SUBSURFACE HYDROCARBON ASSESSMENT REPORT

BP Service Station Number 3887
164 4th Avenue
Brooklyn, New York

NYSDEC Spill Number 97-13442

December 6, 2005

Prepared for:

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TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

This Subsurface Hydrocarbon Assessment Report (SHAR) presents the results of subsurface assessment activities conducted by Delta Environmental Consultants, Inc. (Delta) on behalf of Atlantic Richfield Company, a BP affiliated company (Atlantic Richfield), at BP Service Station Number 3887 between March 14, 2005 and July 19, 2005.

The objective of this SHAR was to assess soil vapors at the subject site by installing one cluster well for vapor monitoring. The scope of work for this assessment included the following:

- pre-clear location of vapor cluster well boring VCW-1
- advancement of vapor cluster well boring VCW-1;
- collection of soil samples during boring advancement for field screening and laboratory analysis;
- installation of vapor cluster wells VCW-1A, VCW-1B, and VCW-1C;
- performance of two vapor sampling events; and,
- preparation of this Subsurface Hydrocarbon Assessment Report containing the observations and information obtained from the aforementioned activities.

2.0 SITE CHARACTERIZATION

2.1 Site Description

BP Service Station Number 3887 is located at 164 4th Avenue, Brooklyn, Kings County, New York (the "subject site"). The subject site is located on the southwestern corner of the intersection of 4th Avenue and Douglass Street. According to the United States Geological Survey (USGS) *Brooklyn, New York-New Jersey* 7.5 Minute Series Topographic Map, the subject site is situated on a generally level parcel at an elevation of approximately 30 feet (ft) above mean sea level. The location of the site is shown on the Site Location Map, Figure 1, Appendix A.

The subject site has an irregular shape and can be accessed from the east along 4th Avenue and from the north along Douglass Street. Above ground structures at the subject site consist of a single-story convenience store, a canopy, two vacuums, and six pump islands with six dispensers. Below ground structures consist of two 10,000-gallon double-wall fiberglass-reinforced plastic gasoline underground storage tanks (USTs), one 12,000-gallon double-wall fiberglass-reinforced plastic gasoline UST, four detention basins, two catch basins, and numerous electrical conduits and municipal water/sewer connection pipes. Site features are shown on the Site Plan, Figure 2, Appendix A.

2.2 Surrounding Land Use

To the north across Douglass Street are the Marble Tile Terrazzo and Granite Corporation and the Big Apply Industry of New York facilities. To the south across Degraw Street are industrial and commercial facilities, including Gino's Auto Body Shop. Adjacent to the west are multi-level commercial and industrial facilities. Adjacent to the northwest is the Emco, Inc. industrial warehouse facility. Across 4th Avenue, approximately 120 ft to the east, are multi-level residential apartments improved with basements. Additionally, approximately 65 ft east of the subject site and beneath 4th Avenue is the 4th Avenue subway tunnel. A Surrounding Land Use Map is provided as Figure 3, Appendix A.

2.3 Sensitive Receptor Survey

Delta conducted a sensitive receptor survey of the subject site and surrounding properties. Several utility vaults and subsurface improvements were identified both on site and off site, including those located approximately 5 to 10 ft east of the subject site beneath 4th Avenue. Four detention basins were identified on of the southern portion of the subject site. Additionally, there are two catch basins located on the subject site. These features are shown on the Site Plan, Figure 2, Appendix A. According to a review of an Environmental Data Resources, Inc. (EDR) Report, there are no Federal or State Public Water Supply Wells within a one-mile radius of the subject site. The structure with a basement that is closest to the subject site, and hydraulically downgradient, is located approximately 100 ft to the southeast, across Degraw Street. Approximately 65 ft to the east is the 4th Avenue Subway tunnel.

3.0 REGIONAL GEOLOGY/HYDROGEOLOGY

According to the Surficial Geologic Map of New York, Lower Hudson Sheet (Cadwell, 1989), this area of New York is underlain by Pleistocene-age glacial till, dominantly consisting of fine to coarse-grained sand with interstitial lenses of gravel and silt, which are remnants of glacial deposition. According to the United States Department of Agriculture Soil Survey Classification and Nomenclature System, this soil would likely be referred to as *Urban Land*, because the original composition and structure of the soil has been significantly altered by urbanization and development activities.

According to a review of the United States Department of the Interior Geological Survey's Water-Table Map of Kings and Queens Counties, Long Island, New York Map, dated March 1997, ground water is located at a depth of approximately 9 ft below ground surface (bgs) and flows to the southwest.

3.1 Site Geology

There are no predominant geological surface features such as bedrock outcroppings on the subject site. Site-specific stratigraphy was gathered during soil boring advancement activities. Based on soil collected via continuous macrocore sampling and split-spoon sampling activities during this and previous subsurface assessments, the subject site is underlain by medium to coarse-grained, brown, silty-sand with construction debris, ash, and clay lenses to a depth of 24 ft bgs, the depth of the deepest boring. Soil boring logs generated during the soil boring advancement and monitoring well installation activities are provided in Appendix C.

3.2 Site Hydrogeology

Ground water movement varies in relation to topography, lithology, elevations of recharge and discharge areas, and man-made influences. Ground water elevations were determined for this site by measuring each monitoring well's top of casing (TOC) relative to an arbitrary benchmark with an assigned elevation of 100.00 ft, measuring the water level in the monitoring wells relative to the TOC, and computing the reference elevation of the ground water at the time of the measurement. The depth to ground water at the site was measured on May 12, 2005 to be between 15.51 and 20.08 ft bgs.

The direction of ground water flow within unconsolidated deposits is interpolated between monitoring wells by comparing the ground water elevations in the monitoring wells and taking into consideration the types of influencing factors mentioned above. Previous ground water monitoring activities at the site have shown ground water flow to the west-southwest.

4.0 FIELD EXPLORATION METHODS

Field explorations performed as part of the subsurface assessment activities included the following:

- Pre-clear of vapor cluster well VCW-1 boring location;
- advancement of vapor cluster well boring VCW-1;
- collection of soil samples during soil boring advancement for field screening and laboratory analysis;
- installation of three one-inch diameter, vapor monitoring wells VCW-1A, VCW-1B, and VCW-1C at soil boring location VCW-1; and,
- performance of two vapor sampling events and prepare analysis of results.

4.1 Soil Borings

AM Drilling Services Inc. (AM), on behalf of Delta, installed vapor cluster well VCW-1 using a Foremost CT150 truck-mounted drill rig with hollow-stem auger capability. Vapor cluster well VCW-1 was installed on the west side of the site in the vicinity of monitoring well MW-5 and adjacent to the convenience store. The location of the vapor well is shown on Figure 2, Site Plan, Appendix A.

On March 14, 2004, the vapor cluster well boring location was pre-cleared by Earth Technology, LLC. The soil boring was cleared using the air-knife technique to a depth of 5 ft bgs and 110% of the hollow stem auger diameter.

On April 4, 2005, AM used a split-spoon soil sampler, advanced by a 140-pound hammer, to collect continuous soil samples from a depth of 5 to 21 ft bgs during the advancement of vapor cluster well boring VCW-1. Soil samples from the split spoon were inspected for visual evidence of petroleum impact and were screened for total volatile organic compounds (VOCs) using a photoionization detector (PID). The soil samples were classified in general accordance with the Unified Soil Classification System. Boring log/vapor well construction summary for VCW-1 is provided in Appendix B.

Soil samples for laboratory analysis were collected from vapor cluster well VCW-1 at the 18 to 19 ft bgs depth interval and the 20 to 21 ft bgs depth interval. These depth intervals generally represent the soils exhibiting the highest PID readings. The soil samples were forwarded under chain-of-custody procedures to Accutest Laboratories (Accutest) of Dayton, New Jersey. Accutest is a New York State Department of Health-certified laboratory (Certification Number 10983). The soil samples were analyzed for VOCs in accordance with United States Environmental Protection Agency (EPA) Method 8260. The analytical results for these soil samples are discussed in Section 5.1.

4.2 Vapor Cluster Well Installation

On April 4, 2005, soil boring VCW-1 was completed as vapor cluster well VCW-1 consisting of vapor wells VCW-1A, VCW-1B, and VCW-1C installed to depths of 18, 12, and 6 ft bgs respectively. The depth to ground water beneath vapor cluster well VCW-1 was anticipated to be between 19 and 21 ft bgs.

Vapor cluster well VCW-1A was constructed of 0.5 ft of one-inch-diameter, Schedule 40, 0.010-inch slot-size, polyvinyl chloride (PVC) well screen and 17.5 ft of one-inch-diameter, Schedule 40, solid, PVC riser pipe. Vapor cluster well VCW-1B was constructed of 0.5 ft of one-inch-diameter, Schedule 40, 0.010-inch slot-size, polyvinyl chloride (PVC) well screen and 11.5 ft of one-inch-diameter, Schedule 40, solid, PVC riser pipe. Vapor cluster well VCW-1C was constructed of 0.5 ft of one-inch-diameter,

Schedule 40, 0.010-inch slot-size, polyvinyl chloride (PVC) well screen and 5.5 ft of one-inch-diameter, Schedule 40, solid, PVC riser pipe.

A sand pack of Morie #1 well sand was installed from the completion depth of vapor cluster well VCW-1A well to one foot above the top of the well screen. A three and one-half-foot-thick Bentonite seal was installed above the sand pack. A sand pack of Morie #1 well sand was installed above the Bentonite to one foot above the top of the well screen of VCW-1B. A three and one-half-foot-thick Bentonite seal was installed above the second sand pack. A sand pack of Morie #1 well sand was installed above the second Bentonite seal to one foot above the top of the well screen of VCW-1C. A three and one-half-foot-thick Bentonite seal was installed above the third sand pack. The remaining annular space of the well was backfilled with well sand from the top of the third Bentonite seal to approximately one ft bgs. A bolt-down, flush-mount protective casing was installed at ground surface using concrete to seal the well cluster from approximately 1 ft bgs to grade level.

5.0 INVESTIGATION ANALYTICAL RESULTS

5.1 Soil Analytical Results

On April 4, 2005, Delta advanced soil boring VCW-1 to a depth of 21 ft bgs using a Foremost CT150 drill rig. Soil samples VCW-1 (17-18 ft) and VCW-1 (20-21 ft) were collected from monitoring well boring VCW-1 and forwarded to Accutest for analysis of VOCs in accordance with EPA Method 8260. The locations of the soil boring is shown on Figure 2, Site Plan, Appendix A. The laboratory analytical results are summarized in Table 1, Soil Analytical Results, Appendix C. Analytical results in **bold** exceed applicable New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) Soil Cleanup Objectives to protect Ground Water Quality (NYSDEC Spill Cleanup Objectives). The Laboratory Analytical Results Report is provided in Appendix D.

As shown in Table 1, laboratory analysis identified one VOC concentration in excess of applicable NYSDEC Soil Cleanup Objectives in each of the soil samples. Total BTEX concentrations (sum of benzene, toluene, ethylbenzene, and xylenes concentrations) ranged from not detected in soil sample VCW-1 (17-18 ft) to 220 micrograms per kilogram (µg/Kg) in soil sample VCW-1 (20-21 ft). Methyl tertiary-butyl ether (MTBE) concentrations ranged from 161 µg/Kg in soil sample VCW-1 (20-21 ft) to 497 µg/Kg in soil sample VCW-1 (17-18 ft). Total VOC concentrations (sum of all target VOCs) were 596 µg/Kg in soil sample VCW-1 (17-18 ft) and 789 µg/Kg in soil sample VCW-1 (20-21 ft).

Soil Analytical Results, Figure 4, Appendix A, illustrates the distribution of VOCs present in the soil samples collected during the April 4, 2005 soil boring activities. Figure 4 indicates that BTEX and MTBE concentrations were detected at boring location VCW-1.

5.2 Vapor Analytical Results

On April 14, 2005, Delta collected three vapor samples (VCW-1A, VCW-1B, and VCW-1C) from vapor cluster well VCW-1 using 6 liter (L) Summa canisters. The vapor samples were forwarded to Accutest for analysis of total BTEX, MTBE, and total petroleum hydrocarbons (TPH) in accordance with EPA Method TO-3. The location of the vapor cluster well is shown on The Site Plan, Figure 2, Appendix A. The laboratory analytical results are summarized in Vapor Analytical Results, Table 2, Appendix C. The Laboratory Analytical Results Report is provided in Appendix E.

As shown in Table 2, benzene concentrations were not detected in any of the vapor samples. Total BTEX concentrations ranged from not detected in vapor samples VCW-1B and VCW-1C to 20 milligrams per cubic meter (mg/m^3) in vapor sample VCW-1A. MTBE concentrations ranged from not detected in vapor samples VCW-1A and VCW-1C to 1.3 mg/m^3 in vapor sample VCW-1B. TPH concentrations ranged from not detected in vapor samples VCW-1B and VCW-1C to 1.3 mg/m^3 in vapor sample VCW-1A.

On July 19, 2005, Delta collected three vapor samples (VCW-1A, VCW-1B, and VCW-1C) from vapor cluster well VCW-1 using 6L Summa canisters. The vapor samples were forwarded to Accutest for analysis of BTEX, MTBE, and TPH in accordance with EPA Method TO-15. The location of the vapor cluster well is shown on The Site Plan, Figure 2, Appendix A. The laboratory analytical results are summarized in Vapor Analytical Results, Table 3, Appendix C. The Laboratory Analytical Results Report is provided in Appendix F.

As shown in Table 3, benzene concentrations ranged from not detected in vapor samples VCW-1B and VCW-1C to 2.51 mg/m^3 in vapor sample VCW-1A. Total BTEX concentrations ranged from not detected in vapor sample VCW-1B to 5.74 mg/m^3 in vapor sample VCW-1A. MTBE concentrations ranged from not detected in vapor samples VCW-1A and VCW-1C to 880 mg/m^3 in vapor sample VCW-1B. TPH ranged from not detected in vapor sample VCW-1C to 42,100 mg/m^3 in vapor sample VCW-1A.

6.0 CONCLUSIONS/FUTURE PLANS

Laboratory analysis identified MTBE concentrations in excess of applicable NYSDEC Soil Cleanup Objectives in both of the soil samples collected during the on-site vapor cluster well installation. Delta will model the potential vapor hazards to the adjacent properties, and as a health safety precaution will continue to monitor the vapor well for potential impacts to the surrounding buildings.

7.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

8.0 REFERENCES

United States Geologic Survey, *Brooklyn, New York*, 7.5 Minute Series Topographic Map, dated 1967 (photorevised 1979), scale 1:24,000.

Cadwell, Donald H., *et al.*, 1989, Surficial Geologic Map of New York, Lower Hudson Sheet: New York State Geologic Survey.

New York State Department of Environmental Conservation, Spill Technology and Remediation Series Memo #1 Petroleum-Contaminated Soil Guidance Policy, dated August 1992.

New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels, dated January 24, 1994, revised August 22, 2001.

New York State Department of Environmental Conservation, Division of Water Resources, Water Quality Regulations, Surface Water and Groundwater Classifications and Standards, New York State, Codes, Rules and Regulations Title 6, Chapter X, Parts 700-706, through March 1998.

United States Department of the Interior Geological Survey, Water-Table Configuration of Kings and Queens Counties, Long Island, New York Map, dated March 1997.

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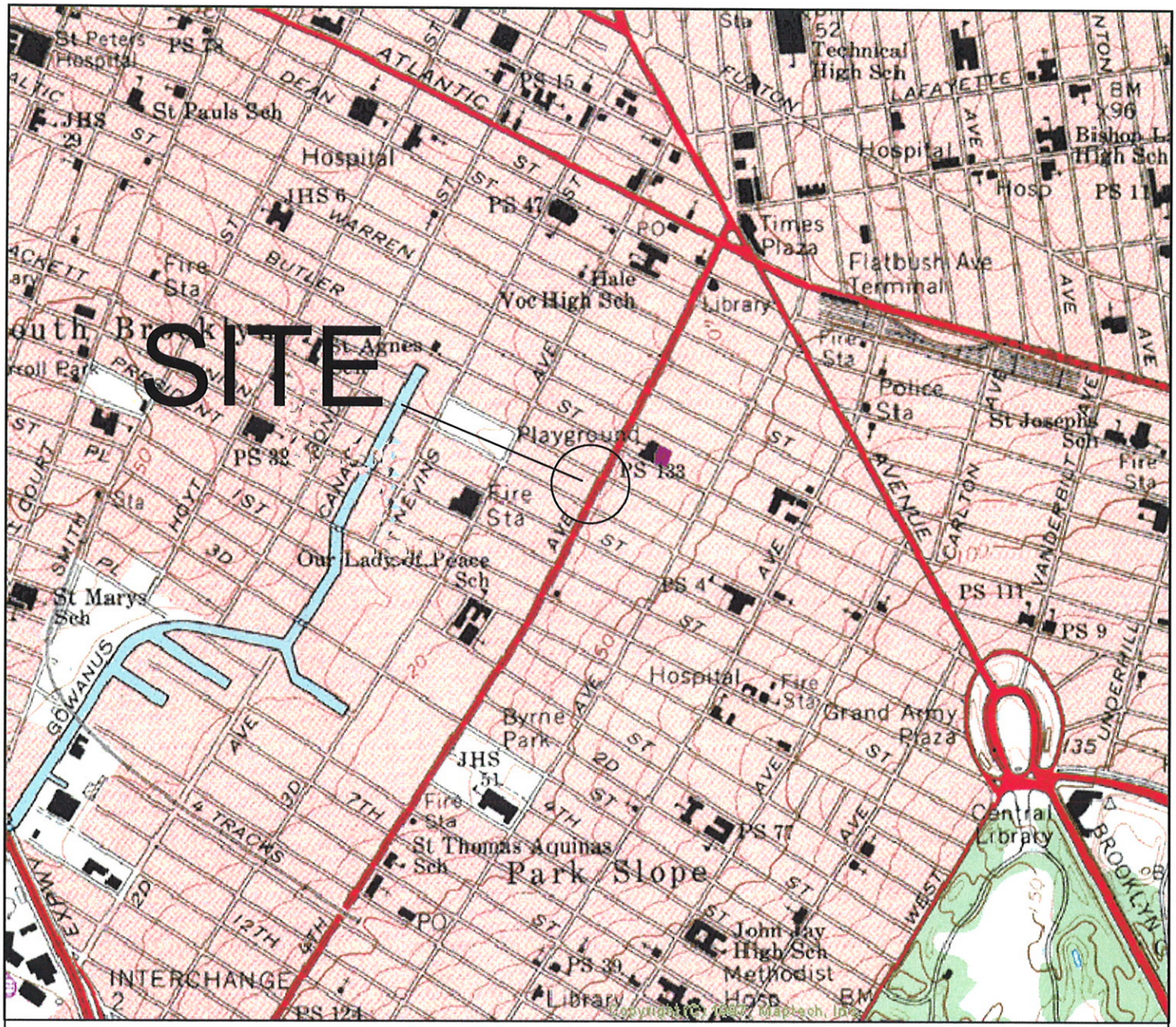
Appendix A



MAP BASED ON USGS 7.5 MINUTES SERIES TOPOGRAPHIC MAP
BROOKLYN, NEW YORK QUADRANGLE
DATE: 1967 REVISED 1979

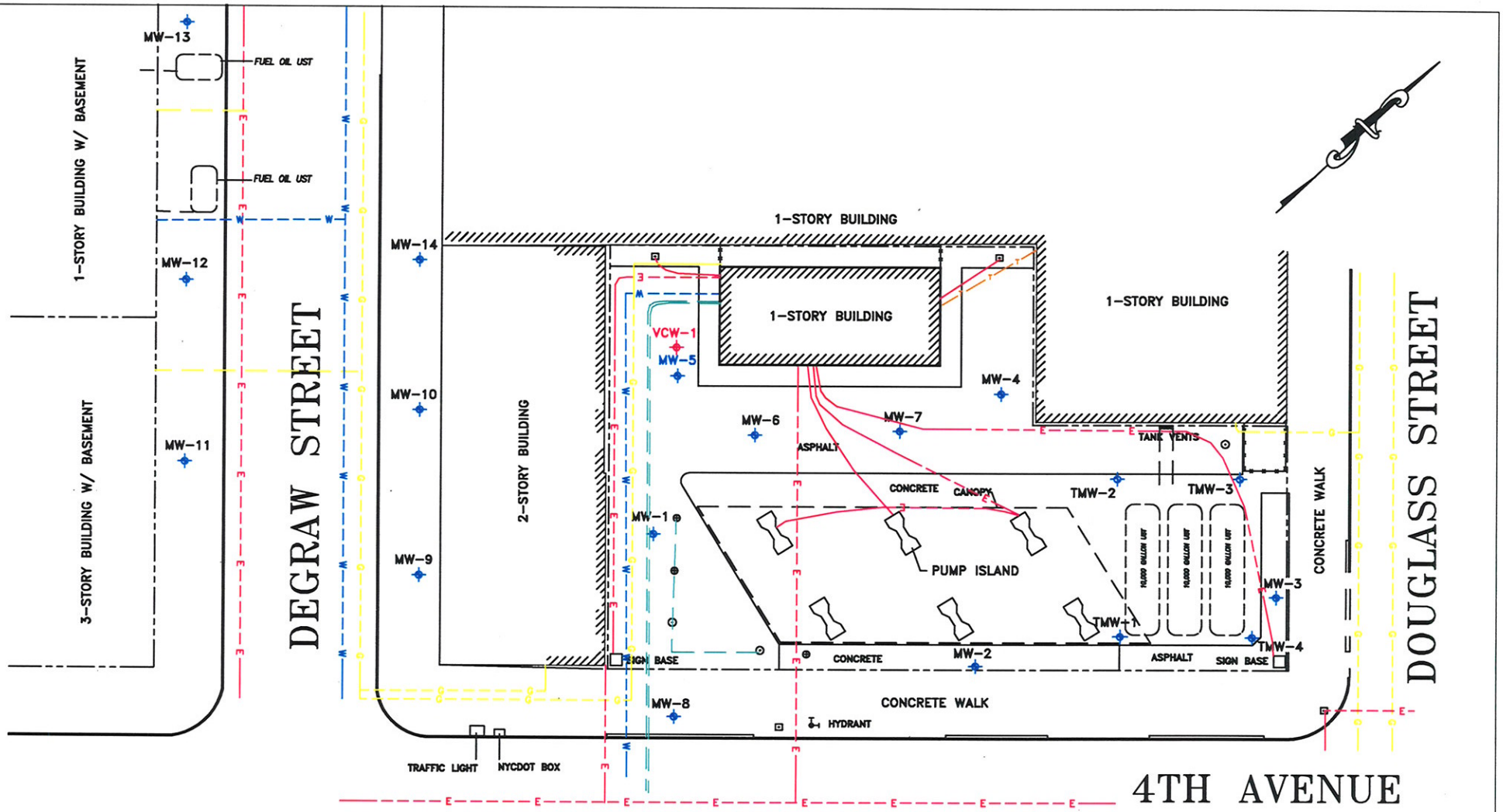
FIGURE 1

SITE LOCATION MAP

BP SERVICE STATION NUMBER 3887
164 4TH AVENUE
BROOKLYN, NEW YORK

PROJECT NO.: G02JF-RP50	DRAWN BY: SCJ
PREPARED BY: DS	DATE: 2/21/05
FILE NAME: SLOC	REVIEWED BY: PZM

Delta Environmental Consultants Inc.



LEGEND:

MW-1 — MONITORING WELL LOCATION

VCW-1 — VAPOR WELL LOCATION

W — WATER LINE

TELEPHONE LINE

E — ELECTRICAL LINE

G — GAS LINE

SEWER LINE

0 35

SCALE FEET

FIGURE 2

SITE PLAN

BP SERVICE STATION NUMBER 3887
164 4TH AVENUE
BROOKLYN, NEW YORK

PROJECT NO.: G02JF-RP50	DRAWN BY: SCJ
PREPARED BY: SCJ	DATE: 1/17/05
FILE NAME: MASTER SITE PLAN	

Delta Environmental Consultants Inc.

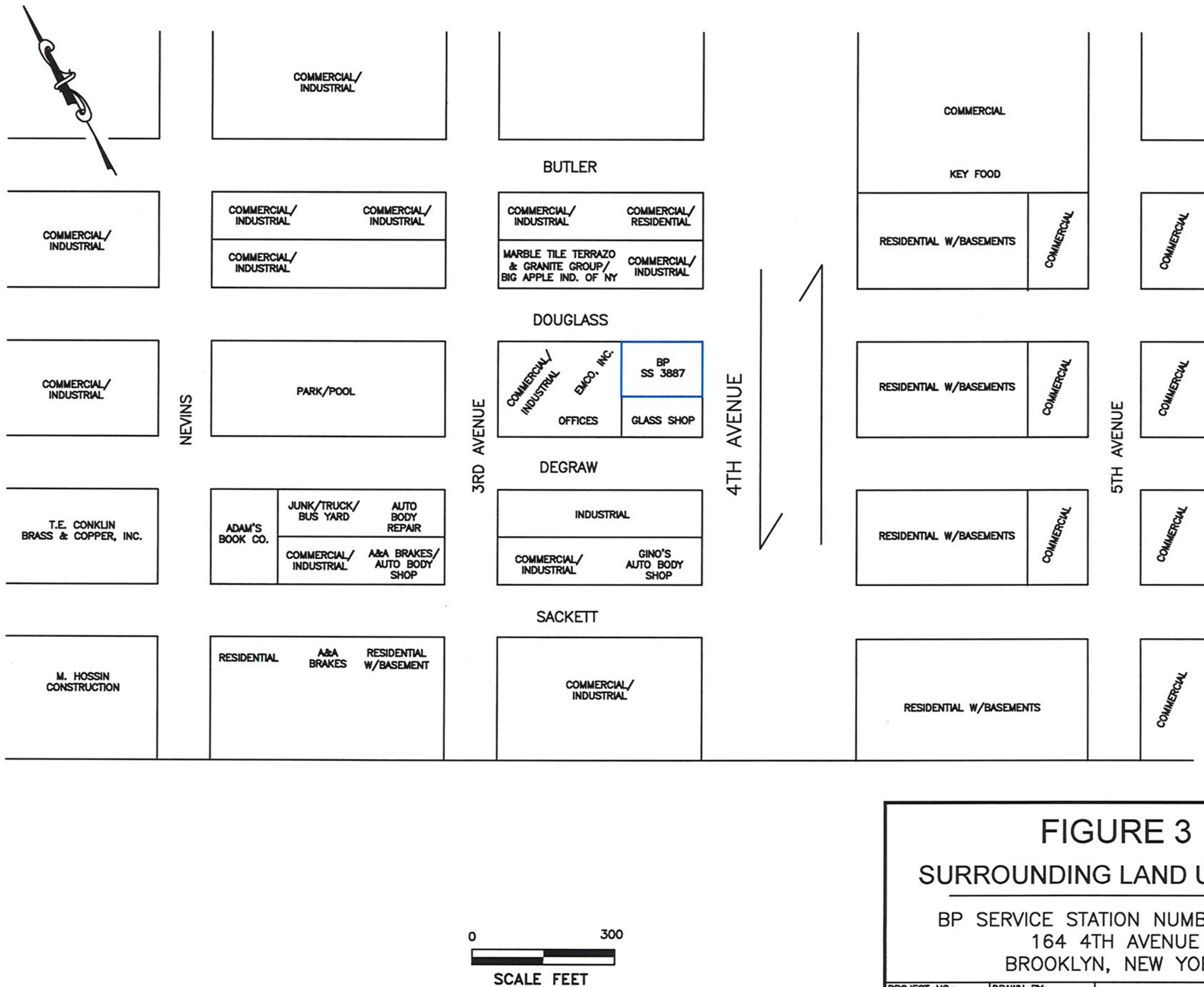


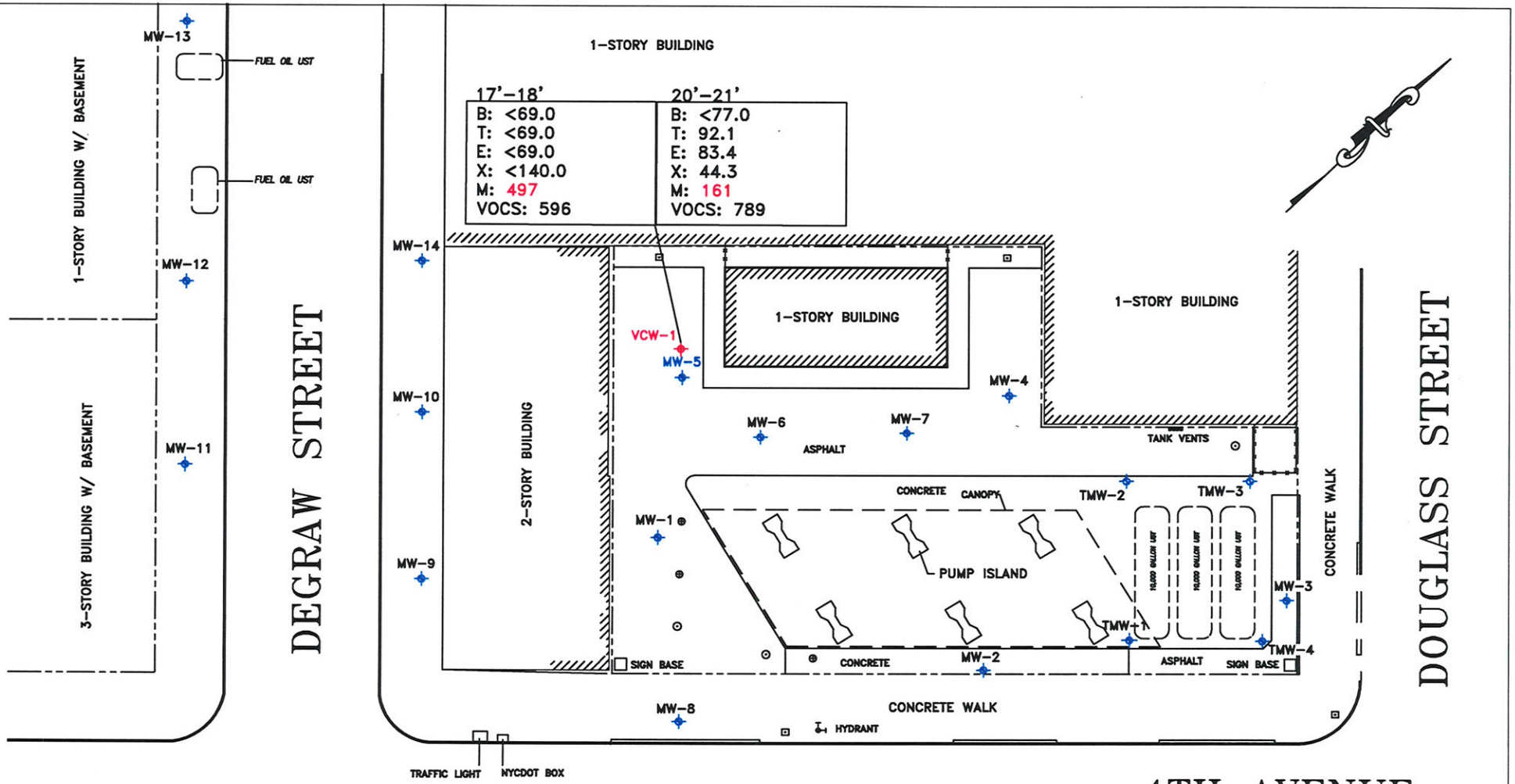
FIGURE 3

SURROUNDING LAND USE MAP

BP SERVICE STATION NUMBER 3887
164 4TH AVENUE
BROOKLYN, NEW YORK

PROJECT NO.: G02JF-RP50	DRAWN BY: SCJ
PREPARED BY: SCJ	DATE: 1/17/05
FILE NAME: SLUSE	REVIEWED BY: PZM

Delta Environmental Consultants Inc.



LEGEND:

MW-1 — MONITORING WELL LOCATION

VCW-1 — VAPOR WELL LOCATION

B: BENZENE
T: TOLUENE
E: ETHYLBENZENE
X: TOTAL XYLENES
M: METHYL TERTIARY-BUTYL ETHER (MTBE)
VOCS: TOTAL VOLATILE ORGANIC COMPOUNDS
RESULTS IN MICROGRAMS PER LITER (µg/Kg)
NYSDEC CRITERIA EXCEEDENCE SHOWN IN RED

0 35
SCALE FEET

FIGURE 4
SOIL ANALYTICAL RESULTS
APRIL 4, 2005

BP SERVICE STATION NUMBER 3887
164 4TH AVENUE
BROOKLYN, NEW YORK

PROJECT NO.: G02JF-RP50	DRAWN BY: SCJ
PREPARED BY: KP	DATE: 4/24/05
FILE NAME: SOILS 2005	

Delta Environmental Consultants Inc.

Appendix B

Delta Environmental Consultants, Inc.

BORING ID: VCW-1

TOTAL DEPTH: 21 ft

PROJECT INFORMATION

PROJECT:	**BP S/S 3887**
SITE LOCATION:	**164 4th Ave Brooklyn, NY**
JOB NO.:	**G02JF**
LOGGED BY:	**K. Pender**
PROJECT MANAGER:	**P. Meyer**
DATES DRILLED:	**April 14, 2005**

DRILLING INFORMATION

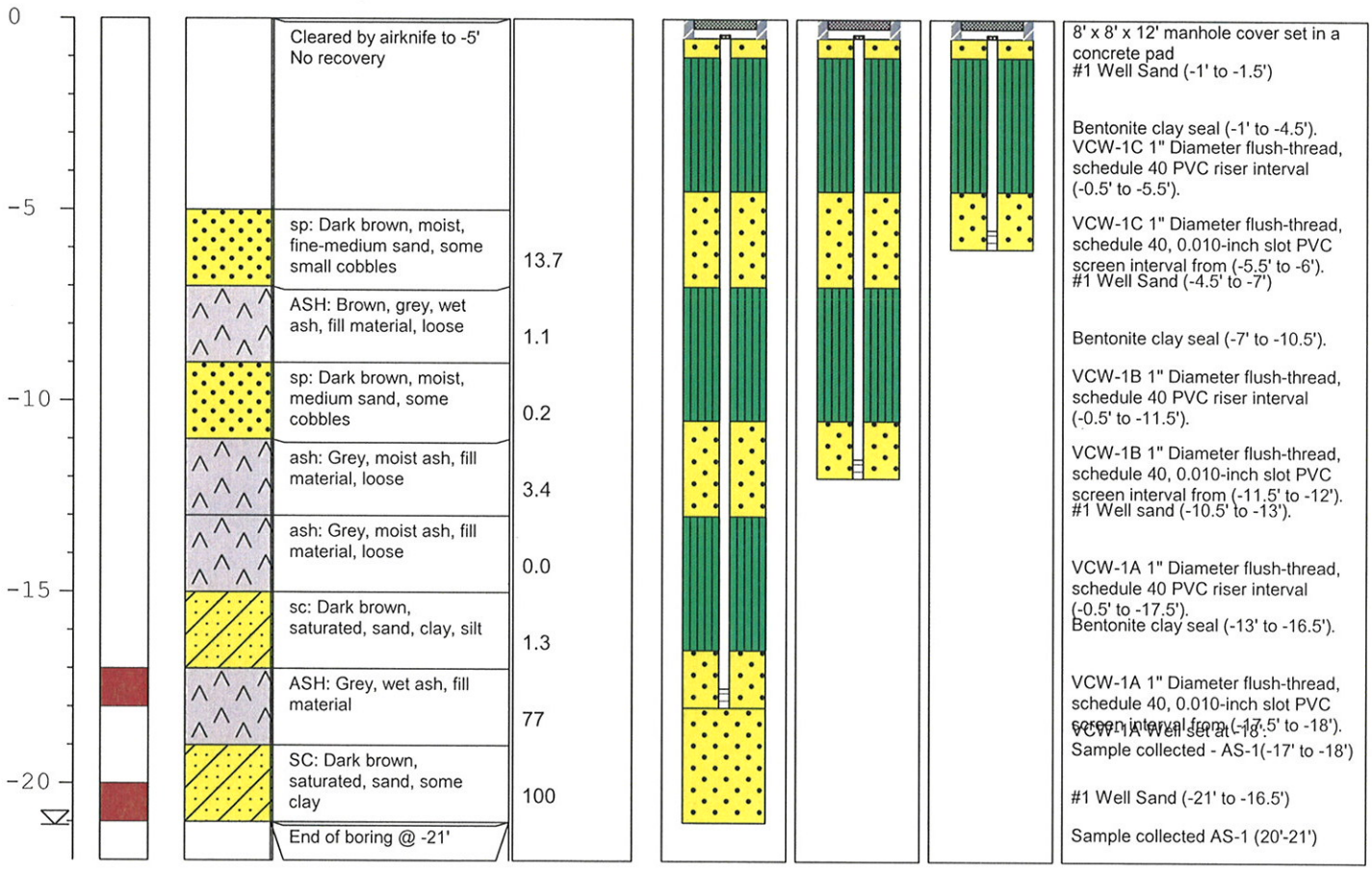
DRILLING CO.:	**AM Drilling**
DRILLER:	**Adam/Mark**
RIG TYPE:	**Foremost CT150**
METHOD OF DRILLING:	**Hollow Stem Auger**
SAMPLING METHODS:	**Split Spoon**
HAMMER WT./DROP	**140 lb., 30 in.**

NOTES:

SAMPLE ID: VCW-1 (18'-19'), VCW-1 (20'-21')

▽ Initial water level measurement

▼ Static water level measurement



Appendix C

Table 1
Soil Analytical Results
April 4, 2005

BP Service Station Number 3887
Brooklyn, New York

Analytical Parameter	NYSDEC Soil Clean-up Objectives (µg/Kg)	Soil Sample Location and Concentration	
		VCW-1 (17'-18')	VCW-1 (20'-21')
Benzene	60	<69.0	<77.0
Ethylbenzene	5,500	<69.0	92.1
Toluene	1,500	<69.0	83.4
Xylenes (total)	1,200	<140	44.3
Methyl Tertiary Butyl Ether	120	**497**	**161**
n-Butylbenzene	12,000	<350	<380
sec-Butylbenzene	11,000	<350	36.4
tert-Butylbenzene	11,000	<350	<380
Isopropylbenzene	2,300	<350	145
p-Isopropyltoluene	11,000	34.5	126
Naphthalene	13,000	<350	<380
n-Propylbenzene	3,700	<350	<380
1,2,4-Trimethylbenzene	13,000	64.4	<380
1,3,5-Trimethylbenzene	3,300	<350	101
Total BTEX	NGV	ND	220
Total VOCs	NGV	596	789

Notes:

NYSDEC - New York State Department of Environmental Conservation

NYSDEC Soil Clean-up Objectives are based on NYSDEC Technical and Administrative Guidance Memorandum No. 4046 Soil Clean-up Objectives to protect ground water

VOC - Volatile Organic compounds

All VOC concentrations reported in micrograms per kilogram (µg/Kg)

NGV - No guidence value

Table 2
Vapor Analytical Results
April 14, 2005

BP Service Station Number 3887
Brooklyn, New York

Analytical Parameter	Vapor Sample Location and Concentration (mg/m^3)		
	VCW-1A	VCW-1B	VCW-1C
Benzene	<0.08	<0.08	<0.08
Ethylbenzene	<0.19	<0.19	<00.19
Toluene	20.0	<0.22	<0.22
Xylenes (total)	<0.22	<0.22	<0.22
Methyl tertiary butyl ether	<0.18	1.3	<0.18
Total BTEX	20.0	ND	ND
Total petroleum hydrocarbons	1.3	ND	ND

Notes:
mg/m^3 - milligrams per cubic meter
ND - Not detected

Table 3
Vapor Analytical Results
July 19, 2005

BP Service Station Number 3887
Brooklyn, New York

Analytical Parameter	Vapor Sample Location and Concentration (mg/m^3)		
	VCW-1A	VCW-1B	VCW-1C
Benzene	2.51	<0.013	<0.026
Ethylbenzene	<0.60	<0.015	0.025 J
Toluene	2.47	<0.017	<0.035
Xylenes (total)	0.76	<0.017	<0.035
Methyl tertiary-butyl ether	<0.58	0.88	<0.029
Total BTEX	5.74	ND	25.0
Total petroleum hydrocarbons	42,100	125	<20.0

Notes:
mg/m^3 - milligrams per cubic meter
ND- Not detected

Appendix D

e-Hardcopy 2.0
Automated Report

New Jersey
ACCUTEST.
Laboratories

04/22/05

RECEIVED APR 25 2005

Technical Report for

BP Amoco Corporation

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Accutest Job Number: N95072

Sampling Date: 04/04/05

Report to:

Delta Environmental Consultants
84 Business Park Drive
Armonk, NY 10501

ATTN: Aaron Lapine

Total number of pages in report: 20

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

Sections: 1 2 3 4

Table of Contents

-1-

Sample Summary

BP Amoco Corporation

Job No: N95072

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY
Project No: PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
N95072-1	04/04/05	00:00	KP	04/05/05	SO	Soil	VCW-1 17'-18'
N95072-2	04/04/05	00:00	KP	04/05/05	SO	Soil	VCW-1 20'-21'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

Report of Analysis

Client Sample ID:	VCW-1 17'-18'		
Lab Sample ID:	N95072-1	Date Sampled:	04/04/05
Matrix:	SO - Soil	Date Received:	04/05/05
Method:	SW846 8260B SW846 5035	Percent Solids:	88.7
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y35038.D	1	04/14/05	KNV	04/05/05 11:00	n/a	VY1417
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.5 g	5.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	69	16	ug/kg	
104-51-8	n-Butylbenzene	ND	350	61	ug/kg	
135-98-8	sec-Butylbenzene	ND	350	19	ug/kg	
98-06-6	tert-Butylbenzene	ND	350	30	ug/kg	
100-41-4	Ethylbenzene	ND	69	39	ug/kg	
98-82-8	Isopropylbenzene	ND	350	72	ug/kg	
99-87-6	p-Isopropyltoluene	34.5	350	21	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	497	69	23	ug/kg	
91-20-3	Naphthalene	ND	350	170	ug/kg	
103-65-1	n-Propylbenzene	ND	350	9.9	ug/kg	
108-88-3	Toluene	ND	69	16	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	64.4	350	53	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	350	67	ug/kg	
	m,p-Xylene	ND	140	53	ug/kg	
95-47-6	o-Xylene	ND	69	29	ug/kg	
1330-20-7	Xylene (total)	ND	140	29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-122%
17060-07-0	1,2-Dichloroethane-D4	91%		62-131%
2037-26-5	Toluene-D8	106%		76-119%
460-00-4	4-Bromofluorobenzene	106%		67-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VCW-1 20'-21'		
Lab Sample ID:	N95072-2	Date Sampled:	04/04/05
Matrix:	SO - Soil	Date Received:	04/05/05
Method:	SW846 8260B SW846 5035	Percent Solids:	78.0
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y35194.D	1	04/18/05	KNV	04/05/05 11:00	n/a	VY1422
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	77	18	ug/kg	
104-51-8	n-Butylbenzene	ND	380	68	ug/kg	
135-98-8	sec-Butylbenzene	36.4	380	21	ug/kg	J
98-06-6	tert-Butylbenzene	ND	380	34	ug/kg	
100-41-4	Ethylbenzene	83.4	77	44	ug/kg	
98-82-8	Isopropylbenzene	145	380	80	ug/kg	J
99-87-6	p-Isopropyltoluene	126	380	24	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	161	77	25	ug/kg	
91-20-3	Naphthalene	ND	380	190	ug/kg	
103-65-1	n-Propylbenzene	ND	380	11	ug/kg	
108-88-3	Toluene	92.1	77	18	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	380	60	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	101	380	75	ug/kg	J
	m,p-Xylene	ND	150	60	ug/kg	
95-47-6	o-Xylene	ND	77	32	ug/kg	
1330-20-7	Xylene (total)	44.3	150	32	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-122%
17060-07-0	1,2-Dichloroethane-D4	97%		62-131%
2037-26-5	Toluene-D8	107%		76-119%
460-00-4	4-Bromofluorobenzene	107%		67-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

bp

Chain of Custody Record

Project Name	BP s/s 3887	Page	of
BP BU/AR Region/Enfos Segment:	East Coast / retail	On-site Time:	11:00 Temp: 50
State or Lead Regulatory Agency	NYSDEC	Off-site Time:	2:30 Temp: 50
YEAR 2005	Requested Due Date (mm/dd/yy) standard	Sky Conditions:	sunny
	COC TRACKING No.	Meteorological Events:	N95072
		Wind Speed:	Direction:

Lab Name:	Accutest	BP/AR Facility No.:	BP s/s 3887	Consultant/Contractor:	Delta Environmental Consultants
Lab Address:	2235 RT 130 Dayton, NJ 08810	BP/AR Facility Address:	164 4th Ave	Address:	84 Business Park Dr. Suite 107 Armonk, NY 10504
Lab PM:	D. Komar	Site Lat/Long:		e-mail EDD to:	pmeyer@deltaenv.com
Tele/Fax:	732 329 - 0200	California Global ID #:		Consultant/Contractor Project No.:	
BP/AR PM Contact Name	Charles Wein	Enfos Project No.		Consultant/Contractor Tele/Fax:	914 765 8198
Address	41 Regan Road	Provision or RCOP	Provision	Consultant/Contractor PM:	B. Fisher
		Phase/WBS:		Invoice to: Consultant or BP or AR Co. (Circle one)	
Tele/Fax:		Sub Phase/Task	03	Report Type & QC level	
		Cost Element	05		

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory Tracking No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Preservatives: Methanol	Requested Analysis: BTEX 8021	Requested Analysis: BTEX/TPH	Requested Analysis: BTEX/Oxy/TPH	Requested Analysis: EPA 8260 full list VOCs	Requested Analysis: EPA 8270 full list SVOCs	Sample Point Lat/Long and Comments
1	VCW-1 17'-18'	2:50	4/4	x			-1	2									X		1441M
2	VCW-1 20'-21'	2:50	4/4	x			-2	2									X		162
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Full Name:	K. Pender	Relinquished By / Affiliation (Sign)	Date	Time	Accepted By / Affiliation(Sign)	Date	Time
Sampler's Company:	Delta		4/4/05	3:30	FedX		
Shipment Date:	4/4/2005	FedX	4/5/05	0915		4/5/05	0915
Shipment Method:	Fed Ex						
Shipment Tracking No:							

Special Instructions: 1 encore/sample @

Custody Seals In Place (circle one)	Y	N	Temp Blank (circle one)	Y	N	Cooler Temperature on Receipt 3.5 °F/C (circle one)		Trip Blank	Y / N (Circle one)

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 2 4/18/03

BPCOC Template.xls 4/4/2005 COC Sheet 3

16

TB

3.1

N95072: Chain of Custody
Page 1 of 1

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1417-MB1	Y35031.D	1	04/14/05	KNV	n/a	n/a	VY1417

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	12	ug/kg	
104-51-8	n-Butylbenzene	ND	250	44	ug/kg	
135-98-8	sec-Butylbenzene	ND	250	14	ug/kg	
98-06-6	tert-Butylbenzene	ND	250	22	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
98-82-8	Isopropylbenzene	ND	250	52	ug/kg	
99-87-6	p-Isopropyltoluene	ND	250	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	16	ug/kg	
91-20-3	Naphthalene	ND	250	120	ug/kg	
103-65-1	n-Propylbenzene	ND	250	7.2	ug/kg	
108-88-3	Toluene	ND	50	11	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	39	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	49	ug/kg	
	m,p-Xylene	ND	100	39	ug/kg	
95-47-6	o-Xylene	ND	50	21	ug/kg	
1330-20-7	Xylene (total)	ND	100	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-122%
17060-07-0	1,2-Dichloroethane-D4	88%	62-131%
2037-26-5	Toluene-D8	105%	76-119%
460-00-4	4-Bromofluorobenzene	106%	67-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1422-MB1	Y35182.D	1	04/18/05	KNV	n/a	n/a	VY1422

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	12	ug/kg	
104-51-8	n-Butylbenzene	ND	250	44	ug/kg	
135-98-8	sec-Butylbenzene	ND	250	14	ug/kg	
98-06-6	tert-Butylbenzene	ND	250	22	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
98-82-8	Isopropylbenzene	ND	250	52	ug/kg	
99-87-6	p-Isopropyltoluene	ND	250	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	16	ug/kg	
91-20-3	Naphthalene	ND	250	120	ug/kg	
103-65-1	n-Propylbenzene	ND	250	7.2	ug/kg	
108-88-3	Toluene	ND	50	11	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	39	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	49	ug/kg	
	m,p-Xylene	ND	100	39	ug/kg	
95-47-6	o-Xylene	ND	50	21	ug/kg	
1330-20-7	Xylene (total)	ND	100	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	70-122%
17060-07-0	1,2-Dichloroethane-D4	94%	62-131%
2037-26-5	Toluene-D8	106%	76-119%
460-00-4	4-Bromofluorobenzene	108%	67-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1417-MB2	Y35059.D	1	04/15/05	KNV	n/a	n/a	VY1417

The QC reported here applies to the following samples: Method: SW846 8260B

VY1417-BS, N95544-5MS, N95544-5MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	12	ug/kg	
104-51-8	n-Butylbenzene	ND	250	44	ug/kg	
135-98-8	sec-Butylbenzene	ND	250	14	ug/kg	
98-06-6	tert-Butylbenzene	ND	250	22	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
98-82-8	Isopropylbenzene	ND	250	52	ug/kg	
99-87-6	p-Isopropyltoluene	ND	250	15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	16	ug/kg	
91-20-3	Naphthalene	ND	250	120	ug/kg	
103-65-1	n-Propylbenzene	ND	250	7.2	ug/kg	
108-88-3	Toluene	ND	50	11	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	39	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	49	ug/kg	
	m,p-Xylene	ND	100	39	ug/kg	
95-47-6	o-Xylene	ND	50	21	ug/kg	
1330-20-7	Xylene (total)	ND	100	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-122%
17060-07-0	1,2-Dichloroethane-D4	97%	62-131%
2037-26-5	Toluene-D8	107%	76-119%
460-00-4	4-Bromofluorobenzene	111%	67-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1417-BS	Y35060.D	1	04/15/05	KNV	n/a	n/a	VY1417

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2620	105	81-116
104-51-8	n-Butylbenzene	2500	2630	105	71-124
135-98-8	sec-Butylbenzene	2500	2600	104	70-124
98-06-6	tert-Butylbenzene	2500	2480	99	72-126
100-41-4	Ethylbenzene	2500	2650	106	81-118
98-82-8	Isopropylbenzene	2500	2740	110	75-127
99-87-6	p-Isopropyltoluene	2500	2570	103	70-123
1634-04-4	Methyl Tert Butyl Ether	2500	2560	102	76-129
91-20-3	Naphthalene	2500	2620	105	62-132
103-65-1	n-Propylbenzene	2500	2680	107	75-122
108-88-3	Toluene	2500	2680	107	82-118
95-63-6	1,2,4-Trimethylbenzene	2500	2640	106	76-122
108-67-8	1,3,5-Trimethylbenzene	2500	2680	107	75-123
	m,p-Xylene	5000	5360	107	81-119
95-47-6	o-Xylene	2500	2680	107	81-121
1330-20-7	Xylene (total)	7500	8040	107	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	70-122%
17060-07-0	1,2-Dichloroethane-D4	96%	62-131%
2037-26-5	Toluene-D8	108%	76-119%
460-00-4	4-Bromofluorobenzene	105%	67-137%

Blank Spike Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1422-BS	Y35183.D	1	04/18/05	KNV	n/a	n/a	VY1422

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2690	108	81-116
104-51-8	n-Butylbenzene	2500	2650	106	71-124
135-98-8	sec-Butylbenzene	2500	2630	105	70-124
98-06-6	tert-Butylbenzene	2500	2510	100	72-126
100-41-4	Ethylbenzene	2500	2690	108	81-118
98-82-8	Isopropylbenzene	2500	2760	110	75-127
99-87-6	p-Isopropyltoluene	2500	2600	104	70-123
1634-04-4	Methyl Tert Butyl Ether	2500	2640	106	76-129
91-20-3	Naphthalene	2500	2560	102	62-132
103-65-1	n-Propylbenzene	2500	2670	107	75-122
108-88-3	Toluene	2500	2750	110	82-118
95-63-6	1,2,4-Trimethylbenzene	2500	2640	106	76-122
108-67-8	1,3,5-Trimethylbenzene	2500	2720	109	75-123
	m,p-Xylene	5000	5420	108	81-119
95-47-6	o-Xylene	2500	2720	109	81-121
1330-20-7	Xylene (total)	7500	8140	109	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-122%
17060-07-0	1,2-Dichloroethane-D4	96%	62-131%
2037-26-5	Toluene-D8	108%	76-119%
460-00-4	4-Bromofluorobenzene	104%	67-137%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N95544-5MS	Y35070.D	1	04/15/05	KNV	n/a	n/a	VY1417
N95544-5MSD	Y35071.D	1	04/15/05	KNV	n/a	n/a	VY1417
N95544-5	Y35068.D	1	04/15/05	KNV	n/a	n/a	VY1417

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-1

CAS No.	Compound	N95544-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3260	3430	105	3420	105	0	54-132/15
104-51-8	n-Butylbenzene	ND		3260	3490	107	3430	105	2	25-161/28
135-98-8	sec-Butylbenzene	ND		3260	3510	108	3490	107	1	29-153/26
98-06-6	tert-Butylbenzene	ND		3260	3330	102	3270	100	2	34-153/25
100-41-4	Ethylbenzene	ND		3260	3430	105	3460	106	1	44-142/20
98-82-8	Isopropylbenzene	ND		3260	3520	108	3460	106	2	36-152/23
99-87-6	p-Isopropyltoluene	ND		3260	3480	107	3500	107	1	32-153/26
1634-04-4	Methyl Tert Butyl Ether	ND		3260	3300	101	3190	98	3	57-141/17
91-20-3	Naphthalene	ND		3260	3610	111	3550	109	2	27-160/29
103-65-1	n-Propylbenzene	ND		3260	3480	107	3460	106	1	33-150/24
108-88-3	Toluene	ND		3260	3550	109	3530	108	1	47-140/17
95-63-6	1,2,4-Trimethylbenzene	ND		3260	3540	109	3460	106	2	32-156/27
108-67-8	1,3,5-Trimethylbenzene	ND		3260	3530	108	3450	106	2	34-153/23
	m,p-Xylene	ND		6520	7000	107	7070	108	1	39-146/22
95-47-6	o-Xylene	ND		3260	3580	110	3620	111	1	50-141/20
1330-20-7	Xylene (total)	ND		9790	10600	108	10700	109	1	43-144/21

CAS No.	Surrogate Recoveries	MS	MSD	N95544-5	Limits
1868-53-7	Dibromofluoromethane	96%	94%	97%	70-122%
17060-07-0	1,2-Dichloroethane-D4	93%	90%	98%	62-131%
2037-26-5	Toluene-D8	107%	107%	105%	76-119%
460-00-4	4-Bromofluorobenzene	104%	104%	108%	67-137%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N96160-3MS	Y35187.D	1	04/18/05	KNV	n/a	n/a	VY1422
N96160-3MSD	Y35188.D	1	04/18/05	KNV	n/a	n/a	VY1422
N96160-3	Y35191.D	1	04/18/05	KNV	n/a	n/a	VY1422

The QC reported here applies to the following samples: Method: SW846 8260B

N95072-2

CAS No.	Compound	N96160-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3990	4230	106	4260	107	1	54-132/15
104-51-8	n-Butylbenzene	ND		3990	4240	106	4290	107	1	25-161/28
135-98-8	sec-Butylbenzene	ND		3990	4250	106	4280	107	1	29-153/26
98-06-6	tert-Butylbenzene	ND		3990	3950	99	3950	99	0	34-153/25
100-41-4	Ethylbenzene	215		3990	4440	106	4470	107	1	44-142/20
98-82-8	Isopropylbenzene	ND		3990	4270	107	4290	107	0	36-152/23
99-87-6	p-Isopropyltoluene	ND		3990	4290	107	4310	108	0	32-153/26
1634-04-4	Methyl Tert Butyl Ether	ND		3990	3990	100	3960	99	1	57-141/17
91-20-3	Naphthalene	ND		3990	4580	115	4540	114	1	27-160/29
103-65-1	n-Propylbenzene	ND		3990	4220	106	4230	106	0	33-150/24
108-88-3	Toluene	622		3990	5260	116	5350	118	2	47-140/17
95-63-6	1,2,4-Trimethylbenzene	ND		3990	4240	106	4220	106	0	32-156/27
108-67-8	1,3,5-Trimethylbenzene	ND		3990	4240	106	4230	106	0	34-153/23
	m,p-Xylene	2470		7980	11700	116	11800	117	1	39-146/22
95-47-6	o-Xylene	667		3990	5250	115	5300	116	1	50-141/20
1330-20-7	Xylene (total)	3140		12000	17000	116	17100	117	1	43-144/21

CAS No.	Surrogate Recoveries	MS	MSD	N96160-3	Limits
1868-53-7	Dibromofluoromethane	95%	94%	95%	70-122%
17060-07-0	1,2-Dichloroethane-D4	90%	88%	91%	62-131%
2037-26-5	Toluene-D8	108%	108%	106%	76-119%
460-00-4	4-Bromofluorobenzene	103%	102%	107%	67-137%

Instrument Performance Check (BFB)

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	VY1413-BFB	Injection Date:	04/12/05
Lab File ID:	Y34936.D	Injection Time:	12:21
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	2338	20.2		Pass
75	30.0 - 80.0% of mass 95	5943	51.3		Pass
95	Base peak, 100% relative abundance	11583	100.0		Pass
96	5.0 - 9.0% of mass 95	790	6.8		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	10007	86.4		Pass
175	5.0 - 9.0% of mass 174	732	6.3	(7.3) [a]	Pass
176	95.01 - 101.0% of mass 174	9717	83.9	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	632	5.5	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1413-IC1413	Y34937.D	04/12/05	12:57	00:36	Initial cal 5
VY1413-IC1413	Y34938.D	04/12/05	13:26	01:05	Initial cal 10
VY1413-IC1413	Y34939.D	04/12/05	13:54	01:33	Initial cal 2
VY1413-IC1413	Y34940.D	04/12/05	14:23	02:02	Initial cal 1
VY1413-IC1413	Y34941.D	04/12/05	14:51	02:30	Initial cal 20
VY1413-ICC1413	Y34942.D	04/12/05	15:19	02:58	Initial cal 50
VY1413-IC1413	Y34943.D	04/12/05	15:47	03:26	Initial cal 100
VY1413-IC1413	Y34944.D	04/12/05	16:15	03:54	Initial cal 200
VY1413-MB1	Y34949.D	04/12/05	19:07	06:46	Method Blank
VY1413-BS	Y34950.D	04/12/05	19:35	07:14	Blank Spike
ZZZZZZ	Y34951.D	04/12/05	20:03	07:42	(unrelated sample)
ZZZZZZ	Y34952.D	04/12/05	20:32	08:11	(unrelated sample)
ZZZZZZ	Y34953.D	04/12/05	21:00	08:39	(unrelated sample)
ZZZZZZ	Y34954.D	04/12/05	21:28	09:07	(unrelated sample)
ZZZZZZ	Y34955.D	04/12/05	21:57	09:36	(unrelated sample)
ZZZZZZ	Y34956.D	04/12/05	22:25	10:04	(unrelated sample)
ZZZZZZ	Y34957.D	04/12/05	22:53	10:32	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	VY1417-BFB	Injection Date:	04/14/05
Lab File ID:	Y35029.D	Injection Time:	13:33
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	2306	19.0		Pass
75	30.0 - 60.0% of mass 95	5929	48.8		Pass
95	Base peak, 100% relative abundance	12155	100.0		Pass
96	5.0 - 9.0% of mass 95	778	6.4		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 150.0% of mass 95	10763	88.5		Pass
175	5.0 - 9.0% of mass 174	778	6.4	(7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	10555	86.8	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	709	5.8	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1417-CC1413	Y35030.D	04/14/05	14:06	00:33	Continuing cal 20
VY1417-MB1	Y35031.D	04/14/05	14:50	01:17	Method Blank
N95072-1	Y35038.D	04/14/05	18:26	04:53	VCW-1 17'-18'
ZZZZZZ	Y35039.D	04/14/05	18:54	05:21	(unrelated sample)
ZZZZZZ	Y35040.D	04/14/05	19:23	05:50	(unrelated sample)
ZZZZZZ	Y35042.D	04/14/05	20:20	06:47	(unrelated sample)
ZZZZZZ	Y35043.D	04/14/05	20:48	07:15	(unrelated sample)
ZZZZZZ	Y35044.D	04/14/05	21:16	07:43	(unrelated sample)
ZZZZZZ	Y35045.D	04/14/05	21:44	08:11	(unrelated sample)
ZZZZZZ	Y35046.D	04/14/05	22:13	08:40	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	VY1417-BFB	Injection Date:	04/15/05
Lab File ID:	Y35057.D	Injection Time:	09:54
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	2230	19.6		Pass
75	30.0 - 60.0% of mass 95	5701	50.1		Pass
95	Base peak, 100% relative abundance	11390	100.0		Pass
96	5.0 - 9.0% of mass 95	768	6.7		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 150.0% of mass 95	10151	89.1		Pass
175	5.0 - 9.0% of mass 174	731	6.4	(7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	9902	86.9	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	663	5.8	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1417-CC1413	Y35058.D	04/15/05	10:28	00:34	Continuing cal 20
VY1417-MB2	Y35059.D	04/15/05	11:01	01:07	Method Blank
VY1417-BS	Y35060.D	04/15/05	11:29	01:35	Blank Spike
ZZZZZZ	Y35061.D	04/15/05	11:57	02:03	(unrelated sample)
ZZZZZZ	Y35062.D	04/15/05	12:26	02:32	(unrelated sample)
ZZZZZZ	Y35063.D	04/15/05	12:59	03:05	(unrelated sample)
ZZZZZZ	Y35064.D	04/15/05	14:26	04:32	(unrelated sample)
ZZZZZZ	Y35065.D	04/15/05	14:59	05:05	(unrelated sample)
ZZZZZZ	Y35066.D	04/15/05	15:27	05:33	(unrelated sample)
ZZZZZZ	Y35067.D	04/15/05	15:56	06:02	(unrelated sample)
N95544-5	Y35068.D	04/15/05	16:24	06:30	(used for QC only; not part of job N95072)
ZZZZZZ	Y35069.D	04/15/05	16:52	06:58	(unrelated sample)
N95544-5MS	Y35070.D	04/15/05	17:20	07:26	Matrix Spike
N95544-5MSD	Y35071.D	04/15/05	17:48	07:54	Matrix Spike Duplicate
VY1419-MB1	Y35073.D	04/15/05	18:44	08:50	Method Blank
ZZZZZZ	Y35076.D	04/15/05	19:12	09:18	(unrelated sample)
ZZZZZZ	Y35077.D	04/15/05	19:40	09:46	(unrelated sample)
ZZZZZZ	Y35078.D	04/15/05	20:09	10:15	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	VY1422-BFB	Injection Date:	04/18/05
Lab File ID:	Y35180.D	Injection Time:	10:59
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	2038	18.9		Pass
75	30.0 - 60.0% of mass 95	5413	50.1		Pass
95	Base peak, 100% relative abundance	10810	100.0		Pass
96	5.0 - 9.0% of mass 95	742	6.9		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 150.0% of mass 95	9731	90.0		Pass
175	5.0 - 9.0% of mass 174	707	6.5	(7.3) [a]	Pass
176	95.0 - 101.0% of mass 174	9298	86.0	(95.6) [a]	Pass
177	5.0 - 9.0% of mass 176	594	5.5	(6.4) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1422-CC1413	Y35181.D	04/18/05	11:27	00:28	Continuing cal 20
VY1422-MB1	Y35182.D	04/18/05	12:10	01:11	Method Blank
VY1422-BS	Y35183.D	04/18/05	12:39	01:40	Blank Spike
ZZZZZZ	Y35184.D	04/18/05	13:07	02:08	(unrelated sample)
ZZZZZZ	Y35185.D	04/18/05	13:35	02:36	(unrelated sample)
ZZZZZZ	Y35186.D	04/18/05	14:04	03:05	(unrelated sample)
N96160-3MS	Y35187.D	04/18/05	14:32	03:33	Matrix Spike
N96160-3MSD	Y35188.D	04/18/05	15:00	04:01	Matrix Spike Duplicate
ZZZZZZ	Y35190.D	04/18/05	15:57	04:58	(unrelated sample)
N96160-3	Y35191.D	04/18/05	16:25	05:26	(used for QC only; not part of job N95072)
ZZZZZZ	Y35192.D	04/18/05	16:53	05:54	(unrelated sample)
ZZZZZZ	Y35193.D	04/18/05	17:22	06:23	(unrelated sample)
N95072-2	Y35194.D	04/18/05	17:50	06:51	VCW-1 20'-21'
ZZZZZZ	Y35195.D	04/18/05	18:18	07:19	(unrelated sample)
ZZZZZZ	Y35196.D	04/18/05	18:47	07:48	(unrelated sample)
ZZZZZZ	Y35197.D	04/18/05	19:15	08:16	(unrelated sample)
ZZZZZZ	Y35198.D	04/18/05	19:44	08:45	(unrelated sample)
ZZZZZZ	Y35199.D	04/18/05	20:12	09:13	(unrelated sample)
ZZZZZZ	Y35201.D	04/18/05	21:09	10:10	(unrelated sample)

Volatile Surrogate Recovery Summary

Job Number: N95072
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Method: SW846 8260B Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
N95072-1	Y35038.D	94.0	91.0	106.0	106.0
N95072-2	Y35194.D	96.0	97.0	107.0	107.0
N95544-5MS	Y35070.D	96.0	93.0	107.0	104.0
N95544-5MSD	Y35071.D	94.0	90.0	107.0	104.0
N96160-3MS	Y35187.D	95.0	90.0	108.0	103.0
N96160-3MSD	Y35188.D	94.0	88.0	108.0	102.0
VY1417-BS	Y35060.D	99.0	96.0	108.0	105.0
VY1417-MB1	Y35031.D	93.0	88.0	105.0	106.0
VY1422-BS	Y35183.D	98.0	96.0	108.0	104.0
VY1422-MB1	Y35182.D	97.0	94.0	106.0	108.0
VY1417-MB2	Y35059.D	98.0	97.0	107.0	111.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-122%
S2 = 1,2-Dichloroethane-D4	62-131%
S3 = Toluene-D8	76-119%
S4 = 4-Bromofluorobenzene	67-137%

Appendix E

New Jersey
ACCUTEST.
Laboratories

04/29/05

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Technical Report for

BP Amoco Corporation

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Accutest Job Number: N96203

Sampling Date: 04/14/05

Report to:

Delta Environmental Consultants
84 Business Park Drive
Armonk, NY 10501

ATTN: Aaron Lapine

Total number of pages in report: **19**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

Table of Contents

Sections: 1 2 3 4

-1-

Sample Summary

BP Amoco Corporation

Job No: N96203

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY
Project No: PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
N96203-1	04/14/05	00:00	KP	04/15/05	AIR	Air	VCW-1A
N96203-2	04/14/05	00:00	KP	04/15/05	AIR	Air	VCW-1B
N96203-3	04/14/05	00:00	KP	04/15/05	AIR	Air	VCW-12

Accutest Laboratories

Report of Analysis

Client Sample ID:	VCW-1A		
Lab Sample ID:	N96203-1	Date Sampled:	04/14/05
Matrix:	AIR - Air	Date Received:	04/15/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR45739.D	1	04/20/05	HSC	n/a	n/a	GQR2132
Run #2							

	Initial Volume
Run #1	0.50 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	ND	0.025	ppmv		ND	0.080	mg/m3
108-88-3	92.14	Toluene	5.4	0.050	ppmv		20	0.19	mg/m3
100-41-4	106.2	Ethylbenzene	ND	0.050	ppmv		ND	0.22	mg/m3
1330-20-7	106.2	Xylenes (total)	ND	0.050	ppmv		ND	0.22	mg/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.050	ppmv		ND	0.18	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		77-127%
460-00-4	4-Bromofluorobenzene	124%		77-127%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VCW-1B		
Lab Sample ID:	N96203-2	Date Sampled:	04/14/05
Matrix:	AIR - Air	Date Received:	04/15/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR45649.D	1	04/16/05	HSC	n/a	n/a	GQR2128
Run #2							

	Initial Volume
Run #1	0.50 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	ND	0.025	ppmv		ND	0.080	mg/m3
108-88-3	92.14	Toluene	ND	0.050	ppmv		ND	0.19	mg/m3
100-41-4	106.2	Ethylbenzene	ND	0.050	ppmv		ND	0.22	mg/m3
1330-20-7	106.2	Xylenes (total)	ND	0.050	ppmv		ND	0.22	mg/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	0.35	0.050	ppmv		1.3	0.18	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		77-127%
460-00-4	4-Bromofluorobenzene	98%		77-127%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VCW-12		
Lab Sample ID:	N96203-3	Date Sampled:	04/14/05
Matrix:	AIR - Air	Date Received:	04/15/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR45650.D	1	04/16/05	HSC	n/a	n/a	GQR2128
Run #2							

	Initial Volume
Run #1	0.50 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	ND	0.025	ppmv		ND	0.080	mg/m3
108-88-3	92.14	Toluene	ND	0.050	ppmv		ND	0.19	mg/m3
100-41-4	106.2	Ethylbenzene	ND	0.050	ppmv		ND	0.22	mg/m3
1330-20-7	106.2	Xylenes (total)	ND	0.050	ppmv		ND	0.22	mg/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.050	ppmv		ND	0.18	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		77-127%
460-00-4	4-Bromofluorobenzene	101%		77-127%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Chain of Custody Record

Page	of
YEAR	2005
Project Name	BP ~~Amoco~~ 3887
BP BU/AR Region/Enfos Segment:	East Coast / retail
State or Lead Regulatory Agency	NYSDEC
Requested Due Date (mm/dd/yy)	standard
COC TRACKING No.	
On-site Time:	10:00 Temp: 50
Off-site Time:	3.00 Temp: 60
Sky Conditions:	sunny N96203
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Accutest	BP/AR Facility No.:	BP ~~Amoco~~ 3887
Lab Address:	2235 RT 130, Dayton, NJ 08810	BP/AR Facility Address:	~~...~~ 9th Ave Brooklyn, NY
Lab PM:	D. Komar	Site Lat/Long:	
Tele/Fax:	732 329 - 0200	California Global ID #:	
BP/AR PM Contact Name	Charles Wein	Enfos Project No.	
Address	41 Regan Road	Provision or RCOP	Provision
Tele/Fax:		Phase/WBS:	
Lab Bottle Order No:		Sub Phase/Task	03
		Cost Element	05

Consultant/Contractor:	Delta Environmental Consultants
Address:	84 Business Park Dr. Suite 107, Armonk, NY 10504
e-mail EDD to:	pmeyer@deltaenv.com
Consultant/Contractor Project No.:	
Consultant/Contractor Tele/Fax:	914 765 8198
Consultant/Contractor PM:	B. Fisher
Invoice to: Consultant or BP or AR Co. (Circle one)	
Report Type & QC level	

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Water/Liquid	Air	Laboratory Tracking No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analysis: BTEX 8021	BTEX/TPH	BTEX/Oxy/TPH	EPA 8260	EPA 8270	TO3 BTEX MTBE				Sample Point Lat/Long and Comments
1	VCW-1A					X	-1													X				
2	VCW-1B					X	-2													X				
3	VCW-1C					X	-3													X				
4																								
5																								
6																								
7																								
8																								
9																								
10																								

		Relinquished By / Affiliation (Sign)	Date	Time	Accepted By / Affiliation (Sign)	Date	Time
Sampler's Full Name:	K. Pender	[signature]	4/14/05	5:00	[signature]		
Sampler's Company:	Delta	[signature]	4/15/05	0945	[signature]	4/15/05	0945
Shipment Date:	4/14/05						
Shipment Method:	Fed Ex						
Shipment Tracking No:							

Special Instructions:

Custody Seals In Place (circle one) Y N | Temp Blank (circle one) Y N | Cooler Temperature on Receipt ____ °F/C (circle one) | Trip Blank Y / N (Circle one)

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor | BP COC Rev. 2 4/18/03

BPCOC Template.xls 4/14/2005 COC Sheet 3

YB

TPS

3.1

N96203: Chain of Custody
Page 1 of 2

3.1

Job Change Order: N96203_4/21/2005

Requested Date:	4/21/2005	**Received Date:**	4/15/2005
Account Name:	BP Amoco Corporation	**Due Date:**	4/29/2005
Project Description:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn,	**Deliverable:**	COMMB
CSR:	DK	**TAT (Days):**	10

Sample #:
N96203-all

Change: Change Due Date to 4/25/05 - client must have results by COB.

Above Changes Per: Paul Meyer **Date:** 4/21/2005

N96203: Chain of Custody
Page 2 of 2

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2128-MB	QR45647.D	1	04/16/05	HSC	n/a	n/a	GQR2128

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-2, N96203-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
1634-04-4	Methyl Tert Butyl Ether	ND	0.050	ppmv		ND	0.18	mg/m3
71-43-2	Benzene	ND	0.025	ppmv		ND	0.080	mg/m3
108-88-3	Toluene	ND	0.050	ppmv		ND	0.19	mg/m3
100-41-4	Ethylbenzene	ND	0.050	ppmv		ND	0.22	mg/m3
1330-20-7	Xylenes (total)	ND	0.050	ppmv		ND	0.22	mg/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	77-127%
460-00-4	4-Bromofluorobenzene	103%	77-127%

Method Blank Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2132-MB	QR45738.D	1	04/20/05	HSC	n/a	n/a	GQR2132

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-1

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
1634-04-4	Methyl Tert Butyl Ether	ND	0.050	ppmv		ND	0.18	mg/m3
71-43-2	Benzene	ND	0.025	ppmv		ND	0.080	mg/m3
108-88-3	Toluene	ND	0.050	ppmv		ND	0.19	mg/m3
100-41-4	Ethylbenzene	ND	0.050	ppmv		ND	0.22	mg/m3
1330-20-7	Xylenes (total)	ND	0.050	ppmv		ND	0.22	mg/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	77-127%
460-00-4	4-Bromofluorobenzene	97%	77-127%

Laboratory Control Sample Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2128-LCS	QR45646.D	1	04/16/05	HSC	n/a	n/a	GQR2128

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-2, N96203-3

CAS No.	Compound	Spike ppmv	LCS ppmv	LCS %	Limits
1634-04-4	Methyl Tert Butyl Ether	10	9.9	99	78-115
71-43-2	Benzene	10	10.3	103	79-118
108-88-3	Toluene	10	10.0	100	81-122
100-41-4	Ethylbenzene	10	13.1	131	85-140
1330-20-7	Xylenes (total)	30	30.7	102	79-122

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	98%	77-127%
460-00-4	4-Bromofluorobenzene	103%	77-127%

Laboratory Control Sample Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2132-LCS	QR45737.D	1	04/20/05	HSC	n/a	n/a	GQR2132

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-1

CAS No.	Compound	Spike ppmv	LCS ppmv	LCS %	Limits
1634-04-4	Methyl Tert Butyl Ether	10	9.4	94	78-115
71-43-2	Benzene	10	9.7	97	79-118
108-88-3	Toluene	10	9.4	94	81-122
100-41-4	Ethylbenzene	10	12.5	125	85-140
1330-20-7	Xylenes (total)	30	30.3	101	79-122

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	90%	77-127%
460-00-4	4-Bromofluorobenzene	103%	77-127%

Duplicate Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N96212-2DUP	QR45658.D	1	04/17/05	HSC	n/a	n/a	GQR2128
N96212-2	QR45657.D	1	04/16/05	HSC	n/a	n/a	GQR2128

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-2, N96203-3

CAS No.	Compound	N96212-2 ppmv	Q	DUP ppmv	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	16
71-43-2	Benzene	ND		ND		nc	33
108-88-3	Toluene	ND		ND		nc	35
100-41-4	Ethylbenzene	ND		ND		nc	33
1330-20-7	Xylenes (total)	ND		ND		nc	32

CAS No.	Surrogate Recoveries	DUP	N96212-2	Limits
460-00-4	4-Bromofluorobenzene	97%	97%	76-129%
460-00-4	4-Bromofluorobenzene	101%	99%	76-129%

Duplicate Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N96365-1DUP	QR45661.D	1	04/17/05	HSC	n/a	n/a	GQR2128
N96365-1	QR45660.D	1	04/17/05	HSC	n/a	n/a	GQR2128

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-2, N96203-3

CAS No.	Compound	N96365-1 ppmv	Q	DUP ppmv	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	15
71-43-2	Benzene	0.34		0.33		3	17
108-88-3	Toluene	2.1		2.0		5	21
100-41-4	Ethylbenzene	0.33		0.33		0	23
1330-20-7	Xylenes (total)	3.0		2.9		3	25

CAS No.	Surrogate Recoveries	DUP	N96365-1	Limits
460-00-4	4-Bromofluorobenzene	90%	90%	77-127%
460-00-4	4-Bromofluorobenzene	103%	103%	77-127%

Duplicate Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N96499-1DUP	QR45741.D	1	04/20/05	HSC	n/a	n/a	GQR2132
N96499-1	QR45740.D	1	04/20/05	HSC	n/a	n/a	GQR2132

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-1

CAS No.	Compound	N96499-1 ppmv	Q	DUP ppmv	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	12.4		13.7		10	15
71-43-2	Benzene	ND		ND		nc	17
108-88-3	Toluene	6.0		6.1		2	21
100-41-4	Ethylbenzene	5.1		4.9		4	23
1330-20-7	Xylenes (total)	2.3		2.3		0	25

CAS No.	Surrogate Recoveries	DUP	N96499-1	Limits
460-00-4	4-Bromofluorobenzene	100%	103%	77-127%
460-00-4	4-Bromofluorobenzene	126%	126%	77-127%

Duplicate Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N96556-2DUP	QR45754.D	1	04/20/05	HSC	n/a	n/a	GQR2132
N96556-2	QR45753.D	1	04/20/05	HSC	n/a	n/a	GQR2132

The QC reported here applies to the following samples: Method: EPA TO-3

N96203-1

CAS No.	Compound	N96556-2 ppmv	Q	DUP ppmv	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	15
71-43-2	Benzene	0.33		0.33		0	17
108-88-3	Toluene	1.4		1.4		0	21
100-41-4	Ethylbenzene	1.0		1.0		0	23
1330-20-7	Xylenes (total)	3.2		3.2		0	25

CAS No.	Surrogate Recoveries	DUP	N96556-2	Limits
460-00-4	4-Bromofluorobenzene	91%	91%	77-127%
460-00-4	4-Bromofluorobenzene	98%	98%	77-127%

Volatile Surrogate Recovery Summary

Job Number: N96203
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Method: EPA TO-3 Matrix: AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
N96203-1	QR45739.D	89.0	124.0
N96203-2	QR45649.D	96.0	98.0
N96203-3	QR45650.D	96.0	101.0
GQR2128-LCS	QR45646.D	98.0	103.0
GQR2128-MB	QR45647.D	97.0	103.0
GQR2132-LCS	QR45737.D	90.0	103.0
GQR2132-MB	QR45738.D	88.0	97.0
N96212-2DUP	QR45658.D	97.0	101.0
N96365-1DUP	QR45661.D	90.0	103.0
N96499-1DUP	QR45741.D	100.0	126.0
N96556-2DUP	QR45754.D	91.0	98.0

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	77-127%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Appendix F

e-Hardcopy 2.0
Automated Report

New Jersey
ACCUTEST
Laboratories

RECEIVED AUG 0 1 2005

07/28/05

Technical Report for

BP Amoco Corporation

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Accutest Job Number: J4581

Sampling Date: 07/19/05

Report to:

Delta Environmental Consultants
84 Business Park Drive
Armonk, NY 10501

ATTN: Aaron Lapine

Total number of pages in report: 32

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

Sections: 1 2 3 4 5

Table of Contents

-1-

Sample Summary

BP Amoco Corporation

Job No: J4581

DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY
Project No: PROJ# G02JF-0044 PHASE 04 SUB 03 COST 05

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
J4581-1	07/19/05	11:35	KP	07/20/05	AIR	Air	VEW-1C
J4581-2	07/19/05	11:45	KP	07/20/05	AIR	Air	VEW-1B
J4581-3	07/19/05	11:55	KP	07/20/05	AIR	Air	VEW-1A

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1C		
Lab Sample ID:	J4581-1	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A468,M118	Date Received:	07/20/05
Method:	TO-15	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2W3738.D	40	07/21/05	WG	n/a	n/a	V2W166
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	ND	8.0	ppbv		ND	26	ug/m3
108-88-3	92.14	Toluene	6.7	8.0	ppbv	J	25	30	ug/m3
100-41-4	106.2	Ethylbenzene	ND	8.0	ppbv		ND	35	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	8.0	ppbv		ND	35	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	8.0	ppbv		ND	29	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		78-124%

(a) Dilution required due to matrix interference(CO_2).

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1C		
Lab Sample ID:	J4581-1	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A468	Date Received:	07/20/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR48157.D	1.35	07/25/05	HSC	n/a	n/a	GQR2231
Run #2							

	Initial Volume
Run #1	0.50 ml
Run #2	

TPH Fraction

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
	72	TPH as Equiv Pentane	ND	6.8	ppmv		ND	20	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		77-127%
460-00-4	4-Bromofluorobenzene	104%		77-127%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1B		
Lab Sample ID:	J4581-2	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A335	Date Received:	07/20/05
Method:	TO-15	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2W3733.D	20	07/21/05	WG	n/a	n/a	V2W166
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	ND	4.0	ppbv		ND	13	ug/m3
108-88-3	92.14	Toluene	ND	4.0	ppbv		ND	15	ug/m3
100-41-4	106.2	Ethylbenzene	ND	4.0	ppbv		ND	17	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	4.0	ppbv		ND	17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	244	4.0	ppbv		880	14	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		78-124%

(a) Diluted due to high concentration of non-target compounds.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1B		
Lab Sample ID:	J4581-2	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A335	Date Received:	07/20/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR48158.D	1.18	07/25/05	HSC	n/a	n/a	GQR2231
Run #2							

	Initial Volume
Run #1	0.50 ml
Run #2	

TPH Fraction

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
	72	TPH as Equiv Pentane	42.3	5.9	ppmv		125	17	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		77-127%
460-00-4	4-Bromofluorobenzene	102%		77-127%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1A		
Lab Sample ID:	J4581-3	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A263,M125	Date Received:	07/20/05
Method:	TO-15	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2W3734.D	800	07/21/05	WG	n/a	n/a	V2W166
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	78.11	Benzene	787	160	ppbv		2510	510	ug/m3
108-88-3	92.14	Toluene	ND	160	ppbv		ND	600	ug/m3
100-41-4	106.2	Ethylbenzene	569	160	ppbv		2470	690	ug/m3
1330-20-7	106.2	Xylenes (total)	175	160	ppbv		760	690	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	160	ppbv		ND	580	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	118%		78-124%

(a) Diluted due to high concentration of non-target compounds.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	VEW-1A		
Lab Sample ID:	J4581-3	Date Sampled:	07/19/05
Matrix:	AIR - Air Summa ID: A263	Date Received:	07/20/05
Method:	EPA TO-3	Percent Solids:	n/a
Project:	DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR48159.D	1.18	07/25/05	HSC	n/a	n/a	GQR2231
Run #2 [a]	QR48169.D	1.18	07/25/05	HSC	n/a	n/a	GQR2231

	Initial Volume
Run #1	0.50 ml
Run #2	0.50 ml

TPH Fraction

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
	72	TPH as Equiv Pentane	14300	5.9	ppmv		42100	17	mg/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	77-127%
460-00-4	4-Bromofluorobenzene	152% [b]	151% [b]	77-127%

(a) Confirmation run.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Chain of Custody Record

J4581 Page ___ of ___

Air

Project Name: s/s 2107 3887 - Par Pond Hangar - DF 7/20/05
BP BU/AR Region/Enfos Segment: East Const/ retail
State or Lead Regulatory Agency: NYSDEC
Requested Due Date (mm/dd/yy): Standard

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Accutest	BP/AR Facility No.:	s/s 2107	Consultant/Contractor:	Delta Environmental Consultants
Address:	2235 RT 130	BP/AR Facility Address:	6090 Eliot Ave	Address:	84 business park drive suite 107 armonk ny
	Dayton, NJ 08810	Site Lat/Long:			
Lab PM:	D.Komar	California Global ID No.:		Consultant/Contractor Project No.:	g02jfrp50
Tele/Fax:	7323290200	Enfos Project No.:	g02jf-0044	Consultant/Contractor PM:	Brad Fisher
BP/AR PM Contact:	Charles Wein	Provision or RCOP (circle one)	Provision	Tele/Fax:	9147658198
Address:	41 Regan Road	Phase/WBS:		Report Type & QC Level:	
		Sub Phase/Task:	3	E-mail EDD To:	pmeyer@deltaenv.com
Tele/Fax:		Cost Element:	5	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	NAOH, ZN, ACE	Methanol preserved VOCs	TO-15 BTEX/ MTBE/TPH	8015CH4	CHL	Total Mn	Dissolved Mn	SO4	VOC3O	Sulfide	Sample Point Lat/Long and Comments
1	VEW-1C	11:35	7/19/2005			x	- 1	1	x						x								
2	VEW-1B	11:45	7/19/2005			x	- 2	1	x						x								B.S
3	VEW-1A	11:55	7/19/2005			x	- 3	1	x						x								
4																							
5																							SAMPLE IDS WRITTEN
6																							ON SUMMAS IN
7																							"MAGIC MARKER"
8																							MNB 7.20.05
9																							
10																							

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	K. Ponder		7/19/05	5:30			
Sampler's Company:	Delta		7-20-05	1000			
Shipment Date:	7/19/2005						
Shipment Method:	Fed Ex						
Shipment Tracking No:							

Special Instructions:

Custody Seals In Place Yes No Temp Blank Yes No Cooler Temperature on Receipt °F/C Trip Blank Yes No

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

BP COC Rev. 4 10/1/04

3.1

J4581: Chain of Custody
Page 1 of 1

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W166-MB	2W3732.D	1	07/21/05	WG	n/a	n/a	V2W166

The QC reported here applies to the following samples: Method: TO-15

J4581-1, J4581-2, J4581-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	78-124%

Method Blank Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W147-MB	2W3347.D	1	06/21/05	DFT	n/a	n/a	V2W147

The QC reported here applies to the following samples: Method: TO-15

V2W147-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	78-124%

Method Blank Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W159-MB	2W3590.D	1	07/12/05	WG	n/a	n/a	V2W159

The QC reported here applies to the following samples: Method: TO-15

V2W159-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W166-BS	2W3730.D	1	07/21/05	WG	n/a	n/a	V2W166
V2W166-BSD	2W3731.D	1	07/21/05	WG	n/a	n/a	V2W166

The QC reported here applies to the following samples: Method: TO-15

J4581-1, J4581-2, J4581-3

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10	10.1	101	10.1	101	0	70-130/30
100-41-4	Ethylbenzene	10	10.5	105	10.5	105	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	11.4	114	11.7	117	3	70-130/30
108-88-3	Toluene	10	10.1	101	10.2	102	1	70-130/30
1330-20-7	Xylenes (total)	30	31.4	105	31.6	105	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	102%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W147-BS	2W3345.D	1	06/21/05	DFT	n/a	n/a	V2W147
V2W147-BSD	2W3346.D	1	06/21/05	DFT	n/a	n/a	V2W147

The QC reported here applies to the following samples: Method: TO-15

V2W147-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10	10.1	101	9.1	91	10	70-130/30
100-41-4	Ethylbenzene	10	9.9	99	8.8	88	12	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.4	104	9.5	95	9	70-130/30
108-88-3	Toluene	10	9.5	95	8.5	85	11	70-130/30
1330-20-7	Xylenes (total)	30	28.9	96	25.9	86	11	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W159-BS	2W3588.D	1	07/12/05	WG	n/a	n/a	V2W159
V2W159-BSD	2W3589.D	1	07/12/05	WG	n/a	n/a	V2W159

The QC reported here applies to the following samples: Method: TO-15

V2W159-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10	10.5	105	10.4	104	1	70-130/30
100-41-4	Ethylbenzene	10	10.5	105	10.8	108	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.9	109	11.1	111	2	70-130/30
108-88-3	Toluene	10	10.4	104	10.5	105	1	70-130/30
1330-20-7	Xylenes (total)	30	31.9	106	32.6	109	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	78-124%

Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
J4786-1DUP	2W3740.D	1	07/21/05	WG	n/a	n/a	V2W166
J4786-1	2W3739.D	1	07/21/05	WG	n/a	n/a	V2W166
J4786-1	2W3741.D	8	07/21/05	WG	n/a	n/a	V2W166

The QC reported here applies to the following samples: Method: TO-15

J4581-1, J4581-2, J4581-3

CAS No.	Compound	J4786-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
71-43-2	Benzene	ND		ND		nc	14
100-41-4	Ethylbenzene	ND		ND		nc	17
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	16
108-88-3	Toluene	ND		ND		nc	13
1330-20-7	Xylenes (total)	0.75		0.68		10	16

CAS No.	Surrogate Recoveries	DUP	J4786-1	J4786-1	Limits
460-00-4	4-Bromofluorobenzene	104%	103%	101%	78-124%

Summa Cleaning Certification

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W147-SCC	2W3349.D	1	06/21/05	DFT	n/a	n/a	V2W147

The QC reported here applies to the following samples: Method: TO-15

J4581-1, J4581-2, J4581-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	78-124%

Summa Cleaning Certification

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W159-SCC	2W3601.D	2	07/13/05	WG	n/a	n/a	V2W159

The QC reported here (Summa M105) applies to the following samples: Method: TO-15

Batch CP1514 cleaned 07/11/05: J4581-1(M118), J4581-3(M125)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
71-43-2	Benzene	ND	0.40	ppbv		ND	1.3	ug/m3
100-41-4	Ethylbenzene	ND	0.40	ppbv		ND	1.7	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.40	ppbv		ND	1.4	ug/m3
108-88-3	Toluene	ND	0.40	ppbv		ND	1.5	ug/m3
1330-20-7	Xylenes (total)	ND	0.40	ppbv		ND	1.7	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	78-124%

Instrument Performance Check (BFB)

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	V2W143-BFB	Injection Date:	06/15/05
Lab File ID:	2W3288.D	Injection Time:	09:46
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	72397	16.9		Pass
75	30.0 - 66.0% of mass 95	190525	44.6		Pass
95	Base peak, 100% relative abundance	427605	100.0		Pass
96	5.0 - 9.0% of mass 95	27980	6.5		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	370602	86.7		Pass
175	4.0 - 9.01% of mass 174	26613	6.2	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	362453	84.8	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	23102	5.4	(6.4) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W143-IC143	2W3289.D	06/15/05	10:42	00:56	Initial cal 0.2
V2W143-IC143	2W3290.D	06/15/05	11:29	01:43	Initial cal 0.5
V2W143-IC143	2W3291.D	06/15/05	12:16	02:30	Initial cal 2
V2W143-IC143	2W3292.D	06/15/05	13:03	03:17	Initial cal 5
V2W143-ICC143	2W3293.D	06/15/05	13:50	04:04	Initial cal 10
V2W143-IC143	2W3294.D	06/15/05	14:37	04:51	Initial cal 20
V2W143-IC143	2W3296.D	06/15/05	16:10	06:24	Initial cal 40
V2W143-BS	2W3298.D	06/15/05	17:44	07:58	Blank Spike
V2W143-BSD	2W3299.D	06/15/05	18:30	08:44	Blank Spike Duplicate
V2W143-MB	2W3300.D	06/15/05	19:17	09:31	Method Blank

Instrument Performance Check (BFB)

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	V2W147-BFB	Injection Date:	06/21/05
Lab File ID:	2W3343.D	Injection Time:	08:52
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	40378	19.9		Pass
75	30.0 - 66.0% of mass 95	100746	49.6		Pass
95	Base peak, 100% relative abundance	203072	100.0		Pass
96	5.0 - 9.0% of mass 95	14721	7.2		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	151266	74.5		Pass
175	4.0 - 9.01% of mass 174	10874	5.4	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	146656	72.2	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	9899	4.9	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W147-CC143	2W3344.D	06/21/05	09:38	00:46	Continuing cal 10
V2W147-BS	2W3345.D	06/21/05	10:25	01:33	Blank Spike
V2W147-BSD	2W3346.D	06/21/05	11:11	02:19	Blank Spike Duplicate
V2W147-MB	2W3347.D	06/21/05	12:48	03:56	Method Blank
V2W147-SCC	2W3348.D	06/21/05	13:35	04:43	Summa Cleaning Certification
V2W147-SCC	2W3349.D	06/21/05	14:21	05:29	Summa Cleaning Certification
J2138-1	2W3350.D	06/21/05	15:08	06:16	(used for QC only; not part of job J4581)
J2138-1DUP	2W3351.D	06/21/05	15:55	07:03	Duplicate
ZZZZZZ	2W3352.D	06/21/05	16:41	07:49	(unrelated sample)
ZZZZZZ	2W3353.D	06/21/05	17:28	08:36	(unrelated sample)
J2138-4	2W3354.D	06/21/05	18:14	09:22	(used for QC only; not part of job J4581)
J2138-4DUP	2W3355.D	06/21/05	19:01	10:09	Duplicate
ZZZZZZ	2W3356.D	06/21/05	19:47	10:55	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	V2W159-BFB	Injection Date:	07/12/05
Lab File ID:	2W3578.D	Injection Time:	09:18
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	38424	25.4		Pass
75	30.0 - 66.0% of mass 95	87546	57.9		Pass
95	Base peak, 100% relative abundance	151082	100.0		Pass
96	5.0 - 9.0% of mass 95	11198	7.4		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	108626	71.9		Pass
175	4.0 - 9.01% of mass 174	8453	5.6	(7.8) [a]	Pass
176	93.0 - 101.0% of mass 174	104106	68.9	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	7281	4.8	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W159-IC159	2W3579.D	07/12/05	10:05	00:47	Initial cal 0.2
V2W159-IC159	2W3580.D	07/12/05	10:51	01:33	Initial cal 0.5
V2W159-IC159	2W3581.D	07/12/05	11:38	02:20	Initial cal 2
V2W159-IC159	2W3582.D	07/12/05	12:24	03:06	Initial cal 5
V2W159-ICC159	2W3583.D	07/12/05	13:11	03:53	Initial cal 10
V2W159-IC159	2W3584.D	07/12/05	13:58	04:40	Initial cal 20
V2W159-IC159	2W3586.D	07/12/05	15:31	06:13	Initial cal 40
V2W159-BS	2W3588.D	07/12/05	17:05	07:47	Blank Spike
V2W159-BSD	2W3589.D	07/12/05	17:51	08:33	Blank Spike Duplicate
V2W159-MB	2W3590.D	07/12/05	19:24	10:06	Method Blank
ZZZZZZ	2W3592.D	07/12/05	20:56	11:38	(unrelated sample)
J3802-3	2W3593.D	07/12/05	21:43	12:25	(used for QC only; not part of job J4581)
J3802-3DUP	2W3594.D	07/12/05	22:29	13:11	Duplicate
ZZZZZZ	2W3595.D	07/12/05	23:16	13:58	(unrelated sample)
ZZZZZZ	2W3596.D	07/13/05	00:02	14:44	(unrelated sample)
ZZZZZZ	2W3597.D	07/13/05	00:48	15:30	(unrelated sample)
ZZZZZZ	2W3598.D	07/13/05	01:35	16:17	(unrelated sample)
ZZZZZZ	2W3599.D	07/13/05	02:21	17:03	(unrelated sample)
ZZZZZZ	2W3600.D	07/13/05	03:08	17:50	(unrelated sample)
V2W159-SCC	2W3601.D	07/13/05	03:54	18:36	Summa Cleaning Certification
V2W159-SCC	2W3602.D	07/13/05	04:40	19:22	Summa Cleaning Certification
ZZZZZZ	2W3603.D	07/13/05	08:43	23:25	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample:	V2W166-BFB	Injection Date:	07/21/05
Lab File ID:	2W3728.D	Injection Time:	09:10
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	45808	26.2		Pass
75	30.0 - 66.0% of mass 95	105424	60.4		Pass
95	Base peak, 100% relative abundance	174549	100.0		Pass
96	5.0 - 9.0% of mass 95	12529	7.2		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	129770	74.3		Pass
175	4.0 - 9.01% of mass 174	9981	5.7	(7.7) [a]	Pass
176	93.0 - 101.0% of mass 174	126232	72.3	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	8335	4.8	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W166-CC159	2W3729.D	07/21/05	09:56	00:46	Continuing cal 10
V2W166-BS	2W3730.D	07/21/05	10:43	01:33	Blank Spike
V2W166-BSD	2W3731.D	07/21/05	11:29	02:19	Blank Spike Duplicate
V2W166-MB	2W3732.D	07/21/05	12:42	03:32	Method Blank
J4581-2	2W3733.D	07/21/05	13:29	04:19	VEW-1B
J4581-3	2W3734.D	07/21/05	14:15	05:05	VEW-1A
J4581-1	2W3738.D	07/21/05	17:41	08:31	VEW-1C
J4786-1	2W3739.D	07/21/05	18:28	09:18	(used for QC only; not part of job J4581)
J4786-1DUP	2W3740.D	07/21/05	19:15	10:05	Duplicate
J4786-1	2W3741.D	07/21/05	20:02	10:52	(used for QC only; not part of job J4581)
ZZZZZZ	2W3742.D	07/21/05	20:48	11:38	(unrelated sample)
ZZZZZZ	2W3743.D	07/21/05	21:36	12:26	(unrelated sample)
V2W166-SCC	2W3745.D	07/21/05	23:10	14:00	Summa Cleaning Certification
V2W166-SCC	2W3746.D	07/22/05	00:01	14:51	Summa Cleaning Certification
V2W166-SCC	2W3747.D	07/22/05	00:48	15:38	Summa Cleaning Certification
V2W166-SCC	2W3748.D	07/22/05	01:35	16:25	Summa Cleaning Certification
ZZZZZZ	2W3749.D	07/22/05	02:22	17:12	(unrelated sample)

Volatile Surrogate Recovery Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Method: TO-15 Matrix: AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
J4581-1	2W3738.D	101.0
J4581-2	2W3733.D	103.0
J4581-3	2W3734.D	118.0
J4786-1DUP	2W3740.D	104.0
V2W147-SCC	2W3349.D	101.0
V2W159-SCC	2W3601.D	98.0
V2W166-BS	2W3730.D	103.0
V2W166-BSD	2W3731.D	102.0
V2W166-MB	2W3732.D	101.0
V2W147-MB	2W3347.D	99.0
V2W159-MB	2W3590.D	98.0

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	78-124%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2231-MB	QR48152.D	1	07/25/05	HSC	n/a	n/a	GQR2231

The QC reported here applies to the following samples: Method: EPA TO-3

J4581-1, J4581-2, J4581-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
	TPH as Equiv Pentane	ND	5.0	ppmv		ND	15	mg/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	77-127%
460-00-4	4-Bromofluorobenzene	101%	77-127%

Laboratory Control Sample Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2231-LCS	QR48151.D	1	07/25/05	HSC	n/a	n/a	GQR2231

5.2

The QC reported here applies to the following samples: Method: EPA TO-3

J4581-1, J4581-2, J4581-3

CAS No.	Compound	Spike ppmv	LCS ppmv	LCS %	Limits
	TPH as Equiv Pentane	10	10.2	102	82-113

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	94%	77-127%
460-00-4	4-Bromofluorobenzene	105%	77-127%

Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F33411-1DUP	QR48154.D	1.43	07/25/05	HSC	n/a	n/a	GQR2231
F33411-1	QR48153.D	1.43	07/25/05	HSC	n/a	n/a	GQR2231

The QC reported here applies to the following samples: Method: EPA TO-3

J4581-1, J4581-2, J4581-3

CAS No.	Compound	F33411-1 ppmv	Q	DUP ppmv	Q	RPD	Limits
	TPH as Equiv Pentane	76.6		76.8		0	13

CAS No.	Surrogate Recoveries	DUP	F33411-1	Limits
460-00-4	4-Bromofluorobenzene	92%	93%	77-127%
460-00-4	4-Bromofluorobenzene	102%	102%	77-127%

Duplicate Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F33498-1DUP	QR48165.D	1	07/25/05	HSC	n/a	n/a	GQR2231
F33498-1	QR48164.D	1	07/25/05	HSC	n/a	n/a	GQR2231

The QC reported here applies to the following samples: Method: EPA TO-3

J4581-1, J4581-2, J4581-3

CAS No.	Compound	F33498-1 ppmv	Q	DUP ppmv	Q	RPD	Limits
	TPH as Equiv Pentane	119		118		1	13

CAS No.	Surrogate Recoveries	DUP	F33498-1	Limits
460-00-4	4-Bromofluorobenzene	90%	90%	77-127%
460-00-4	4-Bromofluorobenzene	103%	103%	77-127%

Volatile Surrogate Recovery Summary

Job Number: J4581
Account: BPAMSS BP Amoco Corporation
Project: DELTANYA: S/S 3887, 164 4th Avenue, Brooklyn, NY

Method: EPA TO-3 Matrix: AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
J4581-1	QR48157.D	93.0	104.0
J4581-2	QR48158.D	91.0	102.0
J4581-3	QR48169.D	96.0	151.0* [c]
J4581-3	QR48159.D	98.0	152.0* [c]
F33411-1DUP	QR48154.D	92.0	102.0
F33498-1DUP	QR48165.D	90.0	103.0
GQR2231-LCS	QR48151.D	94.0	105.0
GQR2231-MB	QR48152.D	94.0	101.0

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	77-127%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.