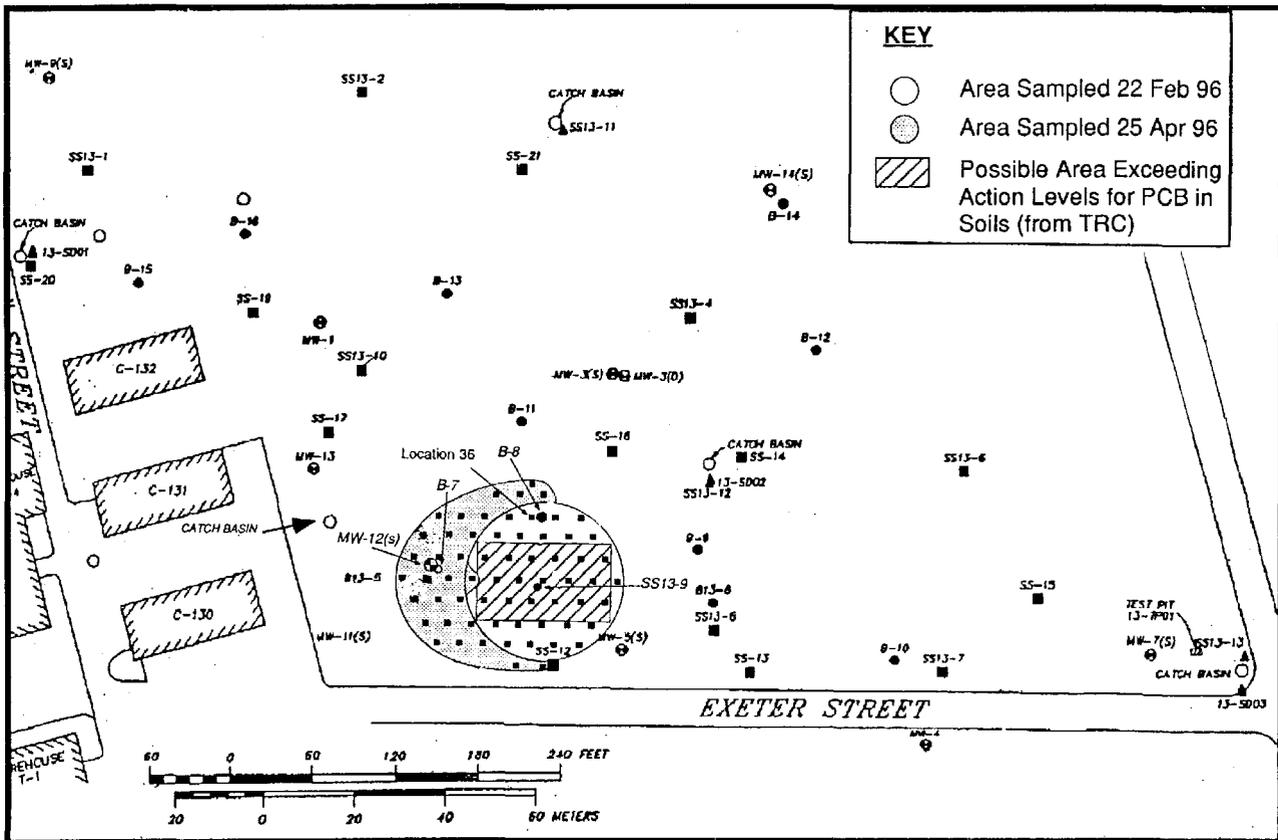
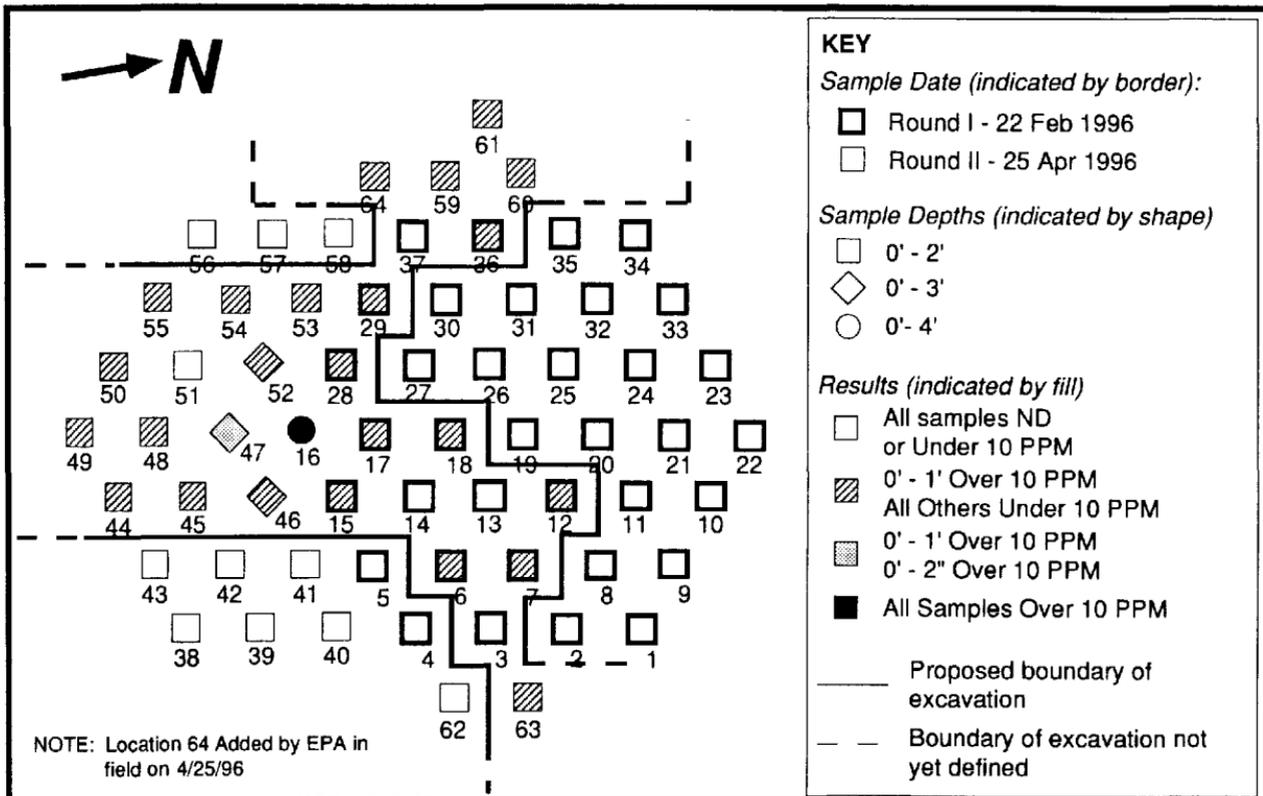


Figure 3-2

TRC and PCB Grid Sampling Locations



Stone & Webster  
Environmental Technology & Services



**Figure 4-1**  
**Site 13 - PCB Sampling Results**  
**Round I and Round II**



**Stone & Webster**  
**Environmental Technology & Services**

**APPENDIX A**  
**LIST OF ACRONYMS AND ABBREVIATIONS**

### List of Acronyms and Abbreviations

bgs	below ground surface
CED	Construction Equipment Division
CTO	Contract Task Order
DAA	Detailed Analysis of Alternatives
EA	EA Engineering, Science and Technology
EPA	United States Environmental Protection Agency
FS	Feasibility Study
FSP	Field Sampling Plan
msl	mean sea level
NAS	Naval Air Station
NCBC	Naval Construction Battalion Center
Northern Division	Northern Division, Naval Facilities Engineering Command
PCB	Polychlorinated biphenyls
QA/QC	Quality Assurance and Quality Control
RI	Remedial Investigation
RIDEM	Rhode Island Department of Environmental Management
RIEDC	Rhode Island Economic Development Corporation
Site 13	IR Program Site 13
SOP	Standard Operating Procedure
Stone & Webster	Stone & Webster Environmental Technology and Services
TRC	TRC Environmental Corporation

**APPENDIX B**  
**LABORATORY DATA and CHAINS OF CUSTODY**



**Client: Stone & Webster Engineering Corp.**

**Client Project: 042910910 (NCBC Davisville, Site 13)**

**Lab Project No.: C0137**

**Date Samples Received: February 22, 1996**

### **Project Narrative**

Eighty three (83) soil samples were received from Stone & Webster Engineering Corp. on February 22, 1996 for the analyses specified in the Chain of Custody Form. The samples were divided into five (5) Sample Delivery Groups (SDGs) for analysis and reporting purpose. For reference, copies of the Mitkem Sample Log-in Sheets are included for cross-referencing the Client sample ID and laboratory sample ID.

Data qualifiers are used where appropriate. The qualifiers are explained in the next page.

The following observations were made for the SDGs:

**SDG#1:** Several samples were analyzed at dilution due to the high concentration of PCBs in the samples. The decachlorobiphenyl recovery for **13SS02B** exceeded the advisory limit of 30-150%.

**SDG#2:** Several samples were analyzed at dilution due to the high concentration of PCBs in the samples.. The high matrix spike recovery for **13SS10A** was due to coeluting Aroclor 1254 interferences from the unspiked sample.

**SDG#3:** Several samples were analyzed at dilution due to the high concentration of PCBs in the samples. Due to the dilutions, both the surrogate recoveries and matrix spike recoveries could not be determined for **13SS16B**. The decachlorobiphenyl recovery for **13SS20A**, **13SS21AD** and **13SS27A** exceeded the advisory limit of 30-150%.

**SDG#4:** Several samples were analyzed at dilution due to the high concentration of PCBs in the sample. The decachlorobiphenyl recovery for **13SS37A** exceeded the advisory limit of 30-150%.

**SDG#5:** None



No unusual observation was made for the analysis other than those mentioned above.

The enclosed data package has been reviewed and is authorized for release as evidenced by the signature below.

A handwritten signature in black ink, appearing to read "R. Courant", is written over a faint horizontal line.

Reinier A. Courant  
QA/QC Director

# MITKEM CORPORATION

Lab Project #: **C0137 (SDG1)**  
Client Name: **Stone & Webster Engineering Corporation**  
Client Project #: **042910910**  
Client PO #: **PS-25674**  
Project Name: **NCBC Davisville, Site 13**  
Date Due: **3/7/96**  
Total Price: **\$**  
Deliverables Req'd: **LOTUS DISKETTE**  
Case Completed: **YES**

Logged In By: MS  
Reviewed By: JW  
Date: 2/28/96  
Time: 9:20

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-01	13SS01A	SL	PCB	2/22/96	2/22/96
-02	13SS01B	SL	PCB	2/22/96	2/22/96
-03	13SS02A	SL	PCB	2/22/96	2/22/96
-04	13SS02B	SL	PCB	2/22/96	2/22/96
-04MS	13SS02B MS	SL	PCB	2/22/96	2/22/96
-04MSD	13SS02B MSD	SL	PCB	2/22/96	2/22/96
-05	13SS02BD	SL	PCB	2/22/96	2/22/96
-06	13SS03A	SL	PCB	2/22/96	2/22/96
-07	13SS03B	SL	PCB	2/22/96	2/22/96
-08	13SS04A	SL	PCB	2/22/96	2/22/96
-09	13SS04B	SL	PCB	2/22/96	2/22/96
-10	13SS05A	SL	PCB	2/22/96	2/22/96
-11	13SS05B	SL	PCB	2/22/96	2/22/96
-12	13SS06A	SL	PCB	2/22/96	2/22/96

2/28/96 8:45 AM

## MITKEM CORPORATION

-13	13SS06AD	SL	PCB	2/22/96	2/22/96
-14	13SS06B	SL	PCB	2/22/96	2/22/96
-14MS	13SS06B MS	SL	PCB	2/22/96	2/22/96
-14MSD	13SS06B MSD	SL	PCB	2/22/96	2/22/96
-15	13SS07A	SL	PCB	2/22/96	2/22/96
-16	13SS07B	SL	PCB	2/22/96	2/22/96
-17	13SS08A	SL	PCB	2/22/96	2/22/96
-18	13SS08AD	SL	PCB	2/22/96	2/22/96
-19	13SS09A	SL	PCB	2/22/96	2/22/96
-20	13SS09B	SL	PCB	2/22/96	2/22/96

### NOTES:

#### ORIGINAL REPORT GOES TO:

Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210  
ATT: Lisa Brandon  
Phone: 617 598-8323  
Fax: 617 598-2922

#### INVOICE GOES TO:

same

#### ADDITIONAL REPORT GOES TO:

none

#### ADDITIONAL REPORT GOES TO:

none



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS01A  
Lab ID: C0137-01  
Analysis: Method 8080

Analysis Date: 2/28/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 101%  
Decachlorobiphenyl 108%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS01B  
Lab ID: C0137-02  
Analysis: Method 8080

Analysis Date: 2/28/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 116%  
Decachlorobiphenyl 120%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS02A  
Lab ID: C0137-03  
Analysis: Method 8080

Analysis Date: 2/28/96  
Matrix: Soil, 92% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	71
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	1,500	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 109%  
Decachlorobiphenyl 108%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS02B  
Lab ID: C0137-04  
Analysis Method 8080

Analysis Date: 2/28/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	102%
Decachlorobiphenyl	170%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS02BD  
Lab ID: C0137-05  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene      88%  
Decachlorobiphenyl                    130%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS03A  
Lab ID: C0137-06  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	410	37
Aroclor-1254	1,600	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	90%
Decachlorobiphenyl	108%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS03B  
Lab ID: C0137-07  
Analysis Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 105%  
Decachlorobiphenyl 140%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS04A  
Lab ID: C0137-08  
Analysis Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	570	38
Aroclor-1254	1,400	38
Aroclor-1260	ND	38

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	101%
Decachlorobiphenyl	118%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS04B  
Lab ID: C0137-09  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 101%  
Decachlorobiphenyl 118%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS05A  
Lab ID: C0137-10  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 3

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	110
Aroclor-1221	ND	220
Aroclor-1232	ND	110
Aroclor-1242	ND	110
Aroclor-1248	1,300	110
Aroclor-1254	2,600	110
Aroclor-1260	ND	110

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 77%  
Decachlorobiphenyl 117%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS05B  
Lab ID: C0137-11  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	88%
Decachlorobiphenyl	116%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation

Client ID: 13SS06A

Lab ID: C0137-12

Analysis: Method 8080

Analysis Date: 3/11/96

Matrix: Soil, 87% solid

Concentration in: ug/kg, dry weight basis

Dilution: 25

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	950
Aroclor-1221	ND	1,900
Aroclor-1232	ND	950
Aroclor-1242	ND	950
Aroclor-1248	32,000	950
Aroclor-1254	19,000	950
Aroclor-1260	ND	950

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene 86%

Decachlorobiphenyl 145%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS06AD  
Lab ID: C0137-13  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 99% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 25

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	840
Aroclor-1221	ND	1,700
Aroclor-1232	ND	840
Aroclor-1242	ND	840
Aroclor-1248	24,000	840
Aroclor-1254	15,000	840
Aroclor-1260	ND	840

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 91%  
Decachlorobiphenyl 126%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS06B  
Lab ID: C0137-14  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	96%
Decachlorobiphenyl	117%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS07A  
Lab ID: C0137-15  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 25

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	900
Aroclor-1221	ND	1,800
Aroclor-1232	ND	900
Aroclor-1242	ND	900
Aroclor-1248	26,000	900
Aroclor-1254	28,000	900
Aroclor-1260	ND	900

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	86%
Decachlorobiphenyl	133%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation

Client ID: 13SS07B

Lab ID: C0137-16

Analysis: Method 8080

Analysis Date: 2/29/96

Matrix: Soil, 88% solid

Concentration in: ug/kg, dry weight basis

Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene 94%

Decachlorobiphenyl 132%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS08A  
Lab ID: C0137-17  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 86% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	380
Aroclor-1221	ND	760
Aroclor-1232	ND	380
Aroclor-1242	ND	380
Aroclor-1248	3,200	380
Aroclor-1254	4,200	380
Aroclor-1260	ND	380

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 82%  
Decachlorobiphenyl 118%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS08AD  
Lab ID: C0137-18  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 87% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	190
Aroclor-1221	ND	380
Aroclor-1232	ND	190
Aroclor-1242	ND	190
Aroclor-1248	3,500	190
Aroclor-1254	4,400	190
Aroclor-1260	ND	190

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	79%
Decachlorobiphenyl	126%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS09A  
Lab ID: C0137-19  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	150	36
Aroclor-1254	300	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 93%  
Decachlorobiphenyl 112%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS09B  
Lab ID: C0137-20  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	106%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0227-B1  
Analysis: Method 8080

Analysis Date: 2/28/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution:

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 106%  
Decachlorobiphenyl 121%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Lab ID for Blank Spike: P0227-LC1

Analysis: Method 8080

Matrix: Soil

Analysis Date for Blank Spike: 2/28/96

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	98



## Analysis Report: Chlorinated Pesticides

### Matrix Spike Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Client ID: 13SS02B

Lab ID for Matrix Spike: C0137-04MS

Analysis Date for Matrix Spike: 2/28/96

Lab ID for Matrix Spike Duplicate: C0137-04MSD

Analysis Date for Matrix Spike Duplicate: 2/28/96

Analysis: Method 8080

#### % Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	81	83	2



## Analysis Report: Chlorinated Pesticides

### Matrix Spike Summary

Client: Stone & Webster Engineering Corporation      Matrix: Solid  
Client ID: 13SS06B  
Lab ID for Matrix Spike: C0137-14MS      Analysis Date for Matrix Spike: 2/29/96  
Lab ID for Matrix Spike Duplicate: C0137-14MSD      Analysis Date for Matrix Spike Duplicate: 2/29/96  
Analysis: Method 8080

#### % Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	37	86	1

**MITKEM CORPORATION**

Lab Project #: **C0137 (SDG2)**  
Client Name: **Stone & Webster Engineering Corporation**  
Client Project #: **042910910**  
Client PO #: **PS-25674**  
Project Name: **NCBC Davisville, Site 13**  
Date Due: **3/7/96**  
Total Price: **\$**  
Deliverables Req'd: **LOTUS DISKETTE**  
Case Completed: **YES**

Logged In By: MS  
Reviewed By: Du  
Date: 2/22/96  
Time: \_\_\_\_\_

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-21	13SS10B	SL	PCB	2/22/96	2/22/96
-22	13SS10BD	SL	PCB	2/22/96	2/22/96
-23	13SS11A	SL	PCB	2/22/96	2/22/96
-24	13SS08B	SL	PCB	2/22/96	2/22/96
-24MS	13SS08B MS ✓	SL	PCB	2/22/96	2/22/96
-24MSD	13SS08B MSD	SL	PCB	2/22/96	2/22/96
-25	13SS11B	SL	PCB	2/22/96	2/22/96
-26	13SS12A	SL	PCB	2/22/96	2/22/96
-27	13SS12B	SL	PCB	2/22/96	2/22/96
-28	13SS13A	SL	PCB	2/22/96	2/22/96
-29	13SS13AD	SL	PCB	2/22/96	2/22/96
-30	13SS14A	SL	PCB	2/22/96	2/22/96
-31	13SS14B	SL	PCB	2/22/96	2/22/96
-32	13SS15A	SL	PCB	2/22/96	2/22/96

2/28/96 8:31 AM

## MITKEM CORPORATION

-33	13SS15B	SL	PCB	2/22/96	2/22/96
-34	13SS10A	SL	PCB	2/22/96	2/22/96
-34MS	13SS10A MS	SL	PCB	2/22/96	2/22/96
-34MSD	13SS10A MSD	SL	PCB	2/22/96	2/22/96
-35	13SS16A	SL	PCB	2/22/96	2/22/96
-36	13SS16AD	SL	PCB	2/22/96	2/22/96
-37	13SS17A	SL	PCB	2/22/96	2/22/96
-38	13SS17B	SL	PCB	2/22/96	2/22/96
-39	13SS18A	SL	PCB	2/22/96	2/22/96
-40	13SS18B	SL	PCB	2/22/96	2/22/96

### NOTES:

#### ORIGINAL REPORT GOES TO:

Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210  
ATT: Lisa Brandon  
Phone: 617 598-8323  
Fax: 617 598-2922

#### INVOICE GOES TO:

same

#### ADDITIONAL REPORT GOES TO:

none

#### ADDITIONAL REPORT GOES TO:

none

2/28/96 8:31 AM

Page 2 of 2

Lab Project #: C0137 SDG2



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS10B  
Lab ID: C0137-21  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	89%
Decachlorobiphenyl	103%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS10BD  
Lab ID: C0137-22  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	96%
Decachlorobiphenyl	107%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS11A  
Lab ID: C0137-23  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 86% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	77
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	280	38
Aroclor-1254	660	38
Aroclor-1260	ND	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 93%  
Decachlorobiphenyl 111%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS08B  
Lab ID: C0137-24  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 87% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	41	38
Aroclor-1254	56	38
Aroclor-1260	ND	38

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	88%
Decachlorobiphenyl	95%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS11B  
Lab ID: C0137-25  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 90%  
Decachlorobiphenyl 104%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS12A  
Lab ID: C0137-26  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	380
Aroclor-1221	ND	750
Aroclor-1232	ND	380
Aroclor-1242	ND	380
Aroclor-1248	5,800	380
Aroclor-1254	8,100	380
Aroclor-1260	ND	380

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 85%  
Decachlorobiphenyl 98%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS12B  
Lab ID: C0137-27  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

### Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	79%
Decachlorobiphenyl	108%

ND=Not Detected

MCP limits: 2.000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS13A  
Lab ID: C0137-28  
Analysis: Method 8080

Analysis Date: 3/9/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	190
Aroclor-1221	ND	370
Aroclor-1232	ND	190
Aroclor-1242	ND	190
Aroclor-1248	1,800	190
Aroclor-1254	2,300	190
Aroclor-1260	ND	190

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 89%  
Decachlorobiphenyl 111%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS13AD  
Lab ID: C0137-29  
Analysis: Method 8080

Analysis Date: 3/9/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	180
Aroclor-1221	ND	370
Aroclor-1232	ND	180
Aroclor-1242	ND	180
Aroclor-1248	1,600	180
Aroclor-1254	1,900	180
Aroclor-1260	ND	180

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 87%  
Decachlorobiphenyl 126%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS14A  
Lab ID: C0137-30  
Analysis: Method 8080

Analysis Date: 3/9/96  
Matrix: Soil, 85% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	190
Aroclor-1221	ND	390
Aroclor-1232	ND	190
Aroclor-1242	ND	190
Aroclor-1248	2,500	190
Aroclor-1254	4,300	190
Aroclor-1260	ND	190

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	136%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS14B  
Lab ID: C0137-31  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 106%  
Decachlorobiphenyl 121%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS15A  
Lab ID: C0137-32  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	370
Aroclor-1221	ND	740
Aroclor-1232	ND	370
Aroclor-1242	ND	370
Aroclor-1248	7,400	370
Aroclor-1254	13,000	370
Aroclor-1260	ND	370

### Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	99%
Decachlorobiphenyl	138%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS15B  
Lab ID: C0137-33  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 100%  
Decachlorobiphenyl 124%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS10A  
Lab ID: C0137-34  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	210	37
Aroclor-1254	660	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 98%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS16A  
Lab ID: C0137-35  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 3,000

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	110,000
Aroclor-1221	ND	220,000
Aroclor-1232	ND	110,000
Aroclor-1242	ND	110,000
Aroclor-1248	3,300,000	110,000
Aroclor-1254	1,600,000	110,000
Aroclor-1260	ND	110,000

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene DL  
Decachlorobiphenyl DL

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS16AD  
Lab ID: C0137-36  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 2,000

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	73,000
Aroclor-1221	ND	150,000
Aroclor-1232	ND	73,000
Aroclor-1242	ND	73,000
Aroclor-1248	1,600,000	73,000
Aroclor-1254	780,000	73,000
Aroclor-1260	ND	73,000

### Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	DL
Decachlorobiphenyl	DL

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS17A  
Lab ID: C0137-37  
Analysis: Method 8080

Analysis Date: 3/9/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	180
Aroclor-1221	ND	370
Aroclor-1232	ND	180
Aroclor-1242	ND	180
Aroclor-1248	5,400	180
Aroclor-1254	7,000	180
Aroclor-1260	ND	180

### Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	80%
Decachlorobiphenyl	132%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS17B  
Lab ID: C0137-38  
Analysis: Method 8080

Analysis Date: 3/2/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 138%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS18A  
Lab ID: C0137-39  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 20

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	740
Aroclor-1221	ND	1,500
Aroclor-1232	ND	740
Aroclor-1242	ND	740
Aroclor-1248	18,000	740
Aroclor-1254	17,000	740
Aroclor-1260	ND	740

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 78%  
Decachlorobiphenyl 131%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS18B  
Lab ID: C0137-40  
Analysis: Method 8080

Analysis Date: /96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 2

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	75
Aroclor-1221	ND	150
Aroclor-1232	ND	75
Aroclor-1242	ND	75
Aroclor-1248	1,000	75
Aroclor-1254	900	75
Aroclor-1260	ND	75

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	67%
Decachlorobiphenyl	116%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0229-B1  
Analysis: Method 8080

Analysis Date: 2/29/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 104%  
Decachlorobiphenyl 113%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Lab ID for Blank Spike: P0229LC1

Analysis Date for Blank Spike: 3/2/96

Analysis: Method 8080

<u>Analyte</u>	<u>% Recovery Blank Spike</u>
Aroclor 1260	94



## Analysis Report: Chlorinated Pesticides

### Matrix Spike Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Client ID: 13SS08B

Lab ID for Matrix Spike: C0137-24MS

Analysis Date for Matrix Spike: 3/2/96

Lab ID for Matrix Spike Duplicate: C0137-24MSD

Analysis Date for Matrix Spike Duplicate: 3/2/96

Analysis: Method 8080

#### % Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	80	94	16



Analysis Report: Chlorinated Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Client ID: 13SS10A

Lab ID for Matrix Spike: C0137-34MS

Analysis Date for Matrix Spike: 3/2/96

Lab ID for Matrix Spike Duplicate: C0137-34MSD

Analysis Date for Matrix Spike Duplicate: 3/2/96

Analysis: Method 8080

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	206	210	2

# MITKEM CORPORATION

Lab Project #: **C0137 (SDG3)**  
Client Name: **Stone & Webster Engineering Corporation**  
Client Project #: **042910910**  
Client PO #: **PS-25674**  
Project Name: **NCBC Davisville, Site 13**  
Date Due: **3/7/96**  
Total Price: **\$**  
Deliverables Req'd: **LOTUS DISKETTE**  
Case Completed: **YES**

Logged In By: LS  
Reviewed By: DM  
Date: 2/28/96  
Time: 9:30

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-41	13SS19A	SL	PCB	2/22/96	2/22/96
-42	13SS19B	SL	PCB	2/22/96	2/22/96
-43	13SS20A	SL	PCB	2/22/96	2/22/96
-44	13SS13B	SL	PCB	2/22/96	2/22/96
-44MS	13SS13B MS	SL	PCB	2/22/96	2/22/96
-44MSD	13SS13B MSD	SL	PCB	2/22/96	2/22/96
-45	13SS20B	SL	PCB	2/22/96	2/22/96
-46	13SS21A	SL	PCB	2/22/96	2/22/96
-47	13SS21AD	SL	PCB	2/22/96	2/22/96
-48	13SS22A	SL	PCB	2/22/96	2/22/96
-49	13SS22B	SL	PCB	2/22/96	2/22/96
-50	13SS23A	SL	PCB	2/22/96	2/22/96
-51	13SS23B	SL	PCB	2/22/96	2/22/96
-52	13SS24A	SL	PCB	2/22/96	2/22/96

2/28/96 8:46 AM

Page 1 of 2

Lab Project #: C0137 SDG3

## MITKEM CORPORATION

-53	13SS24B	SL	PCB	2/22/96	2/22/96
-54	13SS16B	SL	PCB	2/22/96	2/22/96
-54MS	13SS16B MS	SL	PCB	2/22/96	2/22/96
-54MSD	13SS16B MSD	SL	PCB	2/22/96	2/22/96
-55	13SS25A	SL	PCB	2/22/96	2/22/96
-56	13SS25B	SL	PCB	2/22/96	2/22/96
-57	13SS26A	SL	PCB	2/22/96	2/22/96
-58	13SS26B	SL	PCB	2/22/96	2/22/96
-59	13SS27A	SL	PCB	2/22/96	2/22/96
-60	13SS27B	SL	PCB	2/22/96	2/22/96

### NOTES:

#### ORIGINAL REPORT GOES TO:

Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210  
ATT: Lisa Brandon  
Phone: 617 598-8323  
Fax: 617 598-2922

#### ADDITIONAL REPORT GOES TO:

none

#### INVOICE GOES TO:

same

#### ADDITIONAL REPORT GOES TO:

none



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS19A  
Lab ID: C0137-41  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	180
Aroclor-1221	ND	370
Aroclor-1232	ND	180
Aroclor-1242	ND	180
Aroclor-1248	4,200	180
Aroclor-1254	2,100	180
Aroclor-1260	1,500	180

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 97%  
Decachlorobiphenyl 141%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS19B  
Lab ID: C0137-42  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	51	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	102%
Decachlorobiphenyl	122%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS20A  
Lab ID: C0137-43  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	180
Aroclor-1221	ND	370
Aroclor-1232	ND	180
Aroclor-1242	ND	180
Aroclor-1248	2,100	180
Aroclor-1254	2,000	180
Aroclor-1260	1,300	180

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 106%  
Decachlorobiphenyl 153%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS13B  
Lab ID: C0137-44  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	49	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 109%  
Decachlorobiphenyl 142%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS20B  
Lab ID: C0137-45  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	46	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 90%  
Decachlorobiphenyl 109%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS21A  
Lab ID: C0137-46  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 87% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	62	38
Aroclor-1254	190	38
Aroclor-1260	75	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 118%  
Decachlorobiphenyl 146%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS21AD  
Lab ID: C0137-47  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	54	38
Aroclor-1254	72	38
Aroclor-1260	61	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 161%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS22A  
Lab ID: C0137-48  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	280	36
Aroclor-1254	690	36
Aroclor-1260	180	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	94%
Decachlorobiphenyl	126%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS22B  
Lab ID: C0137-49  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 125%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS23A  
Lab ID: C0137-50  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	44	37
Aroclor-1260	ND	37
Surrogate Recovery		
2,4,5,6-Tetrachloro-m-xylene	90%	
Decachlorobiphenyl	119%	

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS23B  
Lab ID: C0137-51  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 97%  
Decachlorobiphenyl 126%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS24A  
Lab ID: C0137-52  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 86% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 2

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	76
Aroclor-1221	ND	150
Aroclor-1232	ND	76
Aroclor-1242	ND	76
Aroclor-1248	1,200	76
Aroclor-1254	1,300	76
Aroclor-1260	1,500	76

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	81%
Decachlorobiphenyl	105%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS24B  
Lab ID: C0137-53  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 108%  
Decachlorobiphenyl 137%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS16B  
Lab ID: C0137-54  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 100

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	3,600
Aroclor-1221	ND	7,300
Aroclor-1232	ND	3,600
Aroclor-1242	ND	3,600
Aroclor-1248	120,000	3,600
Aroclor-1254	87,000	3,600
Aroclor-1260	23,000	3,600

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	DL
Decachlorobiphenyl	DL

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS25A  
Lab ID: C0137-55  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	410	37
Aroclor-1254	970	37
Aroclor-1260	460	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 101%  
Decachlorobiphenyl 133%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS25B  
Lab ID: C0137-56  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

### Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	87%
Decachlorobiphenyl	110%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS26A  
Lab ID: C0137-57  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	410	37
Aroclor-1254	1,100	37
Aroclor-1260	1,200	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	100%
Decachlorobiphenyl	136%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS26B  
Lab ID: C0137-58  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 92% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 88%  
Decachlorobiphenyl 112%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS27A  
Lab ID: C0137-59  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 3

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	1,100
Aroclor-1221	ND	2,200
Aroclor-1232	ND	1,100
Aroclor-1242	ND	1,100
Aroclor-1248	1,600	1,100
Aroclor-1254	1,700	1,100
Aroclor-1260	2,200	1,100

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 97%  
Decachlorobiphenyl 189%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS27B  
Lab ID: C0137-60  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	82	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 88%  
Decachlorobiphenyl 114%

ND=Not Detected

MCP limits: 2.000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0305-B1  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	94%
Decachlorobiphenyl	116%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Lab ID for Blank Spike: P0304LC1

Analysis Date for Blank Spike: 3/10/96

Analysis: Method 8080

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	100



Analysis Report: Chlorinated Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS13B  
Lab ID for Matrix Spike: C0137-44MS  
Lab ID for Matrix Spike Duplicate: C0137-44MSD  
Analysis: Method 8080

Matrix: Solid  
Analysis Date for Matrix Spike: 3/10/96  
Analysis Date for Matrix Spike Duplicate: 3/10/96

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	100	93	7



## Analysis Report: Chlorinated Pesticides

### Matrix Spike Summary

Client: Stone & Webster Engineering Corporation      Matrix: Solid  
Client ID: 13SS16B  
Lab ID for Matrix Spike: C0137-54MS      Analysis Date for Matrix Spike: 3/11/96  
Lab ID for Matrix Spike Duplicate: C0137-54MSD      Analysis Date for Matrix Spike Duplicate: 3/11/96  
Analysis: Method 8080

#### % Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	DL	DL	

The Matrix Spike recovery could not be accurately determined due to high sample dilution (100x).

# MITKEM CORPORATION

Lab Project #: **C0137 (SDG4)**  
Client Name: **Stone & Webster Engineering Corporation**  
Client Project #: **042910910**  
Client PO #: **PS-25674**  
Project Name: **NCBC Davisville, Site 13**  
Date Due: **3/7/96**  
Total Price: **\$**  
Deliverables Req'd: **LOTUS DISKETTE**  
Case Completed: **YES**

Logged In By: MS

Reviewed By: DR

Date: 2/22/96

Time: 9:20

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-61	13SS28A	SL	PCB	2/22/96	2/22/96
-62	13SS28B	SL	PCB	2/22/96	2/22/96
-63	13SS29A	SL	PCB	2/22/96	2/22/96
-64	13SS21B	SL	PCB	2/22/96	2/22/96
-64MS	13SS21B MS	SL	PCB	2/22/96	2/22/96
-64MSD	13SS21B MSD	SL	PCB	2/22/96	2/22/96
-65	13SS29AD	SL	PCB	2/22/96	2/22/96
-66	13SS30A	SL	PCB	2/22/96	2/22/96
-67	13SS30B	SL	PCB	2/22/96	2/22/96
-68	13SS31A	SL	PCB	2/22/96	2/22/96
-69	13SS31B	SL	PCB	2/22/96	2/22/96
-70	13SS32A	SL	PCB	2/22/96	2/22/96
-71	13SS32B	SL	PCB	2/22/96	2/22/96
-72	13SS33A	SL	PCB	2/22/96	2/22/96

2/28/96 8:43 AM

Page 1 of 2

Lab Project #: C0137 SDG4

## MITKEM CORPORATION

-73	13SS33B	SL	PCB	2/22/96	2/22/96
-74	13SS34A	SL	PCB	2/22/96	2/22/96
-75	13SS34B	SL	PCB	2/22/96	2/22/96
-76	13SS35A	SL	PCB	2/22/96	2/22/96
-77	13SS35B	SL	PCB	2/22/96	2/22/96
-78	13SS36A	SL	PCB	2/22/96	2/22/96
-79	13SS36B	SL	PCB	2/22/96	2/22/96
-80	13SS37A	SL	PCB	2/22/96	2/22/96

### NOTES:

#### ORIGINAL REPORT GOES TO:

Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210  
ATT: Lisa Brandon  
Phone: 617 598-8323  
Fax: 617 598-2922

#### INVOICE GOES TO:

same

#### ADDITIONAL REPORT GOES TO:

none

#### ADDITIONAL REPORT GOES TO:

none



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS28A  
Lab ID: C0137-61  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	360
Aroclor-1221	ND	730
Aroclor-1232	ND	360
Aroclor-1242	ND	360
Aroclor-1248	ND	360
Aroclor-1254	8,200	360
Aroclor-1260	17,000	360

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	85%
Decachlorobiphenyl	59%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS28B  
Lab ID: C0137-62  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	330	37
Aroclor-1260	280	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	95%
Decachlorobiphenyl	75%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS29A  
Lab ID: C0137-63  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	370
Aroclor-1221	ND	730
Aroclor-1232	ND	370
Aroclor-1242	ND	370
Aroclor-1248	9,000	370
Aroclor-1254	8,100	370
Aroclor-1260	9,300	370

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 96%  
Decachlorobiphenyl 92%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS21B  
Lab ID: C0137-64  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 88%  
Decachlorobiphenyl 68%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS29AD  
Lab ID: C0137-65  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 20

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	720
Aroclor-1221	ND	1,400
Aroclor-1232	ND	720
Aroclor-1242	ND	720
Aroclor-1248	12,000	720
Aroclor-1254	11,000	720
Aroclor-1260	12,000	720

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	71%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation

Client ID: 13SS30A

Lab ID: C0137-66

Analysis: Method 8080

Analysis Date: 3/11/96

Matrix: Soil, 90% solid

Concentration in: ug/kg, dry weight basis

Dilution: 2

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	73
Aroclor-1221	ND	150
Aroclor-1232	ND	73
Aroclor-1242	ND	73
Aroclor-1248	ND	73
Aroclor-1254	200	73
Aroclor-1260	230	73

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene 90%

Decachlorobiphenyl 66%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS30B  
Lab ID: C0137-67  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	105%
Decachlorobiphenyl	74%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS31A  
Lab ID: C0137-68  
Analysis Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	410	37
Aroclor-1254	1,000	37
Aroclor-1260	540	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 110%  
Decachlorobiphenyl 85%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS31B  
Lab ID: C0137-69  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	39	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	78%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation

Client ID: 13SS32A

Lab ID: C0137-70

Analysis: Method 8080

Analysis Date: 3/11/96

Matrix: Soil, 89% solid

Concentration in: ug/kg, dry weight basis

Dilution: 3

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	110
Aroclor-1221	ND	220
Aroclor-1232	ND	110
Aroclor-1242	ND	110
Aroclor-1248	1,500	110
Aroclor-1254	1,500	110
Aroclor-1260	1,500	110

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene 98%

Decachlorobiphenyl 76%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS32B  
Lab ID: C0137-71  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 85% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	39
Aroclor-1221	ND	78
Aroclor-1232	ND	39
Aroclor-1242	ND	39
Aroclor-1248	230	39
Aroclor-1254	560	39
Aroclor-1260	210	39

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 85%  
Decachlorobiphenyl 70%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS33A  
Lab ID: C0137-72  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	490	37
Aroclor-1254	1,700	37
Aroclor-1260	750	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 98%  
Decachlorobiphenyl 78%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS33B  
Lab ID: C0137-73  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 69% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 3

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	140
Aroclor-1221	ND	290
Aroclor-1232	ND	140
Aroclor-1242	ND	140
Aroclor-1248	ND	140
Aroclor-1254	2,500	140
Aroclor-1260	1,100	140

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 137%  
Decachlorobiphenyl 102%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS34A  
Lab ID: C0137-74  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 3

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	110
Aroclor-1221	ND	220
Aroclor-1232	ND	110
Aroclor-1242	ND	110
Aroclor-1248	1,100	110
Aroclor-1254	1,100	110
Aroclor-1260	1,800	110

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 44%  
Decachlorobiphenyl 33%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS34B  
Lab ID: C0137-75  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	310	37
Aroclor-1260	87	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 105%  
Decachlorobiphenyl 80%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS35A  
Lab ID: C0137-76  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 87% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	190
Aroclor-1221	ND	380
Aroclor-1232	ND	190
Aroclor-1242	ND	190
Aroclor-1248	1,600	190
Aroclor-1254	2,300	190
Aroclor-1260	3,000	190

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 85%  
Decachlorobiphenyl 69%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS35B  
Lab ID: C0137-77  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 89% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	120%
Decachlorobiphenyl	95%

ND=Not Detected

MCP limits: 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS36A  
Lab ID: C0137-78  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	370
Aroclor-1221	ND	730
Aroclor-1232	ND	370
Aroclor-1242	ND	370
Aroclor-1248	4,800	370
Aroclor-1254	4,800	370
Aroclor-1260	7,800	370

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 68%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS36B  
Lab ID: C0137-79  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	53	38
Aroclor-1254	53	38
Aroclor-1260	61	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 102%  
Decachlorobiphenyl 70%

ND=Not Detected

MCP limits 2,000 ug/kg



## Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS37A  
Lab ID: C0137-80  
Analysis: Method 8080

Analysis Date: 3/12/96  
Matrix: Soil, 91% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	240	36
Aroclor-1254	380	36
Aroclor-1260	1,000	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	31%
Decachlorobiphenyl	25%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0307-B1  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	107%
Decachlorobiphenyl	75%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Lab ID for Blank Spike: P0307LC1

Analysis Date for Blank Spike: 3/10/96

Analysis: Method 8080

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	113



## Analysis Report: Chlorinated Pesticides

### Matrix Spike Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Client ID: 13SS21B

Lab ID for Matrix Spike: C0137-64MS

Analysis Date for Matrix Spike: 3/11/96

Lab ID for Matrix Spike Duplicate: C0137-64MSD

Analysis Date for Matrix Spike Duplicate: 3/11/96

Analysis: Method 8080

#### % Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	97	103	6

# MITKEM CORPORATION

Lab Project #: **C0137 (SDG5)**  
Client Name: **Stone & Webster Engineering Corporation**  
Client Project #: **042910910**  
Client PO #: **PS-25674**  
Project Name: **NCBC Davisville, Site 13**  
Date Due: **3/7/96**  
Total Price: **\$**  
Deliverables Req'd: **LOTUS DISKETTE**  
Case Completed: **YES**

Logged In By: MG  
Reviewed By: PC  
Date: 2/28/96  
Time: 9:20

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-81	13SS37B	SL	PCB	2/22/96	2/22/96
-82	13W-R	W	PCB	2/22/96	2/22/96
-83	13SS29B	SL	PCB	2/22/96	2/22/96
-83MS	13SS29B MS	SL	PCB	2/22/96	2/22/96
-83MSD	13SS29B MSD	SL	PCB	2/22/96	2/22/96

**NOTES:**

**ORIGINAL REPORT GOES TO:**  
Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210  
ATT: Lisa Brandon  
Phone: 617 598-8323  
Fax: 617 598-2922

**INVOICE GOES TO:**  
same

**ADDITIONAL REPORT GOES TO:**  
none

**ADDITIONAL REPORT GOES TO:**  
none



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS37B  
Lab ID: C0137-81  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 90% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	107%
Decachlorobiphenyl	69%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13W-R  
Lab ID: C0137-82  
Analysis: Method 8080

Analysis Date: 3/1/96  
Matrix: Water  
Concentration in: ug/L  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	0.1
Aroclor-1221	ND	0.2
Aroclor-1232	ND	0.1
Aroclor-1242	ND	0.1
Aroclor-1248	ND	0.1
Aroclor-1254	ND	0.1
Aroclor-1260	ND	0.1

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 90%  
Decachlorobiphenyl 116%

ND=Not Detected

MCP limits: 1 ug/L



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13SS29B  
Lab ID: C0137-83  
Analysis: Method 8080

Analysis Date: 3/11/96  
Matrix: Soil, 88% solid  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	880	38
Aroclor-1260	650	38

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	95%
Decachlorobiphenyl	61%

ND=Not Detected

MCP limits: 2,000 ug/kg



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, C0227-B2  
Analysis: Method 8080

Analysis Date: 3/1/96  
Matrix: Water  
Concentration in: ug/L  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	0.1
Aroclor-1221	ND	0.2
Aroclor-1232	ND	0.1
Aroclor-1242	ND	0.1
Aroclor-1248	ND	0.1
Aroclor-1254	ND	0.1
Aroclor-1260	ND	0.1

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	96%
Decachlorobiphenyl	120%

ND=Not Detected

MCP limits: 1 ug/L



### Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0307-B2  
Analysis: Method 8080

Analysis Date: 3/10/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	110%
Decachlorobiphenyl	80%

ND=Not Detected

MCP limits: 2,000 ug/kg



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Water

Lab ID for Blank Spike: P02277-LC2

Analysis Date for Blank Spike: 3/1/96

Analysis: Method 8080

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	96



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Lab ID for Blank Spike: P0307-LC2

Analysis Date for Blank Spike: 3/10/96

Analysis: Method 8080

<u>Analyte</u>	<u>% Recovery Blank Spike</u>
Aroclor 1260	104



Analysis Report: Chlorinated Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation

Matrix: Solid

Client ID: 13SS29B

Lab ID for Matrix Spike: C0137-83MS

Analysis Date for Matrix Spike: 3/11/96

Lab ID for Matrix Spike Duplicate: C0137-83MSD

Analysis Date for Matrix Spike Duplicate: 3/11/96

Analysis: Method 8080

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	91	140	42



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 1232 East Broadway Road • Suite 210 • Tempe, Arizona 85282  
 (602) 303-9535 • Fax (602) 921-2883

# CHAIN-OF-CUSTODY RECORD

INVOICE TO						REPORT TO						LAB REFERENCE #										
COMPANY <u>STONE &amp; WEBSTER</u>			PHONE <u>417-589-8323</u>			COMPANY <u>STONE &amp; WEBSTER</u>			PHONE <u>617-589-8323</u>													
NAME <u>LISA BRANDON</u>			FAX <u>417-589-2922</u>			NAME <u>LISA BRANDON</u>			FAX <u>617-589-2922</u>													
ADDRESS <u>245 SUMMER ST 3 FL</u>						ADDRESS <u>245 SUMMER ST 3 FL</u>						TURNAROUND TIME:										
CITY/ST/ZIP <u>BOSTON, MA 02210</u>						CITY/ST/ZIP <u>BOSTON, MA 02210</u>						<u>14 DAYS</u>										
CLIENT PROJECT NAME: <u>MRC DAVISDALE SITE 13</u>		CLIENT PROJECT #: <u>042910910</u>		CLIENT P.O.#:		REQUESTED ANALYSES																
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 8080										COMMENTS			
13SS01A	2/22/96 0800				X			1	X													
13SS01B	2/22/96 0800				X			1	X													
13SS02A	2/22/96 0800				X			1	X													
13SS02B	2/22/96 0800				X			3	X													DO MS/MSD
13SS03A	2/22/96 0815				X			1	X													
13SS03B	2/22/96 0815				X			1	X													
13SS04A	2/22/96 0820				X			1	X													
13SS04B	2/22/96 0820				X			1	X													
13SS05A	2/22/96 0830				X			1	X													
13SS05B	2/22/96 0830				X			1	X													
13SS06A	2/22/96 0835				X			1	X													
13SS06B	2/22/96 0835				X			3	X													DO MS/MSD
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY		DATE/TIME	ADDITIONAL REMARKS:		COOLER TEMP.														
1st	<i>[Signature]</i>	2/22/96	<i>[Signature]</i>		2/20/96 17:30			4°C														
2nd																						
3rd																						

WHITE: LABORATORY COPY      YELLOW: REPORT COPY      PINK: CLIENT'S COPY



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# CHAIN-OF-CUSTODY RECORD

INVOICE TO							REPORT TO							LAB REFERENCE #:								
COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>617-589-8323</u>			COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>617-589-8323</u>											
NAME <u>LISA BRANDON</u>				FAX <u>617-589-2922</u>			NAME <u>LISA BRANDON</u>				FAX <u>617-589-2922</u>											
ADDRESS <u>245 SUMMER ST</u>							ADDRESS <u>245 SUMMER ST 3 FL</u>							TURNAROUND TIME:								
CITY/ST/ZIP <u>BOSTON MA 02210</u>							CITY/ST/ZIP <u>BOSTON, MA 02210</u>							<u>14 DAYS</u>								
CLIENT PROJECT NAME: <u>NBC DAUVILLE SITE 13</u>			CLIENT PROJECT #: <u>040010910</u>			CLIENT P.O.#:		REQUESTED ANALYSES														
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 8080										COMMENTS			
13SS 07A	2/22/96 0840				X			1	X													
13SS 07B	2/22/96 0840				X			1	X													
13SS 08A	2/22/96 0845				X			1	X													
13SS 08B	2/22/96 0845				X			3	X													PO MS/MSD
13SS 09A	2/22/96 0850				X			1	X													
13SS 09B	2/22/96 0850				X			1	X													
13SS 10A	2/22/96 0900				X			3	X													DD MS/MSD
13SS 10B	2/22/96 0900				X			1	X													
13SS 11A	2/22/96 0905				X			1	X													
13SS 11B	2/22/96 0905				X			1	X													
13SS 12A	2/22/96 0910				X			1	X													
13SS 12B	2/22/96 0910				X			1	X													
TSF#	RELINQUISHED BY		DATE/TIME		ACCEPTED BY		DATE/TIME		ADDITIONAL REMARKS:				COOLER TEMP.									
1st	<u>Milium Corp</u>		<u>2/22/96 1635</u>		<u>[Signature]</u>		<u>2/22/96 1730</u>						<u>4°C</u>									
2nd			<u>1</u>				<u>1</u>															
3rd			<u>1</u>				<u>1</u>															

WHITE: LABORATORY COPY

YELLOW: REPORT COPY

PINK: CLIENT'S COPY



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 (602) 303-9535 • Fax (602) 921-2883

# CHAIN-OF-CUSTODY RECORD

INVOICE TO							REPORT TO															
COMPANY: <u>STONE &amp; WEBSTER</u>				PHONE: <u>617-589-8323</u>			COMPANY: <u>STONE &amp; WEBSTER</u>				PHONE: <u>617-589-8323</u>			LAB REFERENCE #								
NAME: <u>LISA BRANDON</u>				FAX: <u>617-589-2922</u>			NAME: <u>LISA BRANDON</u>				FAX: <u>617-589-2922</u>			TURNAROUND TIME:								
ADDRESS: <u>245 SUMMER ST</u>							ADDRESS: <u>245 SUMMER ST. 3 FL</u>							14 DAYS								
CITY/ST/ZIP: <u>BOSTON MA 02210</u>							CITY/ST/ZIP: <u>BOSTON MA 02210</u>															
CLIENT PROJECT NAME: <u>NBC DAVISVILLE SITE 13</u>				CLIENT PROJECT #: <u>042910910</u>			CLIENT P.O.#:							REQUESTED ANALYSES								
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	COMMENTS													
13SS13A	2/2/91'0915				X			1	<div style="display: flex; justify-content: space-between;"> <span>PCB-EPA 8180</span> <span>PCB-EPA 8180</span> </div>													
13SS13B	2/2/91'0915				X			3								DO MS/MSD						
13SS14A	2/2/91'0920				X			1														
13SS14B	2/2/91'0920				X			1														
13SS15A	2/2/91'0930				X			1														
13SS15B	2/2/91'0930				X			1														
13SS16A	2/2/91'0940				X			1														
13SS16B	2/2/91'0940				X			3								DO MS/MSD						
13SS17A	2/2/91'0945				X			1														
13SS17B	2/2/91'0945				X			1														
13SS18A	2/2/91'0955				X			1														
13SS18B	2/2/91'0955				X			1														
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY				DATE/TIME	ADDITIONAL REMARKS:								COOLER TEMP:						
1st	<i>[Signature]</i>	2/2/91'10:55	<i>[Signature]</i>				2/2/91'17:30									4°C						
2nd		/					/															
3rd		/					/															

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# CHAIN-OF-CUSTODY RECORD

INVOICE TO							REPORT TO							LAB REFERENCE #:			
COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>617-589-8323</u>			COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>617-589-8323</u>						
NAME <u>LISA BRANDON</u>				FAX <u>617-589-2922</u>			NAME <u>LISA BRANDON</u>				FAX <u>617-589-2922</u>						
ADDRESS <u>245 SUMMER ST</u>							ADDRESS <u>245 SUMMER ST. 3FL</u>							TURNAROUND TIME:			
CITY/ST/ZIP <u>BOSTON MA 02210</u>							CITY/ST/ZIP <u>BOSTON, MA 02210</u>							<u>14 DAYS</u>			
CLIENT PROJECT NAME: <u>NEBC DAVIDSON</u> <u>SITE 13</u>			CLIENT PROJECT #: <u>047919911</u>			CLIENT P.O.#:			REQUESTED ANALYSES								
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 9290							COMMENTS	
13SS19A	2/22/96 10:00				X			1	X								
13SS19B	2/22/96 10:00				X			1	X								
13SS20A	2/22/96 10:10				X			1	X								
13SS20B	2/22/96 10:10				X			1	X								
13SS21A	2/22/96 10:20				X			1	X								
13SS21B	2/22/96 10:20				X			3	X								Do MS/MSD
13SS22A	2/22/96 10:30				X			1	X								
13SS22B	2/22/96 10:30				X			1	X								
13SS23A	2/22/96 10:40				X			1	X								
13SS23B	2/22/96 10:40				X			1	X								
13SS24A	2/22/96 10:45				X			1	X								
13SS24B	2/22/96 10:45				X			1	X								
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY			DATE/TIME	ADDITIONAL REMARKS:					COOLER TEMP:					
1st	<u>[Signature]</u>	<u>2/22/96 16:35</u>	<u>[Signature]</u>			<u>2/22/96 17:30</u>						<u>1°C</u>					
2nd		<u>1</u>				<u>1</u>											
3rd		<u>1</u>				<u>1</u>											

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# CHAIN-OF-CUSTODY RECORD

INVOICE TO							REPORT TO								
COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>6175898323</u>			COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>6175898323</u>			LAB REFERENCE #	
NAME <u>LISA BRANDON</u>				FAX <u>6175892922</u>			NAME <u>LISA BRANDON</u>				FAX <u>6175892922</u>			TURNAROUND TIME:	
ADDRESS <u>245 SUMMER ST 3 FL</u>							ADDRESS <u>245 SUMMER ST 3 FL</u>							<b>14 DAYS</b>	
CITY/ST/ZIP <u>BOSTON MA 02210</u>							CITY/ST/ZIP <u>BOSTON MA 02210</u>								
CLIENT PROJECT NAME: <u>NRBC DAVISVILLE SITE 13</u>			CLIENT PROJECT #: <u>642910910</u>			CLIENT P.O.#:		REQUESTED ANALYSES <i>PCB-EPA8000</i>							
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID								# OF CONTAINERS
13SS 25A	2/22/96 10:55				X			1	MS/MSD						
13SS 25B	2/22/96 10:55				X		1								
13SS 26A	2/22/96 11:00				X		1								
13SS 26B	2/22/96 11:00				X		1								
13SS 27A	2/22/96 11:10				X		1								
13SS 27B	2/22/96 11:10				X		1								
13SS 28A	2/22/96 11:15				X		1								
13SS 28B	2/22/96 11:15				X		1								
13SS 29A	2/22/96 11:20				X		1								
13SS 29B	2/22/96 11:20				X		3								
13SS 30A	2/22/96 11:30				X		1								
13SS 30B	2/22/96 11:30				X		1								
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY				DATE/TIME	ADDITIONAL REMARKS:				COOLER TEMP:			
1st	<u>Monica C. Bente</u>	<u>2/22/96 1635</u>	<u>[Signature]</u>				<u>2/22/96 17:00</u>					<u>4°C</u>			
2nd															
3rd															

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# CHAIN-OF-CUSTODY RECORD

INVOICE TO							REPORT TO									
COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>6175898323</u>			COMPANY <u>STONE &amp; WEBSTER</u>				PHONE <u>6175898323</u>			LAB REFERENCE #:		
NAME <u>LISA BRANDON</u>				FAX <u>6175892922</u>			NAME <u>LISA BRANDON</u>				FAX <u>6175892922</u>			TURNAROUND TIME:		
ADDRESS <u>245 SUMMER ST 3FL</u>							ADDRESS <u>245 SUMMER ST 3FL</u>							<u>14 DAYS</u>		
CITY/ST/ZIP <u>BOSTON MA 02210</u>							CITY/ST/ZIP <u>BOSTON MA 02210</u>									
CLIENT PROJECT NAME: <u>NBC DAVISVILLE SITE 13</u>			CLIENT PROJECT #: <u>042910910</u>			CLIENT P.O.#:		REQUESTED ANALYSES								
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS								COMMENTS
<u>13SS37A</u>	<u>2/22/96</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>1</u>	<u>PCR-EPA 8090</u>							
<u>13SS37B</u>	<u>2/22/96</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<u>1</u>								
<u>13W-R</u>	<u>1</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<u>1</u>								
								<u>X</u>								
								<u>X</u>								
								<u>X</u>								
								<u>X</u>								
								<u>X</u>								
								<u>X</u>								
								<u>X</u>								
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:										
<u>1st</u>	<u>Miriam C. [Signature]</u>	<u>2/22/96 11:35</u>	<u>[Signature]</u>	<u>2/22/96 17:30</u>		<u>4°C</u>										
<u>2nd</u>		<u>1</u>		<u>1</u>												
<u>3rd</u>		<u>1</u>		<u>1</u>												

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May 9, 1996

Stone & Webster Engineering Corporation  
245 Summer Street  
Boston, MA 02210

Attn: Linda Gardiner

Dear Ms. Gardiner:

RE: Project # 04291.091  
Lab Project # C0337

Enclosed is the Data Report of the analyses required for the samples associated with the Project. If you have any questions regarding this Report, please contact either Kin Chiu or myself.

Thank you for your business.

Sincerely,

A handwritten signature in cursive script, which appears to read "Reinier A. Courant".

Reinier A. Courant  
QA/QC Director



**Client: Stone & Webster Engineering Corp.**

**Client Project: 04291.091 (NCBC Davisville)**

**Lab Project No.: C0337**

**Date Samples Received: April 25, 1996**

### **Project Narrative**

Sixty eight (68) soil samples were received from Stone & Webster Engineering Corp. on April 25, 1996 and analyzed for the parameters specified in the Chain of Custody Form. A copy of the Mitkem Sample Log-in Form is included for cross-referencing the Client Sample ID and Laboratory Sample ID.

For reporting purpose, the sample analyses were reported in four separate Sample Delivery Groups (SDG).

Due to the high concentration of Aroclor 1260 in several of the samples, the corresponding matrix spike recoveries could not be properly determined.

No other unusual observation was made during the analyses.

The enclosed data package has been reviewed and is authorized for release as evidenced by the signature below.

A handwritten signature in cursive script, appearing to read "Reinier A. Courant".

Reinier A. Courant  
QA/QC Director

**Data Qualifiers:**

- J** Detected below the Reporting Limit
- B** The analyte was detected in the associated Method Blank
- D** The analyte concentration is obtained from a diluted analysis
- E** The analyte concentration exceeded the calibration range

**1st SDG**



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 38A  
Lab ID: C0337-01  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	110%
Decachlorobiphenyl	126%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 38B  
Lab ID: C0337-02  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 88% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 112%  
Decachlorobiphenyl 119%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 39A  
Lab ID: C0337-03  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	980	37
Aroclor-1260	1,200	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 115%  
Decachlorobiphenyl 130%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 39B  
Lab ID: C0337-04  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 137%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 40A  
Lab ID: C0337-05  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg. dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	530	37
Aroclor-1260	580	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 109%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 40B  
Lab ID: C0337-06  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 123%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 41A  
Lab ID: C0337-07  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	980	35
Aroclor-1260	1,000	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 98%  
Decachlorobiphenyl 114%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 41B  
Lab ID: C0337-08  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	41	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 94%  
Decachlorobiphenyl 123%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 42A  
Lab ID: C0337-09  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	2,700 D	36
Aroclor-1260	2,400 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 138%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 42B  
Lab ID: C0337-10  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 94%  
Decachlorobiphenyl 132%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 43A  
Lab ID: C0337-11  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	1,400	37
Aroclor-1260	1,400	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	120%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 43B  
Lab ID: C0337-12  
Analysis: Method 8080

Analysis Date: 4/29/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 99%  
Decachlorobiphenyl 124%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 44A  
Lab ID: C0337-13  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	66,000 D	36
Aroclor-1254	72,000 D	36
Aroclor-1260	46,000 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	109%
Decachlorobiphenyl	128%

ND=Not Detected

D = Diluted

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 44B  
Lab ID: C0337-14  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	71
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	120	35
Aroclor-1254	120	35
Aroclor-1260	63	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 125%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 45A  
Lab ID: C0337-15  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	44,000 D	37
Aroclor-1260	30,000 D	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 101%  
Decachlorobiphenyl 114%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 45B  
Lab ID: C0337-16  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	83%
Decachlorobiphenyl	111%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 46A  
Lab ID: C0337-17  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 95% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	340,000 D	35
Aroclor-1260	180,000 D	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 108%  
Decachlorobiphenyl 126%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 46B  
Lab ID: C0337-18  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	71
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	55	35
Aroclor-1260	ND	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 87%  
Decachlorobiphenyl 113%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 46C  
Lab ID: C0337-19  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 93%  
Decachlorobiphenyl 127%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 47A  
Lab ID: C0337-20  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	71
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	3,400,000 D	36
Aroclor-1260	1,300,000 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	102%
Decachlorobiphenyl	*

ND=Not Detected

\* Surrogate could not be accurately determined due to coeluting interferences.

QC Batch: P0425-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation

Analysis Date: 4/29/96

Client ID:

Matrix: Soil

Lab ID: Method Blank, P0425-B1

Concentration in: ug/kg, dry weight basis

Analysis: Method 8080

Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	129%
Decachlorobiphenyl	127%

ND=Not Detected

QC Batch: P0425-B1



Analysis Report: Organochlorine Pesticides

Lab Control Summary

Client: Stone & Webster Engineering Corporation

Matrix: Soil

Lab ID for Blank Spike: P0425-LCS1

Analysis Date for Blank Spike: 04/29/96

Analysis: Method 8080

Spike Compound: Aroclor 1260

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	106

QC Batch: P0425-B1

025



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 42A  
Lab ID for Matrix Spike: C0337-09 MS  
Lab ID for Matrix Spike Duplicate: C0337-09 MSD  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Matrix Spike: 4/27/96  
Analysis Date for Matrix Spike Duplicate: 4/27/96

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	NA	NA	NA

QC Batch: P0425-B1

\* The Matrix Spike recovery could not be accurately determined due to high concentration of AR 1260 in the unspiked sample (2,400 ug/kg) versus the spiked concentration (330 ug/kg).



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation      Matrix: Soil  
Client ID: 13 SS 45B  
Lab ID for Matrix Spike: C0337-16 MS      Analysis Date for Matrix Spike: 4/30/96  
Lab ID for Matrix Spike Duplicate: C0337-16 MSD      Analysis Date for Matrix Spike Duplicate: 4/30/96  
Analysis: Method 8080

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	98	104	6

QC Batch: P0425-B1

027

**2nd SDG**



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 47B  
Lab ID: C0337-21  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	43,000 D	37
Aroclor-1260	15,000 D	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	93%
Decachlorobiphenyl	116%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 47C  
Lab ID: C0337-22  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	240	37
Aroclor-1260	86	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	107%
Decachlorobiphenyl	137%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 48A  
Lab ID: C0337-23  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	14,000 D	36
Aroclor-1260	16,000 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 88%  
Decachlorobiphenyl 111%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 48B  
Lab ID: C0337-24  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	41	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 112%  
Decachlorobiphenyl 147%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 49A  
Lab ID: C0337-25  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	71
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	220,000 D	36
Aroclor-1260	71,000 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 103%  
Decachlorobiphenyl 108%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 49B  
Lab ID: C0337-26  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 87% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	77
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	200	38
Aroclor-1260	78	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 94%  
Decachlorobiphenyl 123%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 50A  
Lab ID: C0337-27  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	73
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	7,500 D	37
Aroclor-1260	9,900 D	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 86%  
Decachlorobiphenyl 103%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 50B  
Lab ID: C0337-28  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 106%  
Decachlorobiphenyl 138%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 51A  
Lab ID: C0337-29  
Analysis: Method 8080

Analysis Date: 4/27/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	2.300 D	36
Aroclor-1260	2.200 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	85%
Decachlorobiphenyl	112%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 51B  
Lab ID: C0337-30  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	180	36
Aroclor-1260	130	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 104%  
Decachlorobiphenyl 136%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 52A  
Lab ID: C0337-31  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	6,700 D	36
Aroclor-1260	3,500 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 105%  
Decachlorobiphenyl 130%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 52B  
Lab ID: C0337-32  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	ND	35
Aroclor-1260	ND	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 103%  
Decachlorobiphenyl 134%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 52C  
Lab ID: C0337-33  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 96%  
Decachlorobiphenyl 124%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 53A  
Lab ID: C0337-34  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	12,000 D	35
Aroclor-1260	4,400 D	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene  
Decachlorobiphenyl

95%  
134%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 53B  
Lab ID: C0337-35  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil, 88% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	110	38
Aroclor-1260	69	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 74%  
Decachlorobiphenyl 107%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 54B  
Lab ID: C0337-36  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 72%  
Decachlorobiphenyl 111%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 55A  
Lab ID: C0337-37  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	7,800 D	36
Aroclor-1260	5,400 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 133%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 55B  
Lab ID: C0337-38  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	160	38
Aroclor-1260	180	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 103%  
Decachlorobiphenyl 143%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 56A  
Lab ID: C0337-39  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	270	35
Aroclor-1260	590	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 104%  
Decachlorobiphenyl 140%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 56B  
Lab ID: C0337-40  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	100%
Decachlorobiphenyl	131%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0426-B1  
Analysis: Method 8080

Analysis Date: 4/30/96  
Matrix: Soil  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 119%  
Decachlorobiphenyl 139%

ND=Not Detected

QC Batch: P0426-B1



Analysis Report: Organochlorine Pesticides

Lab Control Summary

Client: Stone & Webster Engineering Corporation  
Lab ID for Blank Spike: P0425-LCS1  
Analysis: Method 8080  
Spike Compound: Aroclor 1260

Matrix: Soil  
Analysis Date for Blank Spike: 04/30/96

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	115

QC Batch: P0426-B1

050



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 48B  
Lab ID for Matrix Spike: C0337-24 MS  
Lab ID for Matrix Spike Duplicate: C0337-24 MSD  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Matrix Spike: 4/30/96  
Analysis Date for Matrix Spike Duplicate: 4/30/96

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	107	104	3

QC Batch: P0426-B1

**3rd SDG**



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 57A  
Lab ID: C0337-41  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	70
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	230	35
Aroclor-1260	260	35

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 104%  
Decachlorobiphenyl 145%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 57B  
Lab ID: C0337-42  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 142%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 58A  
Lab ID: C0337-43  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	1,100	36
Aroclor-1260	3,600 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 131%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 58B  
Lab ID: C0337-44  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 91% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 92%  
Decachlorobiphenyl 129%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 59A  
Lab ID: C0337-45  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 94% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	71
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	5,700 D	35
Aroclor-1260	17,000 D	35

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	102%
Decachlorobiphenyl	114%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 59B  
Lab ID: C0337-46  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 105%  
Decachlorobiphenyl 131%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 54A  
Lab ID: C0337-47  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	13,000 D	36
Aroclor-1260	6,700 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	97%
Decachlorobiphenyl	128%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 60A  
Lab ID: C0337-48  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	35
Aroclor-1221	ND	71
Aroclor-1232	ND	35
Aroclor-1242	ND	35
Aroclor-1248	ND	35
Aroclor-1254	6,400 D	35
Aroclor-1260	8,100 D	35

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	109%
Decachlorobiphenyl	139%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 60B  
Lab ID: C0337-49  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 96%  
Decachlorobiphenyl 130%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 61A  
Lab ID: C0337-50  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	9,200 D	36
Aroclor-1260	34,000 D	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 110%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 61B  
Lab ID: C0337-51  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	75
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	ND	38
Aroclor-1260	ND	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 102%  
Decachlorobiphenyl 136%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 62A  
Lab ID: C0337-52  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	8,100 D	36
Aroclor-1260	1,400 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	109%
Decachlorobiphenyl	139%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 62B  
Lab ID: C0337-53  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	ND	37
Aroclor-1260	ND	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	101%
Decachlorobiphenyl	135%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 63A  
Lab ID: C0337-54  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	24,000 D	37
Aroclor-1260	3,600 D	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 100%  
Decachlorobiphenyl 129%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 63B  
Lab ID: C0337-55  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 102%  
Decachlorobiphenyl 143%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 16 2A  
Lab ID: C0337-56  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 83% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	40
Aroclor-1221	ND	81
Aroclor-1232	ND	40
Aroclor-1242	ND	40
Aroclor-1248	ND	40
Aroclor-1254	1,700,000 D	40
Aroclor-1260	450,000 D	40

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 156%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 16 2B  
Lab ID: C0337-57  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	630,000 D	37
Aroclor-1260	140,000 D	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	100%
Decachlorobiphenyl	124%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 16 2D  
Lab ID: C0337-58  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 69% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	48
Aroclor-1221	ND	96
Aroclor-1232	ND	48
Aroclor-1242	ND	48
Aroclor-1248	ND	48
Aroclor-1254	31,000 D	48
Aroclor-1260	8,200 D	48

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 81%  
Decachlorobiphenyl 95%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 52B DP  
Lab ID: C0337-59  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	71
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	510	36
Aroclor-1260	200	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 125%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 46B DP  
Lab ID: C0337-60  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	71
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	36	36
Aroclor-1260	ND	36

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene  
Decachlorobiphenyl

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0430-B1  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 100%  
Decachlorobiphenyl 136%

ND=Not Detected

QC Batch: P0430-B1



Analysis Report: Organochlorine Pesticides

Lab Control Summary

Client: Stone & Webster Engineering Corporation  
Lab ID for Blank Spike: P0430-LCS1  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Blank Spike: 05/01/96

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	114

QC Batch: P0430-B1

074



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 54A  
Lab ID for Matrix Spike: C0337-47MS  
Lab ID for Matrix Spike Duplicate: C0337-47MSD  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Matrix Spike: 5/1/96  
Analysis Date for Matrix Spike Duplicate: 5/1/96

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	NA	NA	NA

QC Batch: P0430-B1

\* Matrix Spike recovery could not be accurately determined due to the high AR-1260 concentration in the unspiked sample (6,700 ug/kg) versus the spike concentration (360 ug/kg).



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 62B  
Lab ID for Matrix Spike: C0337-53 MS  
Lab ID for Matrix Spike Duplicate: C0337-53 MSD  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Matrix Spike: 5/1/96  
Analysis Date for Matrix Spike Duplicate: 5/1/96

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	100	106	6

QC Batch: P0430-B1

**4th SDG**



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 40B DP  
Lab ID: C0337-61  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	98%
Decachlorobiphenyl	127%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 41A DP  
Lab ID: C0337-62  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 92% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	1,000	36
Aroclor-1260	1,000	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	100%
Decachlorobiphenyl	132%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 16B DP  
Lab ID: C0337-63  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 89% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	75
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	610,000 D	37
Aroclor-1260	140,000 D	37

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	105%
Decachlorobiphenyl	132%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 58B DP  
Lab ID: C0337-64  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 90% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	37
Aroclor-1221	ND	74
Aroclor-1232	ND	37
Aroclor-1242	ND	37
Aroclor-1248	ND	37
Aroclor-1254	79	37
Aroclor-1260	ND	37

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 107%  
Decachlorobiphenyl 141%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCBs)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 W R2  
Lab ID: C0337-65  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Water  
Concentration in: ug/L  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	1.0
Aroclor-1221	ND	2.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	100%
Decachlorobiphenyl	85%

ND = Not Detected

QC Batch: P0501-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 64A  
Lab ID: C0337-66  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 93% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

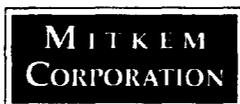
<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	6,500 D	36
Aroclor-1260	38,000 D	36

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	116%
Decachlorobiphenyl	108%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 64B  
Lab ID: C0337-67  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 81% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	41
Aroclor-1221	ND	83
Aroclor-1232	ND	41
Aroclor-1242	ND	41
Aroclor-1248	ND	41
Aroclor-1254	160	41
Aroclor-1260	140	41

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 103%  
Decachlorobiphenyl 130%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID: 13 SS 16 2C  
Lab ID: C0337-68  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil, 88% solids  
Concentration in: ug/kg, dry weight basis  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	38
Aroclor-1221	ND	76
Aroclor-1232	ND	38
Aroclor-1242	ND	38
Aroclor-1248	ND	38
Aroclor-1254	320,000 D	38
Aroclor-1260	73,000 D	38

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 95%  
Decachlorobiphenyl 125%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0430-B2  
Analysis: Method 8080

Analysis Date: 5/2/96  
Matrix: Soil  
Concentration in: ug/kg  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:  
2,4,5,6-Tetrachloro-m-xylene 116%  
Decachlorobiphenyl 134%

ND=Not Detected

QC Batch: P0430-B2



Analysis Report: Polychlorinated Biphenyls (PCBs)

Client: Stone & Webster Engineering Corporation  
Client ID:  
Lab ID: Method Blank, P0501-B1  
Analysis: Method 8080

Analysis Date: 5/1/96  
Matrix: Water  
Concentration in: ug/L  
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	1.0
Aroclor-1221	ND	2.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene	105%
Decachlorobiphenyl	110%

ND = Not Detected

QC Batch: P0501-B1



Analysis Report: Organochlorine Pesticides

Lab Control Summary

Client: Stone & Webster Engineering Corporation  
Lab ID for Blank Spike: P0430-LCS2  
Analysis: Method 8080

Matrix: Soil  
Analysis Date for Blank Spike: 05/02/96

<u>Analyte</u>	<u>% Recovery</u> <u>Blank Spike</u>
Aroclor 1260	120

QC Batch: P0430-B2



Analysis Report: Organochlorine Pesticides

Matrix Spike Summary

Client: Stone & Webster Engineering Corporation      Matrix: Soil  
Client ID: 13 SS 16 2C  
Lab ID for Matrix Spike: C0337-68MS      Analysis Date for Matrix Spike: 5/2/96  
Lab ID for Matrix Spike Duplicate: C0337-68MSD      Analysis Date for Matrix Spike Duplicate: 5/2/96  
Analysis: Method 8080

% Recovery

<u>Analyte</u>	<u>Matrix Spike</u>	<u>Matrix Spike Dup.</u>	<u>% RPD</u>
Aroclor 1260	NA	NA	NA

QC Batch: P0430-B2

\* The Matrix Spike recovery could not be accurately determined due to the high AR-1260 concentration in the unspiked sample (73,000 ug/kg) versus the spike concentration (370 ug/kg).





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# CHAIN-OF-CUSTODY RECORD

Page 2 of 6  
 IN TWO COOLERS

INVOICE TO						REPORT TO																
COMPANY <b>STONE &amp; WEBSTER</b>			PHONE <b>6175891695</b>			COMPANY			PHONE			LAB REFERENCE #:										
NAME <b>LINDA GARDINER</b>			FAX <b>6175892922</b>			NAME <b>SAME</b>			FAX													
ADDRESS <b>245 SUMMER ST. - 3 FL</b>						ADDRESS						TURNAROUND TIME:										
CITY/ST/ZIP <b>BOSTON, MA 02210</b>						CITY/ST/ZIP						<b>14 DAYS</b>										
CLIENT PROJECT NAME: <b>NCBC DAVISVILLE</b>			CLIENT PROJECT #: <b>042910910</b>			CLIENT P.O.#:			REQUESTED ANALYSES													
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 8080										COMMENTS			
13 SS 44 A	4/25/96 1930							1														
13 SS 44 B	4/25/96 1930							1														
13 SS 45 A	4/25/96 1935							1														
13 SS 45 B	4/25/96 1935							3														MS/MSD
13 SS 46 A	4/25/96 1945							1														
13 SS 46 B	4/25/96 1945							1														
13 SS 46 C	4/25/96 1945							1														
13 SS 47 A	4/25/96 1000							1														
13 SS 47 B	4/25/96 1000							1														
13 SS 47 C	4/25/96 1000							1														
13 SS 48 A	4/25/96 1010							1														
13 SS 48 B	4/25/96 1010							3														MS/MSD
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY			DATE/TIME	ADDITIONAL REMARKS					COOLER TEMP										
1st	<i>Linda B. Gardiner</i>	4/25 11340	<i>Mark Stippel</i>			4/25 1340						4°C										
2nd		/				/																
3rd		/				/																

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# CHAIN-OF-CUSTODY RECORD

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INVOICE TO						REPORT TO								
COMPANY <b>STONE &amp; WEBSTER</b>			PHONE <b>6175891695</b>			COMPANY			PHONE					
NAME <b>LINDA GARDINER</b>			FAX <b>6175892922</b>			NAME <b>SAME</b>			FAX					
ADDRESS <b>245 SUMMER ST - 3 FL</b>						ADDRESS								
CITY/ST/ZIP <b>BOSTON, MA 02210</b>						CITY/ST/ZIP								
CLIENT PROJECT NAME: <b>NCBC DAVISVILLE</b>						CLIENT PROJECT #: <b>042910910</b>								
CLIENT P.O.#:						REQUESTED ANALYSES								
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 8080				COMMENTS	
13 SS 49 A	4/25/96 1015													
13 SS 49 B	4/25/96 1015													
13 SS 50 A	4/25/96 1020													
13 SS 50 B	4/25/96 1020													
13 SS 51 A	4/25/96 1030													
13 SS 51 B	4/25/96 1030													
13 SS 52 A	4/25/96 1040													
13 SS 52 B	4/25/96 1040													
13 SS 52 C	4/25/96 1040													
13 SS 53 A	4/25/96 1045													
13 SS 53 B	4/25/96 1045													

TSP#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS	COOLER TEMP
1st	<i>Linda B. Gardiner</i>	4/25 / 1340	<i>Mark Shippel</i>	4/25 / 1340		4°C
2nd		/		/		
3rd		/		/		

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# CHAIN-OF-CUSTODY RECORD

Page 5 of 6  
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INVOICE TO						REPORT TO						LAB REFERENCE #			
COMPANY <u>STONE &amp; WEBSTER</u>						PHONE <u>6175891695</u>						LAB REFERENCE #			
NAME <u>LINDA GARDINER</u>						FAX <u>6175892922</u>						NAME <u>SAME</u>		PHONE	
ADDRESS <u>245 SUMMER ST. - 3 FL</u>						ADDRESS						TURNAROUND TIME			
CITY/ST/ZIP <u>BOSTON, MA 02210</u>						CITY/ST/ZIP						<u>14 DAYS</u>			
CLIENT PROJECT NAME: <u>NCBC DAVISVILLE</u>				CLIENT PROJECT #: <u>042910910</u>		CLIENT P.O.#:		REQUESTED ANALYSES							
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	PCB-EPA 8080						COMMENTS
<u>13 SS 60A</u>	<u>4/25/96 1140</u>														
<u>13 SS 60B</u>	<u>4/25/96 1140</u>														
<u>13 SS 61A</u>	<u>4/25/96 1145</u>														
<u>13 SS 61B</u>	<u>4/25/96 1145</u>														
<u>13 SS 62A</u>	<u>4/25/96 1150</u>														
<u>13 SS 62B</u>	<u>4/25/96 1150</u>							<u>3</u>							<u>MS/MSD</u>
<u>13 SS 63A</u>	<u>4/25/96 1200</u>														
<u>13 SS 63B</u>	<u>4/25/96 1200</u>														
<u>13 SS 16-2 A</u>	<u>4/25/96 950</u>														
<u>13 SS 16-2 B</u>	<u>4/25/96 950</u>							<u>3</u>							
<u>13 SS 16-2 C</u>	<u>4/25/96 950</u>														<u>MS/MSD</u>
<u>13 SS 16-2 D</u>	<u>4/25/96 950</u>														
TSP#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY				DATE/TIME	ADDITIONAL REMARKS				COOLER TEMP			
<u>1st</u>	<u>Linda B. Gardiner</u>	<u>4/25/1340</u>	<u>Mark [Signature]</u>				<u>4/25/96 1340</u>					<u>4°C</u>			
<u>2nd</u>															
<u>3rd</u>															

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# CHAIN-OF-CUSTODY RECORD

Page 6 of 6  
 IN TWO COOLERS

INVOICE TO					REPORT TO				
COMPANY <b>STONE &amp; WEBSTER</b>			PHONE <b>6175891695</b>		COMPANY			PHONE	
NAME <b>LINDA GARDINER</b>			FAX <b>6175892922</b>		NAME <b>SAME</b>			FAX	
ADDRESS <b>245 SUMMER ST - 3FL</b>					ADDRESS				
CITY/ST/ZIP <b>BOSTON, MA 02210</b>					CITY/ST/ZIP				
CLIENT PROJECT NAME: <b>NCBC DAVISVILLE</b>					CLIENT PROJECT #: <b>042910910</b>		CLIENT P.O.#:		
REQUESTED ANALYSES									
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	COMMENTS
135552B-DP	4/25/96 1040	X							PCB-EPA8080
135546B-DP	4/25/96 940	X							
135540B-DP	4/25/96 900	X							
135541A-DP	4/25/96 910	X							
135516B-DP	4/25/96 950	X							
135558B-DP	4/25/96 1120	X							
13W-R2	4/25/96 1220		X	X					
135564A	4/25/96 1210	X							
135564B	4/25/96 1210	X							
TSF#		RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS			COOLER TEMP
1st		Linda B. Gardiner	4/29/96 3:10	Mark Duppl	4/25/96 13:40				4°C
2nd			/		/				
3rd			/		/				

095

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# MITKEM CORPORATION

Lab Project #: C0337     **R1**  
 Client Name: **Stone & Webster Engineering Corporation**  
 Client Project #: **04291.091**  
 Client PO #: **PS-25674**  
 Project Name: **NCBC Davisville**  
 Date Due: **5/9/96**  
 Total Price: **\$**  
 Deliverables Req'd: **COE NO SOXHLET**  
 Case Completed: **YES**

Logged In By: MS  
 Reviewed By: KC  
 Date: 4/29/96     Time: 12:10

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
01	13 SS 38 A	SL	PCB	4/25/96	4/25/96
02	13 SS 38 B	SL	PCB	4/25/96	4/25/96
03	13 SS 39 A	SL	PCB	4/25/96	4/25/96
04	13 SS 39 B	SL	PCB	4/25/96	4/25/96
05	13 SS 40 A	SL	PCB	4/25/96	4/25/96
06	13 SS 40 B	SL	PCB	4/25/96	4/25/96
07	13 SS 41 A	SL	PCB	4/25/96	4/25/96
08	13 SS 41 B	SL	PCB	4/25/96	4/25/96
09	13 SS 42 A	SL	PCB	4/25/96	4/25/96
09 MS	13 SS 42 A MS	SL	PCB	4/25/96	4/25/96
09 MSD	13 SS 42 A MSD	SL	PCB	4/25/96	4/25/96
10	13 SS 42 B	SL	PCB	4/25/96	4/25/96
11	13 SS 43 A	SL	PCB	4/25/96	4/25/96

4/29/96 10:37 AM

**MITKEM CORPORATION**

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
12	13 SS 43 B	SL	PCB	4/25/96	4/25/96
13	13 SS 44 A	SL	PCB	4/25/96	4/25/96
14	13 SS 44 B	SL	PCB	4/25/96	4/25/96
15	13 SS 45 A	SL	PCB	4/25/96	4/25/96
16	13 SS 45 B	SL	PCB	4/25/96	4/25/96
16 MS	13 SS 45 B MS	SL	PCB	4/25/96	4/25/96
16 MSD	13 SS 45 B MSD	SL	PCB	4/25/96	4/25/96
17	13 SS 46 A	SL	PCB	4/25/96	4/25/96
18	13 SS 46 B	SL	PCB	4/25/96	4/25/96
19	13 SS 46 C	SL	PCB	4/25/96	4/25/96
20	13 SS 47 A	SL	PCB	4/25/96	4/25/96
21	13 SS 47 B	SL	PCB	4/25/96	4/25/96
22	13 SS 47 C	SL	PCB	4/25/96	4/25/96
23	13 SS 48 A	SL	PCB	4/25/96	4/25/96
24	13 SS 48 B	SL	PCB	4/25/96	4/25/96
24 MS	13 SS 48 B MS	SL	PCB	4/25/96	4/25/96
24 MSD	13 SS 48 B MSD	SL	PCB	4/25/96	4/25/96
25	13 SS 49 A	SL	PCB	4/25/96	4/25/96
26	13 SS 49 B	SL	PCB	4/25/96	4/25/96

4/29/96 10:07 AM

**MITKEM CORPORATION**

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
27	13 SS 50 A	SL	PCB	4/25/96	4/25/96
28	13 SS 50 B	SL	PCB	4/25/96	4/25/96
29	13 SS 51 A	SL	PCB	4/25/96	4/25/96
30	13 SS 51 B	SL	PCB	4/25/96	4/25/96
31	13 SS 52 A	SL	PCB	4/25/96	4/25/96
32	13 SS 52 B	SL	PCB	4/25/96	4/25/96
33	13 SS 52 C	SL	PCB	4/25/96	4/25/96
34	13 SS 53 A	SL	PCB	4/25/96	4/25/96
35	13 SS 53 B	SL	PCB	4/25/96	4/25/96
36	13 SS 54 B	SL	PCB	4/25/96	4/25/96
37	13 SS 55 A	SL	PCB	4/25/96	4/25/96
38	13 SS 55 B	SL	PCB	4/25/96	4/25/96
39	13 SS 56 A	SL	PCB	4/25/96	4/25/96
40	13 SS 56 B	SL	PCB	4/25/96	4/25/96
41	13 SS 57 A	SL	PCB	4/25/96	4/25/96
42	13 SS 57 B	SL	PCB	4/25/96	4/25/96
43	13 SS 58 A	SL	PCB	4/25/96	4/25/96
44	13 SS 58 B	SL	PCB	4/25/96	4/25/96

4/29/96 10:07 AM

Page 3 of 5

Lab Project #: C0337

# MITKEM CORPORATION

000

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
45	13 SS 59 A	SL	PCB	4/25/96	4/25/96
46	13 SS 59 B	SL	PCB	4/25/96	4/25/96
47	13 SS 54 A	SL	PCB	4/25/96	4/25/96
47 MS	13 SS 54 A MS	SL	PCB	4/25/96	4/25/96
47 MSD	13 SS 54 A MSD	SL	PCB	4/25/96	4/25/96
48	13 SS 60 A	SL	PCB	4/25/96	4/25/96
49	13 SS 60 B	SL	PCB	4/25/96	4/25/96
50	13 SS 61 A	SL	PCB	4/25/96	4/25/96
51	13 SS 61 B	SL	PCB	4/25/96	4/25/96
52	13 SS 62 A	SL	PCB	4/25/96	4/25/96
53	13 SS 62 B	SL	PCB	4/25/96	4/25/96
53 MS	13 SS 62 B MS	SL	PCB	4/25/96	4/25/96
53 MSD	13 SS 62 B MSD	SL	PCB	4/25/96	4/25/96
54	13 SS 63 A	SL	PCB	4/25/96	4/25/96
55	13 SS 63 B	SL	PCB	4/25/96	4/25/96
56	13 SS 16 2 A	SL	PCB	4/25/96	4/25/96
57	13 SS 16 2 B	SL	PCB	4/25/96	4/25/96
58	13 SS 16 2 D	SL	PCB	4/25/96	4/25/96
59	13 SS 52 B DP	SL	PCB	4/25/96	4/25/96

4/29/96 10:07 AM

Page 4 of 5

Lab Project #: C0337

**Last page of Data Report**

**MITKEM CORPORATION**

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Sampled</u>	<u>Date Received</u>
-60	13 SS 46 B DP	SL	PCB	4/25/96	4/25/96
-61	13 SS 40 B DP	SL	PCB	4/25/96	4/25/96
-62	13 SS 41 A DP	SL	PCB	4/25/96	4/25/96
-63	13 SS 16 B DP	SL	PCB	4/25/96	4/25/96
-64	13 SS 58 B DP	SL	PCB	4/25/96	4/25/96
-65	13 W R2	W	PCB	4/25/96	4/25/96
-66	13 SS 64 A	SL	PCB	4/25/96	4/25/96
-67	13 SS 64 B	SL	PCB	4/25/96	4/25/96
-68	13 SS 16 2 C	SL	PCB	4/25/96	4/25/96
-68 MS	13 SS 16 2 C MS	SL	PCB	4/25/96	4/25/96
-68 MSD	13 SS 16 2 C MSD	SL	PCB	4/25/96	4/25/96

**NOTES:**

- 1) RI: PRICE CHANGE
- 2) SAMPLES -01 THRU -20 ARE IN SDG1
- 3) SAMPLES -21 THRU -40 ARE IN SDG2
- 4) SAMPLES -41 THRU -60 ARE IN SDG3
- 5) SAMPLES -61 THRU -68 ARE IN SDG4

<u>TPH</u>	<u>IR</u>	<u>BNA</u>	<u>Herb</u>	<u>P/P</u>	<u>Wet</u>	<u>Met</u>	<u>VOA</u>
0	0	0	0	80	0	0	0

**ORIGINAL REPORT GOES TO:**

Stone & Webster Engineering Corporation  
 145 Summer Street  
 Boston, MA 02210  
 ATT: Linda Gardiner  
 Phone: 617 589-1695  
 Fax: 617 589-2922

**INVOICE GOES TO:**

same

4/29/96 10:38 AM

Page 5 of 5

Lab Project #: C0337