CR3

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ExxonMobil
Refining & Supply

November 13, 2009

Mr. Chad Staniszewski
New York State Department of
Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

RE: EXXON MOBIL OIL CORPORATION
FORMER BUFFALO TERMINAL
625 ELK STREET
BUFFALO, NEW YORK
BROWNFIELD SITE #C915201
SOIL VAPOR SAMPLING REPORT

Dear Mr. Staniszewski:

Attached, please find the "Second Round Soil Vapor Sampling Report and Scope of Work for Additional Sampling" dated November 06, 2009 for the above referenced site.

If there are any questions please call me at (401) 434-7356.

Sincerely,

J.A. Abel

Project Manager

Cc: Buckeye Terminals LLC

One Babcock Terminal

Mr. Cameron O'Connor - NYSDOH

November 6, 2009

SECOND ROUND SOIL VAPOR SAMPLING REPORT AND SCOPE OF WORK FOR ADDITIONAL SAMPLING

ExxonMobil Former Buffalo Terminal
Buffalo, New York

Prepared for

EXXONMOBIL OIL CORPORATION
1001 Wampanoag Trail
Riverside, Rhode Island 02915

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

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1.0 INTRODUCTION

Roux Associates, Inc. (Roux Associates), on behalf of ExxonMobil Oil Corporation (ExxonMobil), has prepared the following description of soil vapor sampling results and Scope of Work for additional soil vapor, subslab vapor and crawlspace air sampling for methane within Operable Units 2 and 3 (OU-2 and OU-3) of the ExxonMobil former Buffalo Terminal, Buffalo, New York (Site; Figure 1). The soil vapor sampling described in this report was completed in July 2009 in accordance with the Soil Vapor Sampling Report dated January 30, 2009.

The soil vapor sampling results (summary tables and analytical reports) were forwarded to the NYSDEC in a letter dated August 14, 2009. This report includes an evaluation of the data. OU-2 is located south of Elk Street and north of Prenatt Street and OU-3 is located south of Prenatt Street and north of the Buffalo River, as shown in Figure 2. The results of previous subsurface investigations within OU-2 and OU-3 were described in the Soil Vapor Sampling Plan dated April 21, 2008 (Plan) and will not be reiterated here.

The soil vapor sampling and analysis of the potential for soil vapor intrusion completed per the Plan in October and November 2008, coupled with the further sampling conducted in July 2009 and described in this report, address the following goals:

- Evaluation of existing occupied buildings onsite;
- Evaluation of site property boundaries;
- Evaluation of the potential for vapor generation from areas of separate-phase product; and
- Assessment of the potential for vapor migration along sewer lines.

The results described herein relate to four buildings associated with the former petroleum refinery and/or active petroleum storage and distribution operation that are currently occupied within the limits of OU-2 and OU-3. These are:

- the Buckeye Terminals, LLC (Buckeye) warehouse/garage/main terminal office in the Administrative Offices and Operations Area (AOOA) in OU-2 (identified on Figure 2 as Building 152 - Main Office [Former Mechanical Shops]);
- the building identified on Figure 2 as Building 153 - Store House in the AOOA in OU-2;

- the garages in the Babcock Street Properties Area (BSPA) in OU-2 (identified on Figure 2 as Building 140 - One Babcock Street Tenants (One Babcock) [former Lakes Division Garage]); and
- the One Babcock Street offices and warehouse (identified on Figure 2 as Building 135 – One Babcock Street Offices [former Barrel House]), located within the BSPA in OU-3.

Vehicles and equipment are stored and maintained in the garages in all buildings with the exception of equipment only in Building 135 and activities include the use of petroleum products. In addition, portions of each of the buildings include office and/or storage space. Detailed descriptions of the site setting and history of OU-2 and OU-3 were described in the Plan and will not be reiterated here. Unoccupied buildings were not included in the Plan and include the Laboratory Building located within the AOOA which is abandoned and locked with no plans to reopen it, the Electrical Sub-Station A structure in the AOOA which is not used for continuous occupancy, and the One Babcock Street Storage Facility [former Truck Loading Rack] used for storage and which is not occupied on a regular basis.

To evaluate existing occupied buildings, ExxonMobil collected multiple soil vapor sub-slab and/or crawlspace air samples during the 2008 and 2009 sampling events either beneath the slabs of the occupied buildings or immediately adjacent to the buildings. Samples were collected due to the presence of volatile petroleum constituents and/or mercury in soil and groundwater in the vicinity of occupied buildings and utility corridors and due to the presence of separate-phase product in OU-3. Mercury vapor samples were only collected during the 2008 sampling event.

In addition, several soil vapor samples were collected along the BCP site boundary in areas where volatile petroleum constituents and/or mercury were detected in soil and groundwater during previous investigations. Mercury vapor samples were only collected during the 2008 sampling event.

Finally, soil vapor samples were collected at several locations above the separate-phase product plume in OU-3 to evaluate the potential for generation of impacted soil vapor in separate-phase product areas.

Where possible, soil vapor points were located underneath pavement or concrete.

Sampling was conducted in accordance with the Soil Vapor Intrusion Guidance Document (NYSDOH, 2006). In the following sections, the results of the soil vapor and sub-slab samples are evaluated relative to United States Department of Labor Occupational Health and Safety Administration (OSHA) permissible exposure limits (PELs) and typical background levels.

In order to address the environmental conditions at the Site, ExxonMobil entered into a Brownfield Site Cleanup Agreement with the New York State Department of Environmental Conservation (NYSDEC) on April 3, 2006. Under this agreement, the Site entered into New York State's Brownfield Cleanup Program (BCP). The Site is defined, for the purposes of the BCP, as the area within the limits of the five OUs. In addition, the Site was divided into nine geographic areas for the purpose of assessing environmental conditions and reporting the results of area-specific activities. These geographic areas were designated according to the historical primary operations that occurred in each portion of the Site. OU-2 encompasses portions of the former geographic areas designated as the northern portion of the BSPA and the AOOA, as well as the northern portion of the Former Refinery Area (FRA), Northern Tank Yard Area (NTYA), Northeast Process and Storage Area (NPSA), and a small northern portion of the Central Rail and Process Area (CRPA). OU-2 is depicted on Figure 2. OU-3 encompasses the southern portions of the BSPA, FRA, and CRPA, as well as the entire Southern Tank Yard Area (STYA), as shown on Figure 2.

The operational portion of the Site south of Elk Street is currently a petroleum products storage and distribution facility owned and operated by Buckeye with the surrounding non-operating area (formerly part of historic operations) owned by ExxonMobil.

Until recently, there was no comprehensive development plan currently in place for this portion of Buffalo. However, ExxonMobil and other stakeholders in the area undertook an evaluation of the best future use of the property and surrounding areas of this portion of Buffalo known as the "Elk Street Corridor". In October 2008, the results of the evaluation were documented in a report entitled "Elk Street Corridor Redevelopment Plan" (Wendel Duchscherer, 2008). In the vicinity of the Site, the Preferred Redevelopment Plan includes a combination of light industrial, back office, commercial, green space, and very limited retail use. Until the redevelopment plan is implemented, continued uses of the Site include vacant land with a portion operating as a

petroleum products storage and distribution terminal owned and operated by Buckeye and a portion (on the Babcock Street Properties Area (BSPA)) owned and operated by One Babcock for various industrial purposes. This report provides an evaluation of soil vapor impacts based on current and reasonably anticipated future uses of the property.

2.0 SOIL VAPOR SAMPLING SCOPE OF WORK PERFORMED

The following sections include the description and rationale for selection of the soil vapor samples collected in July 2009 and the Scope of Work completed to collect the samples.

2.1 Description of Samples Collected

Given the results of the soil vapor sampling conducted in 2008, ExxonMobil further evaluated the potential for intrusion of site-related constituents from the subsurface to the interior spaces for the three occupied buildings in OU-2 (Buildings 152, 153 and 140) and the occupied building in OU-3 (Building 135). In addition, ExxonMobil evaluated the potential for soil vapor migration along site sewers and at the Site property boundary. All samples collected in July 2009 were analyzed for petroleum-related VOCs and methane. In addition, forensic analysis, including carbon isotope, hydrogen isotope, and fixed gases analyses for assessment of the methane source (i.e., thermogenic versus biogenic) was conducted on two samples, as described below.

To further evaluate the potential for vapor intrusion into the four occupied buildings, ExxonMobil collected multiple soil vapor sub-slab vapor and/or crawlspace air samples either beneath the slabs of the occupied buildings or immediately adjacent to the buildings. The locations and depths samples collected in July 2009 are described below by area. Figure 2 shows the locations of the of the 2008 and 2009 sub-slab soil vapor and/or crawlspace air samples. The rationale for the selected sampling points is described below. Where samples were collected more than 5 feet from the proposed location shown in the January 2009 Soil Vapor Sampling Report, the reason for moving the locations is provided in the following sections. The actual locations are shown on Figure 2.

2.1.1 BSPA Vapor Samples in the Vicinity of Buildings 135 and 140, the 72-inch Municipal Sewer in Babcock Street and the Western BCP Site Boundary

The following additional sampling was completed in the BSPA.

2.1.1.1 Additional Sub Slab Soil Vapor Sampling in the Vicinity of Building 135

As shown on Table 2, elevated concentrations of methane (greater than 25% of the LEL) were detected in the 2008 samples SV-10 and SV-11, as were elevated concentrations of petroleum constituents. Samples SV-10 and SV-11 were collected adjacent to Building 135 and near storm

sewer piping. Therefore, a crawlspace air sample (SV-13) was collected from the crawlspace beneath the slab of Building 135. The sample was collected through the northern portion of the western foundation wall of the building in the vicinity of occupied offices and was sampled for VOCs and methane. SV-13 was moved from the originally proposed location in the northern foundation wall due to accessibility issues. The crawlspace was approximately 4 feet high and had a soil floor. The crawlspace walls consisted of wood panels, which did not create a seal between the crawlspace and the outdoor air. One opening in the northern wall of the crawlspace was noted and was sealed to the extent practicable using plywood during the sampling, to reduce the potential for ambient air intrusion. The crawlspace cannot be accessed from the office space, and there is no direct connection (e.g. holes) between the crawl space and the office. No cracks or openings in the ceiling of the crawlspace (which is the floor of the occupied offices) were evident. In addition to VOCs and methane, forensic analysis, including carbon isotope, hydrogen isotope, and fixed gases analyses for assessment of the methane source (i.e., thermogenic versus biogenic) was conducted due to the natural gas supply line within ten feet of the sample location.. Finally, the crawlspace air at the SV-13 location was screened with an LEL meter hourly during the sampling period (through a separate sampling tube). The location of SV-13 is shown on Figure 2. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.1.1.2 Additional Sub Slab Soil Vapor Sampling and Methane Screening in the Vicinity of Building 140

Due to the elevated detection limits for VOCs in the sub-slab soil vapor sample SV-1 collected in 2008 and the elevated methane concentration, the soil vapor at this location was re-sampled and was analyzed for VOCs and methane. In addition to methane, forensic analysis, including carbon isotope, hydrogen isotope, and fixed gases analyses for assessment of the methane source (i.e., thermogenic versus biogenic) was conducted due to the natural gas supply line located on the east side of Babcock Street within 60 feet of the sample location. The location of this line is shown on Figure 2. Because methane was detected at SV-1 at a concentration exceeding 25% of its LEL, the indoor air in the vicinity of SV-1, in the northern of Building 140, was screened for methane using an LEL meter. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.1.1.3 Sampling Along the BSA Municipal Sewer in Babcock Street

Based upon the results for SV-1 and SV-10 from the 2008 sampling round, and due to the potential for migration of impacted soil vapor along the 72-inch municipal sewer in Babcock Street, additional soil vapor sampling was completed at two locations along the sewer as shown on Figure 2:

- One location (SV-14) at the boundary between OU-2 and OU-3.
- One location (SV-15) at Elk Street.

SV-14 was moved to an asphalt area approximately 29 feet to the southeast due to traffic issues, road access and the proximity of the initial location to the gas line in Babcock Street. SV-15 was moved approximately 41 feet to the west into the unimproved area due to encountering concrete/refusal at 18 to 20 inches below grade at the original location. SV-15 was installed in the grass due to the proximity of the revised location to the municipal sewer in Babcock Street. Sampling was conducted in accordance with the procedures described in section 2.2 for VOCs and methane. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.1.1.4 Additional Soil Vapor Samples to Evaluate the Western BCP Site Boundary

Due to the presence of elevated concentrations of several VOCs, elevated detection limits for other VOCs, and elevated methane at SV-1 during the 2008 sampling round, an additional boundary soil vapor sample, SV-16, was completed in an unimproved area to the west of the BCP site boundary to the northwest of SV-2. This sample point was moved approximately 125 feet to the southwest from its originally proposed location (which was within the BCP boundary), due to the storage of construction equipment and very hard fill material at the original location. Sampling was conducted in accordance with the procedures described in section 2.2 for VOCs and methane. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.1.2 AOOA Vapor Samples in the Vicinity of Buildings 152 and 153 and NPSA Vapor Sample Along the Sewer Line that Extends to Elk Street Near the Main Entrance

The following additional sampling was completed in the AOOA and NPSA.

2.1.2.1 Sub-slab Sampling at Building 152

Due to the presence of VOC concentrations in excess of comparison criteria detected in soil vapor samples during the 2008 sampling round, a sub-slab vapor sample was collected beneath the slab of Building 152. The sample, SV-17, was located to the southwest of the SV-4 sampling location, beneath a multi-purpose room. SV-17 was moved approximately 18 feet to the southwest from the originally proposed location due to the presence of an overhead door and associated traffic. The revised location was as close to the sewer line as practical. This location was selected to best represent potential concentrations of VOCs beneath the occupied portion of the building and to evaluate the potential for the sewer line that enters the building near the SV-4 sample location to act as a preferential transport pathway. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

Sampling was conducted in accordance with the procedures described in Section 2.2 for VOCs and methane.

2.1.2.2 Sub-slab Sampling at Building 153

As shown on Figure 2, a sewer line runs from the western side of Building 153 to Building 152, near the sampling location SV-4 and north to Elk Street. Due to the elevated concentrations of VOCs in SV-4 during the 2008 sampling round and the possibility that the sewer line may act as a preferential transport pathway, sub-slab soil vapor sample SV-18 was collected underneath Building 153 immediately adjacent to the sewer line, as shown on Figure 2. This sample was located beneath the occupied portion of the building.

Sampling was conducted in accordance with the procedures described in Section 2.2 for VOCs and methane. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.1.2.3 Sampling Along the Sewer Line that Extends to Elk Street Near the Main Entrance in the NPSA

Based upon the results for SV-4 from the 2008 sampling round and due to the potential for migration of impacted soil vapor along the sewer line that extends from Building 152 and 153 to Elk Street, soil vapor sample SV-19 was collected to the east of the sewer at the intersection of

the boundary of OU-2 and Elk Street. This sample point was attempted at several locations within the asphalt roadway near the initially proposed location. However, thick concrete and/or shallow water was encountered at each location. Therefore, the point was moved approximately 10 feet to the southeast into the unimproved area.

Sampling was conducted in accordance with the procedures described in section 2.2 for VOCs and methane. One ambient air sample was also collected on each day of sampling and analyzed for VOCs and methane.

2.2 Scope of Work Completed

The Scope of Work for the sample collection and data evaluation was divided into the following tasks:

- Task 1 – Utility Clearance Activities;
- Task 2 – Sample Collection and Analysis; and
- Task 3 – Data Evaluation and Report Preparation.

Each task is described below:

2.2.1 Task 1 – Utility Clearance and Installation of Soil Vapor Subslab and Crawlspace Sampling Points

Prior to any intrusive activities, the New York One Call center was contacted to mark out all of the utilities in the study area. To ensure that no utilities were disrupted during the installation of the sampling points, a utility clearance was completed by hand prior to installing the sample collection point. The building owner was also questioned to provide information regarding the location of any potential utilities in the areas that were to be sampled.

Soil Vapor Sample Points

The soil vapor sample points were installed to a depth of 2 to 2.5 feet using hand tools. Each sample point was installed at least one foot above the water table. Approximately two inches of sand were installed in the bottom of the borehole and a length of Teflon-lined sample tubing fitted with a six inch long stainless steel sample screen was inserted into the borehole. The annular space was backfilled with coarse sand to one foot above the sample

tubing. Above the sand, a bentonite seal was installed in the annular space to within one foot of ground surface to secure the sample tubing in place and to seal the borehole to prevent infiltration of ambient air to the soil gas sample point. The borehole was then backfilled with non-impacted native material, more bentonite, or clean sand to grade. Figure 3 provides a schematic of the sampling set-up for VOCs. The end of the tubing protruding above the land surface was sealed until the soil sampling began. The sample points were left in place with the tubing capped following sample collection.

Sub-Slab Vapor and Crawlspace Air Sample Points

For sub-slab samples, a 1-inch hole was drilled through the concrete slab and a vacuum was used to loosen and remove the material within the boring to a depth of eight inches below the slab. Upon reaching the target depth, two inches of coarse sand were installed in the bottom of the borehole. A six inch long stainless steel sample screen attached to a length of Teflon-lined sample tubing was extended to the bottom of the boring (the screened interval was zero to six inches below the slab). The annular space was backfilled with coarse sand to the top of the sample screen. Above the sand, a temporary bentonite or modeling clay seal was installed in the annular space between the sample tubing and the slab penetration to secure the sample tubing in place and to seal the penetration through the slab to prevent migration of any potential vapors present beneath the slab into the building. Figure 3 provides a schematic of the sampling set-up for VOCs. The sample points were left in place with the tubing capped following sample collection. For the sample from the crawlspace of Building 135 (SV-13), a one inch hole was drilled in the vertical foundation wall of the crawl space. A length of Teflon-lined sample tubing with a sampling screen was extended through the wall and sealed with modeling clay. A second sample tube was also sealed into the SV-13 location to be used for methane screening of the crawlspace air with an LEL meter.

2.2.2 Task 2 – Sample Collection and Analysis

Soil vapor samples were collected from the locations described above. The following procedural steps were followed during soil vapor sample collection:

1. New Teflon-lined tubing was passed through a plastic container (i.e., bucket) and connected to a 'T' connector three-way valve assembly, with one end of the 'T' connector leading to a vacuum air purge pump and the other end leading to a pre-

evacuated six-liter summa canister with regulator calibrated to collect a sample over an 8-hour period for VOC sampling.

2. A tracer gas (i.e., helium) was then used to enrich the atmosphere in the immediate vicinity of the sampling location (using an inverted bucket) where the sampling tubing intersects the ground surface in order to test the borehole seal and verify that ambient air is not inadvertently drawn into the sample. The tracer gas was used to verify that ambient air did not dilute the soil vapor sample being collected.

3. The soil vapor sample tubing was purged of approximately three volumes of the sample tubing using a vacuum pump.

4. Both the purged air in the sample tubing and the helium-enriched area within the bucket were screened for the tracer gas. The tracer gas was measured utilizing a portable helium detecting meter, which measures the rate of helium leakage in milliliters per second. If the screening results indicated that the rate of helium detected in the sampling tubing was greater than 20 percent of the helium detected in the enriched area (i.e., within the bucket), the seals around the sampling equipment were reset and the sample tubing purged again until the tracer gas was no longer detected at levels greater than 20 percent of the enriched concentration located directly above the borehole.

5. Following the purging and tracer gas verification steps, the air purge pump was turned off, the valve leading to the air purge pump was closed, and the soil vapor was directed to the Summa canister for VOC sample collection. The Summa canister regulator restricted the sample collection rate to 9.9 to 10.4 milliliters per minute (0.0099 to 0.0104 liters per minute) to allow the sample to be collected over an 8-hour period[1].

Samples were collected from July 7 through July 9, 2009. Outdoor ambient air samples were collected concurrently with the soil vapor and sub-slab vapor samples (one per day of sampling). One duplicate sample for VOCs was obtained during the program by collecting two samples sequentially from the same sample point (SV-18). During sampling, weather conditions were recorded (e.g., precipitation, indoor and outdoor temperature, and barometric pressure). In addition, any pertinent outdoor observations (e.g., odors, PID readings, and significant activities in the vicinity) were recorded.

The field sampling team maintained a sample log sheet summarizing the sample identification, date and time of sample collection, identity of samplers, sampling methods and devices utilized, vacuum of canisters before and after samples are collected, and sample analyses. Soil vapor

[1] Roux Associates proposed a sample collection rate of approximately 12.5 milliliters per minute. The slightly lower actual flow rate did not affect the collection time of approximately 8 hours.

sampling field forms are presented in Appendix A and equipment calibration forms are presented in Appendix B.

Each VOC sample was collected in a Summa canister over an 8-hour period using sampling methods that were in accordance with the NYSDOH Soil Vapor Intrusion Guidance (NYSDOH, 2006). Each air/soil vapor sample was analyzed for VOCs under a USEPA Method TO-15 list of analytes and methane by modified ASTM 1946 (modified method achieves a detection limit of 10 ppm_v). In addition, a separate summa canister was collected from soil vapor samples SV-1 and SV-13 for analysis of forensic parameters. Method-specific QA/QC protocols were followed by the laboratory. Test America Laboratories of Nashville, Tennessee and Phoenix, Arizona provided laboratory services for the TO-15 and ASTM 1946 analysis including the sampling containers and regulators. Test America is an Environmental Laboratory Approved Program (ELAP) certified laboratory. Laboratory data was be reported in NYSDEC ASP Category B deliverables. The forensic analyses, including carbon isotopes and, hydrogen isotopes were performed at Zymax Forensics Laboratories in Escondido, California. Analysis of fixed gasses for assessment of the methane source were performed at Environmental Analytical Service, Inc. (EAS) in San Luis Obispo, California.

In addition, a Data Usability Summary Report (DUSR) was prepared for the TestAmerica TO-15 and fixed gas vapor samples by a party independent from the laboratory performing the analysis in accordance with Appendix 2B of DER-10. The report prepared by Data Validation Services (DVS) of North Creek, New York is presented in Appendix C. In the instances where DVS suggested adding a qualifier to the laboratory data, the summary tables were modified to reflect that qualification.

3.0 EVALUATION OF AMBIENT AIR AND SOIL VAPOR SAMPLE RESULTS

The following sections provide an evaluation of the soil vapor and ambient air data collected relative to several potentially applicable regulatory criteria and comparison values. Sampling results are provided on Table 1 for VOCs and Table 2 for fixed gases (including methane). The evaluation of fixed gasses presented below focuses only on methane. Relevant data from the forensics sampling for methane are presented in Section 3.3.

Petroleum and non-petroleum related VOCs were detected in the soil vapor and ambient air samples. In addition, methane was detected at several locations close to or below the detection limit.

3.1 Evaluation of Ambient Air Results

VOCs were detected in all ambient air samples and results were compared to soil vapor concentrations to determine whether multiple sources of VOCs may impact indoor air.

At least eighteen compounds were detected in each ambient air sample. The maximum concentration of 2-butanone was detected in Ambient Air 2, suggesting that an ambient source, rather than a subsurface source, could contribute to 2-butanone concentrations in indoor air. Likewise, other VOCs detected in ambient (outdoor) air were found at similar concentrations in soil vapor or crawlspace samples (e.g., acetone and dichlorodifluoromethane) and, thus, ambient air is the likely source of these constituents in indoor air[2]. Some of these constituents are also common laboratory contaminants and, thus, this is another possible source.

3.2 Development of Attenuation Factors and Comparison to Criteria

Soil vapor, sub-slab vapor and crawlspace air sampling results were evaluated relative to indoor air comparison criteria and a methane screening level. In order to compare indoor air criteria to soil vapor, sub-slab vapor, and crawlspace air results, indoor air criteria were multiplied by an attenuation factor to convert each indoor air concentration to a corresponding soil vapor, sub-slab vapor, or crawlspace air concentration. The development of the attenuation factors and the comparison criteria are described below.

[2] Indoor air VOC sources, such as adhesives, solvents, petroleum products and dry cleaned clothing, also contribute to indoor air concentrations.

3.2.1 Attenuation Factors and Comparison Criteria

Two sub-slab attenuation factors were used in this analysis. First, a sub-slab attenuation factor of 20 was used as a conservative value and represents the lowest indoor air to sub-slab vapor factor used by NYSDOH in Decision Matrix 1 of the Soil Vapor Intrusion Guidance[3] (NYSDOH, 2006). A second attenuation factor of 150 was used as a more typical attenuation factor based on studies summarized below:

- An investigation of radon by Mosley et al. (2004) found that sub-slab vapor concentrations were approximately 100 to 500 times greater than indoor air concentrations, with ninety percent of the attenuation factors greater than approximately 150. Little et al. (1992) reported that indoor air concentrations were approximately 625 times greater than soil vapor concentrations (i.e., indicating slightly greater attenuation than reported by Mosley et al.). McHugh (2005) reported a radon-based attenuation factor in a small office building of 2000, again indicating greater attenuation than reported by Mosley et al.

- Wertz & McDonald (2004) reported on the confounding effects of background indoor air concentration on the calculation and interpretation of sub-slab attenuation factors from a soil vapor/indoor air investigation involving a chlorinated solvent plume at Endicott, NY. They found that background concentrations in indoor air heavily influenced calculated sub-slab attenuation factors. Furthermore, they found that the effect of background indoor air concentration on sub-slab attenuation factors could be reduced, but not eliminated, by calculating sub-slab attenuation factors only when soil vapor concentrations were above 100 X 75% background. Using this approach, they reported that 75% of the attenuation factors for the combined PCE, TCE, and trichloroethane (TCA) data were approximately 150 or more. This did not eliminate the effect of background and they calculated theoretical attenuation factors ranging from 250 to 500.

The following comparison criteria include:

- Background VOCs are present in indoor air, regardless of the presence of a subsurface source. The source of background VOCs include ambient air and a wide range of materials used within the structures (e.g., paints, adhesives, solvents, stored petroleum products). To identify whether any indoor air impacts above background levels due to soil vapor are probable, background indoor air concentrations provided by the NYSDOH (NYSDOH, 2006) were multiplied by the sub-slab attenuation factors discussed above and these adjusted values were compared to soil vapor[4], sub-slab vapor[4] and crawlspace[5] data.

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[3] NYSDOH applies a factor of twenty to the lowest indoor air concentration in decision matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³.

[4] Indoor air comparison criteria were adjusted by attenuation factors of 20 and 150 for comparison to soil vapor and sub-slab vapor, as described in Section 3.2.1.

[5] The sub-slab attenuation factor of 20 was considered appropriate for crawlspace data, as the crawlspace samples were collected beneath a concrete floor with no access (*i.e.*) door or stairwell to the crawlspace. Therefore, the attenuation between the crawlspace and the indoor air mimics the attenuation through a foundation slab.

- Because onsite buildings are used for industrial/commercial purposes, OSHA PELs were identified as relevant worker-related comparison values. Note also that these buildings contain and use petroleum products. To identify whether any indoor air impacts above OSHA PELs due to soil vapor are probable. OSHA PELs were multiplied by the sub-slab attenuation factors discussed above and these adjusted values were compared to soil vapor[6], sub-slab vapor[6] and crawlspace[7] data.

- Twenty-five percent of the methane lower explosive limit (LEL) or 12,500 ppm was used as a conservative screening value for comparison to methane concentrations detected.

3.2.2 Comparison to Adjusted Indoor Air Criteria

As part of the data evaluation process, NYSDOH presents background indoor air levels as screening tools generally used to determine appropriate next steps in a vapor intrusion evaluation (NYSDOH, 2006). Background indoor air concentrations represent those concentrations of VOCs present in indoor air of buildings not affected by subsurface environmental contamination. When site indoor air concentrations are consistent with background concentrations, the source(s) of VOCs in indoor air can be difficult to identify but are usually related to ambient air sources and multiple indoor air sources from products stored or used in the building or used in building materials. In this scenario, mitigation measures often do not result in a reduction of indoor air concentrations as other interior or ambient sources remain.

As described in Section 3.2, in order to compare background indoor air concentrations presented in the Soil Vapor Intrusion Guidance (NYSDOH, 2006) to soil vapor and sub-slab concentrations, the background indoor air values were multiplied by a factor of 20 as a conservative attenuation factor and 150 as a more typical attenuation factor. Crawlspace air concentrations were compared to the background indoor air values multiplied by an attenuation factor of 20. These factors were applied to identify soil vapor, sub-slab and crawl space vapor concentrations that could result in indoor air concentrations equal to or greater than the background indoor air level.

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[6] Indoor air comparison criteria were adjusted by attenuation factors of 20 and 150 for comparison to soil vapor and sub-slab vapor, as described in Section 3.2.1.

[7] The sub-slab attenuation factor of 20 was considered appropriate for crawlspace data, as the crawlspace samples were collected beneath a concrete floor with no access (*i.e.*) door or stairwell to the crawlspace. Therefore, the attenuation between the crawlspace and the indoor air mimics the attenuation through a foundation slab.

Table 1 presents the comparison of detected soil vapor concentrations to adjusted background indoor air concentrations, by building or study area. Both 2008 and 2009 results are provided. The 2008 sampling results and evaluation were presented in the January 2009 Soil Vapor Sampling Report; the July 2009 sampling results are described herein. No soil vapor, sub-slab vapor, or crawlspace air result collected in 2009 exceeded any background comparison criteria. Therefore, no indoor air concentration above background is expected. All detection limits were below the adjusted background indoor air comparison criteria.

3.2.3 Comparison to OSHA PELs

Table 1 also presents a comparison of adjusted OSHA PELs[8] to soil vapor, sub-slab vapor and crawlspace air concentrations to assess whether subsurface conditions have the potential to impact indoor air at concentrations greater than occupational health and safety standards. No subsurface soil vapor, sub-slab vapor or crawlspace air concentration exceeded its corresponding adjusted OSHA PEL; therefore, no worker standards are expected to be exceeded in indoor air.

3.3 Methane Evaluation

As shown on Table 2, no result collected in 2009 exceeded the methane comparison criteria of 12,500 ppm_v.

The 2008 methane results indicated elevated levels in soil vapor in the vicinity of Building 135 at SV-10 (412,500 ppm_v) and SV-11 (244,800 ppm_v), and sub-slab vapor beneath building 140 (130,200 ppm_v) at SV-1. Based on these results, soil gas was re-sampled at SV-1, the crawlspace air beneath the Building 135 office space was sampled (SV-13) in 2009, and methane was screened with an LEL meter hourly during the 8-hour sampling period. The methane screening results are presented on Table 3.

Crawlspace methane concentrations were non-detect at SV-13. In addition, all crawlspace methane screening readings were 0.0% LEL. Crawlspace air, rather than subsurface soil vapor, was sampled in 2009 as the medium potentially impacted by soil vapor, and the potential source of vapor to indoor air. Because all crawlspace walls were not completely sealed from outdoor

[8] PELs were adjusted by attenuation factors of 20 for crawlspace, soil vapor, and sub-slab vapor comparisons. Indoor air criteria were also adjusted by an attenuation factor of 150 to evaluate soil vapor and sub-slab vapor comparisons.

(ambient) air, ambient air could have mixed with vapor originating from the subsurface in the crawlspace.

Soil vapor methane concentrations at SV-1 were 1,644 ppm_v (collected on July 9, 2009 for forensic evaluation and analyzed by EAS) and 7,007 ppm_v (collected on July 8, 2009 and analyzed by TestAmerica). All LEL screening measurements in indoor air in the vicinity of the SV-1 sample point in Building 140. were zero % LEL.

Forensic Evaluation and Potential Methane Sources

Newfields Environmental Forensics Practice LLC (Newfields) of Rockland Massachusetts provided an evaluation of the available forensics data for methane, which is summarized below (Newfields 2009). Viable methane sources for consideration in the Babcock Street area could include the breakdown of underlying organic-rich sediments along the Buffalo River, the breakdown of sewage and leaking "sewer" gas from sewer lines, the breakdown of spilled petroleum in the subsurface, or a leaking natural (consumer) gas pipeline(s). These viable sources include both biogenic and thermogenic sources of methane, defined as follows:

- Biogenic methane refers to methane formed by the biological breakdown of organic matter (e.g., peat, sewage, garbage, animal waste, or petroleum) by methanogenic bacteria.
- Thermogenic methane refers to methane formed by geologic processes such as the thermal breakdown of ancient organic matter in petroleum sources rocks or coals or by the cracking of oil into gas over geologic time.

The formation of biogenic methane requires both: (1) strict anaerobic conditions and (2) a source of either molecular hydrogen and CO2 or another source of oxygen (simple acids or alcohols). The latter conditions reflect the two mechanisms by which biogenic methane can form:

- Acetate Fermentation: CH3COOH ---> CH4 + CO2
- CO2 Reduction: CO2 + H2 ---> CH4 + H2O

Geochemical literature has shown that the stable isotopic character of the carbon and hydrogen comprising methane varies depending upon how the methane was formed. Biogenic methane formed by both mechanisms contains carbon that is isotopically lighter than the organic material

being degraded (e.g., petroleum, sewage, garbage, peat, etc.) and biogenic methane formed by acetate fermentation contains hydrogen that is isotopically lighter than the ambient ground water. In contrast, thermogenic methane contains carbon that is isotopically heavier than biogenic methane and hydrogen that is isotopically heavier than methane formed by acetate fermentation. Thus, stable isotope analysis of methane in soil gas can distinguish biogenic methane from thermogenic methane and can also distinguish between the two forms of biogenic methane.

Another means of distinguishing biogenic from thermogenic methane is the relative abundance of methane relative to ethane, propane, butane and other light gases. Biogenic methane formed by either mechanism will contain only small quantities of the other light gases whereas thermogenic methane may contain a significant percentage of the other light gases. It should be noted that raw thermogenic gas is processed for use as a fuel by consumers (e.g., natural gas used for heating) in order to remove these other gases and therefore, consumer natural gas will contain less of the other light gases.

The relevant molecular and isotopic results obtained for the SV-1 and SV-13 soil gas samples collected in July 2009 are summarized in the table below. These data show that the elevated concentrations of methane observed in soil gases in October 2008 (Table 2) were not present in July 2009. The concentration of methane analyzed by EAS at the SV-1 location is only 1,644 ppmv (nearly 80-times less than observed last October). Methane was not detected in crawlspace air at the SV-13 location. No other hydrocarbon gases (e.g., ethane, propane, butane, etc.; C2-C4 gases) were detected in either sample.

Methane and Other Hydrocarbon Gas Concentrations and Isotopic Results on Methane and CO2 in the July 2009 Samples

Sample ID	Date Sampled	Methane (ppmv)	C2-C4 Gases (ppmv)	$\delta^{13}C$	δD
SV-1	7/8/2009	1644	7.35 U	-35.84	-144.04
SV-13	7/9/2009	10.0 U	7.35 U	-44.61	-179.26

δ ^{13}C - Stable isotope ratio of Carbon 13 to Carbon 12 .
δ D - Stable isotope ratio of Deuterium to Hydrogen.

The isotopic data acquired on the small amounts of methane in the SV-1 and SV-13 soil gas samples in July 2009 provide additional information on the nature of the methane present at that

time. Although these data were qualified as "estimates" due to the low to non-detect concentrations of methane, the methane detected is consistent with thermogenic methane – and not with either form of biogenic methane. This result can be seen in Figure 4 which shows a cross-plot of $\delta^{13}C$ (stable isotope ratio of Carbon 13 to Carbon 12) and δD (stable isotope ratio of Deuterium to Hydrogen) for these soil gases.

Figure 4 includes three areas in which methane from different origins conventionally plot depending upon their carbon and hydrogen isotopic compositions. Although estimated values, the methane in SV-1 (soil vapor) and SV-13 (crawlspace air) in July 2009 are typical of thermogenic methane and, thus, may be related to a leak from nearby natural gas line(s). No gas leaks or gas line repairs were identified by National Fuel Gas, the supplier for the area, between October 2008 and July 2009. It is therefore possible that the elevated methane detected in soil gas in October 2008 was also thermogenic (and the July 2009 soil gas contains only a residue of this).

3.4 Evaluation of Comparison Results

The four goals of additional soil vapor and indoor air investigation and assessment in OU-2 and OU-3 included:

1. Additional assessment of each occupied building;
2. Evaluation of the western site boundary;
3. Evaluation of the potential for vapor generation from areas of separate-phase product; and
4. Assessment of the potential for vapor migration along sewer lines onsite and to Elk Street.

In line with the four goals, the following was concluded:

1. Evaluation of existing occupied buildings onsite:

   Four buildings (Buildings 135, 140, 152 and 153) were evaluated for potential indoor air impacts.

   Sub-slab vapor sampling results collected in 2009 beneath Building 152 and Building 153 were all less than the adjusted indoor air comparison criteria. Therefore, no further assessment of VOCs or methane at these buildings is warranted.

Building 135 indoor air was assessed by comparing SV-13 sampling results, collected in a crawlspace beneath the offices, to adjusted indoor air comparison values for VOCs. No crawlspace VOC concentration exceeded any comparison value. Therefore, no further assessment of VOCs at this building is warranted.

Recent soil vapor samples from the SV-1 sample point in Building 140 confirmed earlier results that no adjusted indoor air impacts above background are expected in the building. Thus, no further assessment of VOCs at Building 140 is warranted.

Methane was detected beneath the northern portion of Building 140, at SV-1 at 1,644ppm$_v$ and 7007 ppm$_v$. As shown on Table 2 the methane concentrations in the sub-slab vapor sample SV-1 in building 140 have decreased significantly between the 2008 and 2009 sampling rounds. Methane was detected at relatively high concentrations in soil vapor to the north of Building 135 in 2008 (SV-10 and SV-11), but was not detected in crawlspace air (SV-13) at Building 135 in 2009. Methane was screened in indoor air in the vicinity of SV-1 and in crawlspace air from the SV-13 sample location hourly during the 8-hour sampling period and all readings were 0.0% LEL.

As discussed in Section 3.3, the methane detected in 2009 is consistent with thermogenic methane and therefore may not be associated with the biological breakdown of petroleum products in the subsurface and could potentially be associated with a leaking natural gas pipeline. Inquiries to National Fuel Gas, the natural gas supplier for the area, indicate that no leaks or repairs have been reported in the area. It is also possible that the elevated methane detected in soil gas in October 2008 was also thermogenic (and the July 2009 soil gas contains only a residue of this). Due to large variability in methane results between 2008 and 2009, ExxonMobil will resample subslab vapor at SV-1, soil vapor at SV-10 and crawlspace air at SV-13 during the 2009 heating season, as described in Section 4.

2. Evaluation of Site property boundaries:

   No VOC or methane result exceeded any adjusted indoor air comparison criterion at soil vapor boundary sample SV-16 (western boundary) or samples completed along the northern property boundary to evaluate sewers (SV-15 and SV-19). Similarly, no VOC or methane exceeded comparison criteria in -previously reported northern and eastern boundary soil vapor samples from 2008 (described in the January 2009 Soil Vapor Sampling Report) Therefore, no further assessment of boundaries is required.

3. Evaluation of the potential for vapor generation from areas of separate-phase product:

   Separate-phase product is located underneath and to the east of Building 135. The potential for vapor generation in the vicinity of Building 135 has been discussed above as part of goal 1. During the July 2009 sampling round, no samples were collected to assess the area of separate-phase product east of Building 135. Based upon the historical analysis, provided in the January 2009 Soil Vapor Sampling Report and current use, it was concluded that no further sampling to the east of Building 135 is warranted at this time.

4. Assessment of the potential for vapor migration along sewer lines:

Due to elevated concentrations of VOCs and/or methane in 2008 samples located near sewer lines, locations in the central portion of the Site and near Elk Street were assessed. Soil vapor samples SV-14 and SV-15 assessed soil vapor along sewer lines on Babcock Street, and soil vapor samples SV-17, SV-18 and SV-19 assessed the potential for vapor migration between Buildings 152 and 153 and Elk Street. No VOC or methane sampling result exceeded any adjusted indoor air comparison value; therefore, no additional assessment of vapor migration along sewer lines is required.

4.0 PROPOSED ADDITIONAL METHANE SAMPLING

Based upon the evaluation of the soil vapor data collected in July 2009, as presented in Section 3, and considering results of samples collected in October and November 2008, additional sampling for methane at SV-1, SV-10 and SV-13 is recommended as described in this section.

4.1 Proposed Additional Methane Sampling

Due to the variability in methane concentrations detected in 2008 and 2009, the following locations will be resampled for methane in prior to the end of 2009:

- Subslab soil vapor at SV-1 beneath Building 140;
- Soil vapor at SV-10 (the location with the highest soil vapor methane concentration in the vicinity of Building 135 in 2008); and
- Crawlspace air at SV-13 beneath Building 135.

In addition forensic analysis, including carbon isotope, hydrogen isotope, and fixed gases analyses for assessment of the methane source (i.e., thermogenic versus biogenic) may be performed at each location. The decision to perform the forensic analyses will be made based upon the concentrations of methane observed in the samples (i.e., if the concentrations are similar to the low levels observed in 2009, the forensic analyses will not be performed; conversely, if methane is detected at a concentration of 12,500 ppm [one quarter of the LEL for methane] or greater, the forensic analyses will be performed).

4.2 Sampling and Analysis Protocols

Sampling protocols for subslab soil samples will be consistent with the protocols for collection of samples described in Section 2 of this report. Samples will be analyzed in accordance with the methods for methane and/or methane forensic analyses described in Section 2.

During sampling, weather conditions will be recorded (e.g., precipitation, indoor and outdoor temperature and barometric pressure). In addition, any pertinent indoor and outdoor observations (e.g., odors, PID readings, and significant activities in the vicinity) will be recorded.

The field sampling team will maintain a sample log sheet, similar to those presented in Appendix A, summarizing the sample identification, date and time of sample collection, identity of samplers, sampling methods and devices utilized, vacuum of canisters before and after samples are collected, and sample analyses.

5.0 PROJECT SCHEDULE

The methane sampling described above will be completed prior to the end of 2009. The results of the sampling will be described in the Final AAR for OU-2 to be submitted by December 31, 2009 (if the data is available) and the Final AAR for OU-3.

Respectfully Submitted,

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Table 1. Comparison of Detected Soil Vapor Concentrations to Adjusted Background Indoor Air Values and Adjusted OSHA PELs

Parameter	Adjusted Background Air Concentrations (Attenuation Factor of 20) (1)	Adjusted Background Air Concentrations (Attenuation Factor of 150) (2)	Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 20) (3)	Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 150) (4)	Ambient Air						Building 135		
Sample Designation:					**Ambient Air 1**	**Ambient Air 1**	**Ambient Air 2**	**Ambient Air 2**	**Ambient Air 3**	**Ambient Air 4**	**SV-10**	**SV-11**	**SV-13**
Sample Date:					10/6/2008	7/7/2009	10/7/2008	7/8/2009	10/28/2008	10/29/2008	10/28/2008	10/28/2008	7/8/2009
Units:					µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3 **(5)**
1,1,1-Trichloroethane	412	3090	3.80E+07	2.85E+08	2.73 U	2.73 U	2.73 U	2.73 U	2.73 U	2.73 U	5457 U	5239 U	2.73 U
1,1,2-Trichloroethane	30	225	9.00E+05	6.75E+06	2.73 U	2.73 U	2.73 U	2.73 U	2.73 U	2.73 U	5456 U	5238 U	2.73 U
1,1-Dichloroethane	14	105	8.00E+06	6.00E+07	1.98 U	2.02 U	2.02 U	2.02 U	2.02 U	2.02 U	4047 U	3886 U	2.02 U
1,1-Dichloroethene	28	210	1.58E+07	1.19E+08	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3965 U	3806 U	1.98 U
1,2,4-Trimethylbenzene	190	1425			2.46 U	2.9	2.46 U	2.4 J	2.46 U	2.46 U	4916 U	4719 U	2.46 UV
1,3,5-Trimethylbenzene	74	555			2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	4916 U	4719 U	2.46 U
1,3-Butadiene	60	450	4.42E+04	3.32E+05	1.1 U	0.51 J	1.1 U	0.51 J	1.1 U	1.1 U	2209 U	2120 U	1.1 U
1,3-Dichlorobenzene	48	360			8.4	3.01 U	9	3.01 U	3.01 U	3.01 U	6012 U	5772 U	3.01 U
1,4-Dichlorobenzene	110	825	9.00E+06	6.75E+07	3.01 U	3.01 U	3.01 U	3.01 U	3.3	3.01 U	6012 U	5772 U	3.01 U
2,2,4-Trimethylpentane (7)			4.70E+07	3.53E+08	2.34 U	2.34 UCL	*11*	*1.1 J*	*6.5*	2.34 U	*144830*	*60740*	2.34 U
2-Butanone	240	1800	1.18E+07	8.85E+07	2.95 U	4.7	12	9.7	2.95 U	2.95 U	5898 U	5603 U	10
2-Hexanone			8.20E+06	6.15E+07	4.1 U	1.4 JCL	4.1 U	*1.8 J*	4.1 U	4.1 U	8193 U	7783 U	4.1 UV
2-Propanol	5000	37500	1.96E+07	1.47E+08	13	4.92 U	23	4.92 U	4.92 U	4.92 U	10078 U	9587 U	2.7 J
4-Ethyltoluene	72	540			2.46 U	1.7 J	2.46 U	0.79 J	2.46 U	2.46 U	4916 U	4719 U	2.46 U
4-Methyl-2-pentanone (MIBK)	120	900	8.20E+06	6.15E+07	4.1 U	4.1 UCL	4.1 U	4.1 U	4.1 U	4.1 U	8193 U	7783 U	4.1 U
Acetone	1978	14835	4.80E+07	3.60E+08	74	50	160	43	13	15	23755 U	22804 U	76
Benzene	188	1410	6.39E+04	4.79E+05	1.6 U	1.3 J	1.6	1.8	1.8	1.6 U	**26520**	3067 U	0.99 J
Benzyl Chloride	136	1020	1.00E+05	7.50E+05	10.4 U	10.4 U	10.4 U	1.8 J	10.4 U	10.4 U	21226 U	20191 U	10.4 U
Bromodichloromethane (6)					3.35 U	3.35 U	3.35 U	3.35 U	3.35 U	3.35 U	6701 U	6433 U	3.35 U
Carbon disulfide	84	630	1.25E+06	9.34E+06	4.1	1.6	1.56 U	0.87 J	1.56 U	1.56 U	3114 U	2989 U	0.53 J
Carbon tetrachloride	26	195	1.26E+06	9.44E+06	3.15 U	3.15 U	3.15 U	3.15 U	3.15 U	3.15 U	6291 U	6040 U	3.15 U
Chloroform	22	165	4.80E+06	3.60E+07	2.44 U	2.44 U	2.44 U	2.44 U	2.44 U	2.44 U	4883 U	4687 U	2.44 U
Chloromethane	74	555	4.13E+06	3.10E+07	2.3	1.1 NJV	3.7	1.0 J	1.03 U	1.1	2065 U	1982 U	1.1
cis-1,2-Dichloroethene	38	285			1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3965 U	3806 U	1.98 U
Cyclohexane			2.10E+07	1.58E+08	1.72 U	1.72 U	*6.2*	*0.55 J*	*17*	1.72 U	*413060*	*209970*	1.72 U
Dichlorodifluoromethane	330	2475	9.90E+07	7.43E+08	2.47 U	0.84 J	2.47 U	3.5	2.47 U	3.1	4945 U	4748 U	3.5
Ethyl Acetate	108	810	2.80E+07	2.10E+08	1.8 U	0.87 J	1.8 U	1.8 U	1.8 U	1.8 U	3604 U	3460 U	0.83 J
Ethylbenzene	114	855	8.70E+06	6.53E+07	3.5 U	1.7 J	2.17 U	1.7 J	2.17 U	2.17 U	4342 U	4169 U	1.3 J
Heptane			4.00E+07	3.00E+08	2.05 U	2.05 U	*2.8*	*0.86 J*	2.05 U	2.05 U	4098 U	3934 U	2.05 UV
Hexane			3.60E+07	2.70E+08	1.76 U	1.8	*4.2*	*0.85 J*	*19*	1.76 U	*493440*	*38770*	1.76 UV
m+p-Xylene	444	3330	8.70E+06	6.53E+07	4.34 U	5.6	4.34 U	5.6	4.34 U	4.34 U	8684 U	8250 U	4.1 J
Methylene Chloride	200	1500	1.74E+06	1.30E+07	1.74 U	1.74 U	5.9	1.1 J	4.2	3.4	3474 U	3335 U	0.8 J
MTBE	230	1725	0.00E+00	0.00E+00	3.61 U	3.61 U	3.61 U	3.61 U	3.61 U	3.61 U	7211 U	6850 U	3.61 U
o-Xylene	158	1185	8.70E+06	6.53E+07	2.17 U	2.2	2.17 U	2.0 J	2.17 U	2.17 U	4342 U	4169 U	1.4 J
Propene (7)			1.72E+07	1.29E+08	*9.6*	0.861 U	*12*	*0.74 J*	0.861 U	0.861 U	1721 U	1652 U	0.861 U
Styrene	38	285	8.52E+06	6.39E+07	2.13 U	1.1 J	2.13 U	2.13 U	2.13 U	2.13 U	4260 U	4089 U	2.13 U
Tetrachloroethene	318	2385	1.36E+07	1.02E+08	3.39 U	3.39 U	3.39 U	3.39 U	3.39 U	3.39 U	6782 U	6511 U	3.39 U
Tetrahydrofuran			1.18E+07	8.85E+07	5.9 U	5.9 U	5.9 U	5.9 U	5.9 U	5.9 U	12092 U	11502 U	5.9 U
Toluene	860	6450	1.51E+07	1.13E+08	2.2	7.2	4.9	4.9	3.8	1.88 U	3769 U	3618 U	36
trans-1,2-Dichloroethene			1.58E+07	1.19E+08	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3965 U	3806 U	1.98 U
Trichloroethene	84	630	1.07E+07	8.06E+07	2.69 U	2.69 U	2.69 U	2.69 U	2.69 U	2.69 U	5374 U	5159 U	2.69 U
Trichlorofluoromethane	362	2715	1.12E+08	8.40E+08	2.81 U	1.5 J	2.81 U	1.7 J	2.81 U	2.81 U	5618 U	5394 U	1.7 J
Vinyl Acetate (7)			7.00E+05	5.25E+06	1.76 U	1.76 U	1.76 U	1.76 U	1.76 U	1.76 U	3521 U	3380 U	1.76 U
MERCURY													

Notes:

Results are provided for compounds that were detected in at least one sample.

µg/m^3 - Micrograms per cubic meter

U - Not detected

J - Estimated Concentration

V - qualifier added by the Data Validator (Data Validation Services)

(1) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.

(2) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.

(3) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³.

(4) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report.

(5) Sample SV-13 was collected from a crawl space beneath Building 135. SV-13 results were compared to adjusted air concentrations considering an attenuation factor of 20, and were not compared to air concentrations with an attenuation factor of 150.

(6) NYSDOH does not present a background indoor air value for bromodichloromethane. OSHA does not present a PEL for Bromodichloromethane in CFR 1910.1000 Table Z-1 or Table Z-2 (updated February 28, 2006). Bromodichlormethane is on the American Conference of Governmental Industrial Hygienists (ACGIH) 2009 Under Study List. No TLV is currently available. Therefore, no comparison value is available. It was not detected above the reporting limit, but was estimated below the reporting limit in three samples.

(7) OSHA does not present a PEL for this compound in CFR 1910.1000 Table Z-1 or Table Z-2. However, the American Conference of Governmental Industrial Hygienists (ACGIH) presents an 8-hour time weighted average for in TLVs and BEIs Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices.

Samples were collected between October 6 and October 29, 2008 and on July 7 and July 8, 2009

C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.

Values in italics indicate that there was no background indoor air comparison value.

Values in bold and shaded indicate an exceedence of 20 times the background indoor air comparison values.

Values in bold, shaded and outlined indicate an exceedence of 150 times the background indoor air comparison values.

No detected concentration exceeds the adjusted OSHA PELs.

Table 1. Comparison of Detected Soil Vapor Concentrations to Adjusted Background Indoor Air Values and Adjusted OSHA PELs

					Building 140			Sewers				Site Boundary Soil Vapor Samples	
Parameter	**Adjusted Background Air Concentrations (Attenuation Factor of 20) (1)**	**Adjusted Background Air Concentrations (Attenuation Factor of 150) (2)**	**Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 20) (3)**	**Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 150) (4)**	**Sample Designation:** **SV-1**	**SV-1**	**SV-2**	**SV-8**	**SV-14**	**SV-15**	**SV-19**	**SV-9**	**SV-16**
				Sample Date:	10/28/2008	7/7/2009	10/29/2008	10/28/2008	7/7/2009	7/7/2009	7/7/2009	10/6/2008	7/7/2009
				Units:	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
1,1,1-Trichloroethane	412	3090	3.80E+07	2.85E+08	546 U	13.6 U	2.73 U	2.73 U	13.6 U	2.73 U	2.73 U	2.73 U	13.6 U
1,1,2-Trichloroethane	30	225	9.00E+05	6.75E+06	546 U	8.7 J	2.73 U	2.73 U	13.6 U	2.73 U	2.73 U	2.73 U	13.6 U
1,1-Dichloroethane	14	105	8.00E+06	6.00E+07	405 U	10.1 U	2.02 U	2.02 U	10.1 U	2.02 U	2.02 U	2.02 U	10.1 U
1,1-Dichloroethene	28	210	1.58E+07	1.19E+08	396 U	9.91 U	1.98 U	1.98 U	9.91 U	1.98 U	1.98 U	1.98 U	9.91 U
1,2,4-Trimethylbenzene	190	1425			492 U	12.3 U	13	12	*7.4 J*	4	4.9	4.3	5.4 J
1,3,5-Trimethylbenzene	74	555			492 U	12.3 U	3.4	2.8	12.3 U	0.98 J	1.1 J	2.46 U	12.3 U
1,3-Butadiene	60	450		0.00E+00	221 U	5.52 U	1.1 U	1.1 U	5.52 U	1.1 U	0.46 J	1.1 U	5.52 U
1,3-Dichlorobenzene	48	360			601 U	15 U	3.01 U	3.01 U	15 U	3.01 U	3.01 U	8.4	15 U
1,4-Dichlorobenzene	110	825	9.00E+06	6.75E+07	601 U	15 U	9.6	8.4	15 U	2.0 J	3.4	55	15 U
2,2,4-Trimethylpentane			4.70E+07	3.53E+08	*17750*	*560*	*14*	*4.7*	11.7 U	2.34 U	2.34 UCL	2.34 U	11.7 U
2-Butanone	240	1800	1.18E+07	8.85E+07	590 U	14.7 U	2.95 U	2.95 U	14.7 U	8.9	13	2.95 U	10.0 J
2-Hexanone			8.20E+06	6.15E+07	819 U	20.5 U	4.1 U	4.1 U	*7.8 J*	*0.61 J*	*1.2 JCL*	*4.9*	20.5 U
2-Propanol	5000	37500	1.96E+07	1.47E+08	983 U	24.6 U	5.2	4.92 U	24.3 U	4.92 U	4.92 U	4.92 U	24.6 U
4-Ethyltoluene	72	540			492 U	12.3 U	2.8	2.46 U	12.3 U	1.3 J	2.7	2.9	12.3 U
4-Methyl-2-pentanone (MIBK)	120	900	8.20E+06	6.15E+07	819 U	20.5 U	4.1 U	4.1 U	14 J	4.1 U	4.1 UCL	4.1 U	9.0 J
Acetone	1978	14835	4.80E+07	3.60E+08	2735 U	59.4 U	20	11.9 U	59.4 U	57	69	43	52 J
Benzene	188	1410	6.39E+04	4.79E+05	319 U	7.7 J	12	14	13	1.1 J	1.3 J	2.6	8
Benzyl Chloride	136	1020	1.00E+05	7.50E+05	2071 U	51.8 U	10.4 U	10.4 U	51.3 U	10.4 U	10.4 U	10.4 U	51.8 U
Bromodichloromethane (6)					670 U	16.8 U	3.35 U	3.35 U	16.8 U	3.35 U	3.35 U	3.35 U	16.8 U
Carbon disulfide	84	630	1.25E+06	9.34E+06	311 U	21	2.5	8.4	47	3.1	16	3.7	25
Carbon tetrachloride	26	195	1.26E+06	9.44E+06	629 U	15.7 U	3.15 U	3.15 U	15.7 U	3.15 U	3.15 U	3.15 U	15.7 U
Chloroform	22	165	4.80E+06	3.60E+07	488 U	12.2 U	2.44 U	2.44 U	17	13	2.44 U	2.44 U	12.2 U
Chloromethane	74	555	4.13E+06	3.10E+07	206 U	5.16 U	1.2	1.03 U	3.5 J	0.95 J	0.72 J	1.03 U	5.16 U
cis-1,2-Dichloroethene	38	285			396 U	9.91 U	1.98 U	1.98 U	9.91 U	1.98 U	1.98 U	1.98 U	9.91 U
Cyclohexane			2.10E+07	1.58E+08	*5160*	*140*	*13*	*41*	69	1.72 U	1.72 U	1.72 U	*7.6 J*
Dichlorodifluoromethane	330	2475	9.90E+07	7.43E+08	495 U	12.4 U	3.8	2.47	12.4 U	2.47 U	1.2 J	2.47 U	12.4 U
Ethyl Acetate	108	810	2.80E+07	2.10E+08	360 U	9.01 U	1.8 U	1.8 U	9.01 U	1.8 U	1.8 U	1.8 U	9.01 U
Ethylbenzene	114	855	8.70E+06	6.53E+07	434 U	7.8 J	7.4	7	8.7 J	4.1	4.8	3.5	6.1 J
Heptane			4.00E+07	3.00E+08	410 U	*5.3 J*	*9*	*14*	31	2.05 U	2.05 U	2.05 U	10.2 U
Hexane			3.60E+07	2.70E+08	*560*	*22*	*34*	*71*	35	*1.3 J*	*0.78 J*	*8.8*	11
m+p-Xylene	444	3330	8.70E+06	6.53E+07	868 U	25	18	14	30	15	16	7.4	18 J
Methylene Chloride	200	1500	1.74E+06	1.30E+07	347 U	8.68 U	8.3	3.1	8.68 U	1.74 U	1.74 U	4.5	8.68 U
MTBE	230	1725	0.00E+00	0.00E+00	721 U	18 U	3.61 U	3.61 U	18 U	0.61 J	0.65 J	3.61 U	18 U
o-Xylene	158	1185	8.70E+06	6.53E+07	434 U	9.6 J	7.4	6.5	17	5.2	6.1	2.17 U	8.7 J
Propene (7)			1.72E+07	1.29E+08	172 U	*33*	0.861 U	*13*	48	0.861 U	0.861 U	0.861 U	160
Styrene	38	285	8.52E+06	6.39E+07	426 U	10.6 U	2.13 U	2.13 U	10.6 U	1.0 J	1.2 J	3	10.6 U
Tetrachloroethene	318	2385	1.36E+07	1.02E+08	678 U	17 U	3.39 U	3.39 U	17 U	3.39 U	28	3.39 U	17 U
Tetrahydrofuran			1.18E+07	8.85E+07	1180 U	29.5 U	5.9 U	5.9 U	29.2 U	5.9 U	5.9 U	5.9 U	29.5 U
Toluene	860	6450	1.51E+07	1.13E+08	377 U	53	37	18	38	12	14	11	22
trans-1,2-Dichloroethene			1.58E+07	1.19E+08	396 U	9.91 U	1.98 U	1.98 U	9.91 U	1.98 U	1.98 U	1.98 U	9.91 U
Trichloroethene	84	630	1.07E+07	8.06E+07	537 U	13.4 U	2.69 U	2.69 U	13.4 U	2.69 U	2.69 U	2.69 U	13.4 U
Trichlorofluoromethane	362	2715	1.12E+08	8.40E+08	562 U	14 U	2.81 U	3.4	14 U	3.3	3.7	2.81 U	14 U
Vinyl Acetate (7)			7.00E+05	5.25E+06	352 U	8.8 U	1.76 U	1.76 U	8.8 U	1.76 U	1.76 U	1.76 U	6.0 J
MERCURY					0.43 U							0.433 U	

Notes:
Results are provided for compounds that were detected in at least one sample.
µg/m^3 - Micrograms per cubic meter
U - Not detected
J - Estimated Concentration
V - qualifier added by the Data Validotor (Data Validation Services)

(1) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.

(2) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.
(3) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³.
(4) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report.
(5) Sample SV-13 was collected from a crawl space beneath Building 135. SV-13 results were compared to adjusted air concentrations considering an attenuation factor of 20, and were not compared to air concentrations with an attenuation factor of 150.
(6) NYSDOH does not presenta background indoor air value for bromodichloromethane. OSHA does not present a PEL for Bromodichloromethane in CFR 1910.1000 Table Z-1 or Table Z-2 (updated February 28, 2006). Bromodichlormethane is on the American Conference of Governmental Industrial Hygienists (ACGIH) 2009 Under Study List. No TLV is currently available. Therefore, no comparison value is available. It was not detected above the reporting limit, but was estimated below the reporting limit in three samples.
(7) OSHA does not present a PEL for this compound in CFR 1910.1000 Table Z-1 or Table Z-2. However, the American Conference of Governmental Industrial Hygienists (ACGIH) presents an 8-hour time weighted average for in TLVs and BEIs Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices.
Samples were collected between October 6 and October 29, 2008 and on July 7 and July 8, 2009
C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
Values in italics indicate that there was no background indoor air comparison value.
Values in bold and shaded indicate an exceedence of 20 times the background indoor air comparison values.
Values in bold, shaded and outlined indicate an exceedence of 150 times the background indoor air comparison values.
No detected concentration exceeds the adjusted OSHA PELs.

Table 1. Comparison of Detected Soil Vapor Concentrations to Adjusted Background Indoor Air Values and Adjusted OSHA PELs

Parameter	Adjusted Background Air Concentrations (Attenuation Factor of 20) (1)	Adjusted Background Air Concentrations (Attenuation Factor of 150) (2)	Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 20) (3)	Adjusted OSHA Permissible Exposure Limits (Attenuation Factor of 150) (4)	Building 152					Building 153				OU-3 Separate-Phase Product
Sample Designation:					SV-3	SV-4	SV-4 DUP	SV-5	SV-17	SV-6	SV-6 DUP	SV-18	SV-18 DUP	SV-12
Sample Date:					10/7/2008	10/6/2008	10/7/2008	10/6/2008	7/7/2009	10/6/2008	10/7/2008	7/7/2009	7/8/2009	10/7/2008
Units:					µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
1,1,1-Trichloroethane	412	3090	3.80E+07	2.85E+08	180	150	170	5.46 U	2.73 U	110	60	60	55	5350 U
1,1,2-Trichloroethane	30	225	9.00E+05	6.75E+06	2.73 U	2.73 U	2.73 U	5.46 U	2.73 U	2.73 U	2.73 U	2.73 U	2.73 U	5350 U
1,1-Dichloroethane	14	105	8.00E+06	6.00E+07	2.02 U	**260**	**300**	4.05 U	2.02 U	2.02 U	2.02 U	1.3 J	1.1 J	3970 U
1,1-Dichloroethene	28	210	1.58E+07	1.19E+08	1.98 U	5.2	2.9	3.96 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3890 U
1,2,4-Trimethylbenzene	190	1425			3.5	2.7 JV	2.6 JV	4.92 U	17	2.46 U	2.46 U	8.4	6.9	4820 U
1,3,5-Trimethylbenzene	74	555			2.46 U	2.46 U	2.46 U	4.92 U	3.7	2.46 U	2.46 U	1.7 J	1.5 J	4820 U
1,3-Butadiene	60	450		0.00E+00	1.1 U	1.1 U	1.1 U	2.21 U	1.1 U	1.1 U	1.1 U	1.1 U	0.99 J	2160 U
1,3-Dichlorobenzene	48	360			3.01 U	3.01 U	3.01 U	6.01 U	3.01 U	15	3.01 U	3.01 U	3.01 U	5890 U
1,4-Dichlorobenzene	110	825	9.00E+06	6.75E+07	11	78	30	84	3	27	3.01 U	3.2	2.3 J	5890 U
2,2,4-Trimethylpentane			4.70E+07	3.53E+08	2.34 U	2.34 U	*130*	*6.1*	2.34 UCL	2.34 U	*140*	*2.8*	2.34 U	*3100000*
2-Butanone	240	1800	1.18E+07	8.85E+07	5.3	19	2.95 U	9.1	35	5.9	2.95 U	7.1 JV	13 JV	5900 U
2-Hexanone			8.20E+06	6.15E+07	4.1 U	4.1 U	4.1 U	8.19 U	*4.1*	4.1 U	4.1 U	*3.6 J*	*2.8 J*	8190 U
2-Propanol	5000	37500	1.96E+07	1.47E+08	4.92 U	4.92 U	4.92 U	30	4.92 U	4.92 U	4.92 U	2.7 J	5.9	9590 U
4-Ethyltoluene	72	540			2.8	2.46 U	2.46 U	4.92 U	5.9	2.46 U	2.46 U	3.4	2.8	4820 U
4-Methyl-2-pentanone (MIBK)	120	900	8.20E+06	6.15E+07	4.1 U	4.1 U	4.1 U	8.19 U	3.2 J	4.1 U	4.1 U	3.3 J	1.9 J	8190 U
Acetone	1978	14835	4.80E+07	3.60E+08	11.9 U	140	11.9 U	86	110	48	11.9 U	67	62	23300 U
Benzene	188	1410	6.39E+04	4.79E+05	1.6	8	11	3.8	3.5	3.8	3.8	2.7	2.4	**58000**
Benzyl Chloride	136	1020	1.00E+05	7.50E+05	10.4 U	10.4 U	10.4 U	20.7 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	20200 U
Bromodichloromethane (6)					3.35 U	3.35 U	3.35 U	6.7 U	*2.8 J*	3.35 U	3.35 U	*2.0 J*	*1.4 J*	6570 U
Carbon disulfide	84	630	1.25E+06	9.34E+06	9.7	**90**	37	3.11 U	13	23	9.3	12	12	3050 U
Carbon tetrachloride	26	195	1.26E+06	9.44E+06	4.1	3.15 U	3.15 U	6.29 U	3.15 U	3.15 U	3.15 U	3.15 U	3.15 U	6170 U
Chloroform	22	165	4.80E+06	3.60E+07	2.44 U	8.8	11	4.88 U	8.3	2.44 U	2.44 U	3.2	2.7	4780 U
Chloromethane	74	555	4.13E+06	3.10E+07	1.03 U	1.03 U	1.03 U	2.06 U	1.03 U	1.03 U	1.2	1.03 U	1.03 U	2020 U
cis-1,2-Dichloroethene	38	285			1.98 U	**170**	**190**	3.96 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3890 U
Cyclohexane			2.10E+07	1.58E+08	1.72 U	*52*		*7.6*	1.72 U	*10*	*110*	1.9	1.72 UV	*2500000*
Dichlorodifluoromethane	330	2475	9.90E+07	7.43E+08	2.47 U	2.47 U	2.47 U	4.95 U	2.47 U	2.47 U	2.47 U	3.9	3.6	4850 U
Ethyl Acetate	108	810	2.80E+07	2.10E+08	18	1.8 U	1.8 U	3.6 U	1.4 J	1.8 U	1.8 U	1.8 U	1.3 J	3530 U
Ethylbenzene	114	855	8.70E+06	6.53E+07	2.9	2.7	2.17 U	4.34 U	7.4	3.2	2.17 U	4.1	4.8	**8700**
Heptane			4.00E+07	3.00E+08	2.05 U	*4.5*	*32*	4.1 U	3.9	*6.2*	*32*	4.5 JV	*2.2 JV*	*860000*
Hexane			3.60E+07	2.70E+08	*4.9*	*35*	*490*	*17*	5.6	*22*	*110*	3.9 JV	*1.3 JV*	*6000000*
m+p-Xylene	444	3330	8.70E+06	6.53E+07	4.34 U	8.3	4.34 U	9.6	28	10	4.34 U	16	18	8680 U
Methylene Chloride	200	1500	1.74E+06	1.30E+07	5.2	4.9	1.74 U	4.5	1.74 U	7.3	27	0.56 J	0.63 J	3400 U
MTBE	230	1725	0.00E+00	0.00E+00	3.61 U	3.61 U	3.61 U	7.21 U	3.61 U	3.61 U	3.61 U	3.61 U	3.61 U	7210 U
o-Xylene	158	1185	8.70E+06	6.53E+07	2.17 U	2.8	2.17 U	4.34 U	11	2.8	2.17 U	6.5	6.5	4260 U
Propene (7)			1.72E+07	1.29E+08	0.861 U	*69*	*26*	*6.7*	0.98	*13*	*24*	2.1 JV	*0.88 JV*	1690 U
Styrene	38	285	8.52E+06	6.39E+07	3.2	2.13 U	3.1 JV	8.5 JV	1.5 J	3.3 JV	2.13 U	1.3 J	0.85 J	4170 U
Tetrachloroethene	318	2385	1.36E+07	1.02E+08	13	120	200	6.78 U	35	7.5	18	160	110	6650 U
Tetrahydrofuran			1.18E+07	8.85E+07	*8.3*	5.9 U	5.9 U	11.8 U	6.5	5.9 U	5.9 U	5.9 U	5.9 U	11500 U
Toluene	860	6450	1.51E+07	1.13E+08	7.2	14	9.8	16	26	12	4.9	17	18	3690 U
trans-1,2-Dichloroethene			1.58E+07	1.19E+08	1.98 U	*23*	1.98 U	3.96 U	1.98 U	1.98 U	1.98 U	1.98 U	1.98 U	3890 U
Trichloroethene	84	630	1.07E+07	8.06E+07	2.69 U	**91**	**120**	5.37 U	2.69 U	2.69 U	2.69 U	1.5 J	2.69 U	5270 U
Trichlorofluoromethane	362	2715	1.12E+08	8.40E+08	4.3	2.81 U	2.81 U	5.62 U	3.9	4.4	2.81 U	2.0 J	1.9 J	5510 U
Vinyl Acetate (7)			700000	5250000	1.76 U	1.76 U	1.76 U	3.52 U	0.67 J	1.76 U	1.76 U	1.2 J	1.76 U	3450 U
MERCURY														

Notes:
Results are provided for compounds that were detected in at least one sample.
µg/m^3 - Micrograms per cubic meter
U - Not detected
J - Estimated Concentration
V - qualifier added by the Data Validotor (Data Validation Services)

(1) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.

(2) Values are equal to the 90th percentile background indoor air value from the EPA 2001 BASE study, as provided by NYSDOH in Appendix C, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006, multiplied by 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report. If the compound was nondetect in background samples, the detection limit multiplied by 20 was used as a surrogate value.
(3) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 20. This attenuation factor was obtained from NYSDOH (2006) as the factor applied to the lowest indoor air concentration in Decision Matrix 1 (0.25 ug/m³) which results in the lowest sub-slab vapor concentration of 5 ug/m³.
(4) Values are equal to the Permissible Exposures Limits (PELs) presented by the Occupational Safety and Health Administration (OSHA) in Tables Z-1 and Z-2 of 29 CFR 1910.1000, last updated February 28, 2006, multiplied by an attenuation factor of 150, which is a conservative value within the range of attenuation factors measured in numerous studies (Mosley et al, 2004, Wertz & McDonald, 2004), as described in Section 3.2.1 of the report.
(5) Sample SV-13 was collected from a crawl space beneath Building 135. SV-13 results were compared to adjusted air concentrations considering an attenuation factor of 20, and were not compared to air concentrations with an attenuation factor of 150.
(6) NYSDOH does not presenta background indoor air value for bromodichloromethane. OSHA does not present a PEL for Bromodichloromethane in CFR 1910.1000 Table Z-1 or Table Z-2 (updated February 28, 2006). Bromodichlormethane is on the American Conference of Governmental Industrial Hygienists (ACGIH) 2009 Under Study List. No TLV is currently available. Therefore, no comparison value is available. It was not detected above the reporting limit, but was estimated below the reporting limit in three samples.
(7) OSHA does not present a PEL for this compound in CFR 1910.1000 Table Z-1 or Table Z-2. However, the American Conference of Governmental Industrial Hygienists (ACGIH) presents an 8-hour time weighted average for in TLVs and BEIs Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices.
Samples were collected between October 6 and October 29, 2008 and on July 7 and July 8, 2009
C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
Values in italics indicate that there was no background indoor air comparison value.
Values in bold and shaded indicate an exceedence of 20 times the background indoor air comparison values.
Values in bold, shaded and outlined indicate an exceedence of 150 times the background indoor air comparison values.
No detected concentration exceeds the adjusted OSHA PELs.

Table 2. Summary of Fixed Gas Concentrations in Soil Vapor Samples

			Ambient Air						Building 135				Building 140			
Parameter	25% Methane LEL (1)	**Sample Designation:**	**Ambient Air 1**	**Ambient Air 1**	**Ambient Air 2**	**Ambient Air 2**	**Ambient Air 3**	**Ambient Air 4**	**SV-10**	**SV-11**	**SV-13 (2)**	**SV-13 (2)**	**SV-1**	**SV-1 (3)**	**SV-1 (3)**	**SV-2**
		Sample Date:	10/6/2008	7/7/2009	10/7/2008	7/8/2009	10/28/2008	10/29/2008	10/28/2008	10/28/2008	7/8/2009	7/9/2009	10/28/2008	7/7/2009	7/8/2009	10/29/2008
	ppmv	**Units:**	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
Carbon Dioxide			440.5	390.4	434.5	396.5	435	520	84780	12070	384	NA	32890	2568	NA	553.5
Carbon Monoxide			10 U	15.40 U	10 U	15.10 U	10 U	10 U	10 U	10 U	14.00 U	NA	10 U	14.80 U	NA	10 U
Hydrogen			246 U	381.9 U	246 U	374.5 U	246 U	246 U	246 U	246 U	347.2 U	NA	246 U	367.0 U	NA	246 U
Methane	12500		9.92 U	15.28 U	9.92 U	14.98 U	9.92 U	9.92 U	**412500**	**244800**	13.89 U	10.0 U	**130200**	7007	1644	9.92 U
Nitrogen			759000	778000	728500	773400	744400	775200	422300	718500	800600	NA	748800	768400	NA	735500
Oxygen			201800	194300	201800	192900	193000	197500	13350	14840	202300	NA	110100	196400	NA	208100

Notes:

(1) Twenty-five percent of the methane lower explosive limit was used for comparison purposes. There is no regulatory limit set for methane.

(2) The sample collected on July 8, 2009 from SV-13 was analyzed by Testamerica and the sample collected on July 9, 2009 was analyzed by Environmental Analytical Service as part of the methane forensic evaluation.

(3) The sample collected on July 7, 2009 from SV-1 was analyzed by Testamerica and the sample collected on July 8, 2009 was analyzed by Environmental Analytical Service as part of the methane forensic evaluation.

ppmv - Parts per million/volume

Values in bold and shaded indicate exceedence of 25% of the LEL (12,500 ppmv).

NA - Not analyzed

U - Not detected

Table 2. Summary of Fixed Gas Concentrations in Soil Vapor Samples

			Sewers				Site Boundary Soil Vapor Samples		Building 152					Building 153				OU-3 Separate-Phase Product
	25% Methane	**Sample Designation:**	**SV-8**	**SV-14**	**SV-15**	**SV-19**	**SV-9**	**SV-16**	**SV-3**	**SV-4**	**SV-4 DUP**	**SV-5**	**SV-17**	**SV-6**	**SV-6 DUP**	**SV-18**	**SV-18 DUP**	**SV-12**
Parameter	LEL (1)	**Sample Date:**	10/28/2008	7/7/2009	7/7/2009	7/7/2009	10/6/2008	7/7/2009	10/7/2008	10/6/2008	10/7/2008	10/6/2008	7/7/2009	10/6/2008	10/7/2008	7/7/2009	7/8/2009	10/7/2008
	ppmv	**Units:**	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
Carbon Dioxide			3495	33700	5042	45540	41180	81110	27640	3023	2959	454	297.4	1291	1146	4664	4452	99170
Carbon Monoxide			10 U	14.70 U	15.20 U	15.60 U	10 U	15.60 U	10 U	10 U	10 U	10 U	15.20 U	10 U	10 U	14.80 U	15.30 U	10 U
Hydrogen			246 U	364.6 U	377.0 U	386.9 U	246 U	386.9 U	246 U	246 U	246 U	246 U	377.0 U	246 U	246 U	367.0 U	379.4 U	246 U
Methane	12500		9.92 U	19.55	15.08 U	15.48 U	9.92 U	321.8	9.92 U	9.92 U	9.92 U	25.63	15.08 U	52.31	57.99	14.68 U	15.18 U	**159200**
Nitrogen			747200	834900	784700	784600	774000	797400	775500	715200	785500	784700	754700	754500	742600	822100	776600	647900
Oxygen			191900	138600	191300	141900	159800	33750	132400	193400	199600	199300	195500	199300	204800	202300	187600	46780

Notes:

(1) Twenty-five percent of the methane lower explosive limit was used for comparison purposes. There is no regulatory limit set for methane.

(2) The sample collected on July 8, 2009 from SV-13 was analyzed by Testamerica and the sample collected on July 9, 2009 was analyzed by Environmental Analytical Service as part of the methane forensic evaluation.

(3) The sample collected on July 7, 2009 from SV-1 was analyzed by Testamerica and the sample collected on July 8, 2009 was analyzed by Environmental Analytical Service as part of the methane forensic evaluation.

ppmv - Parts per million/volume

Values in bold and shaded indicate exceedence of 25% of the LEL (12,500 ppmv).

NA - Not analyzed

U - Not detected

Table 3. Methane Screening Results Using an LEL Meter

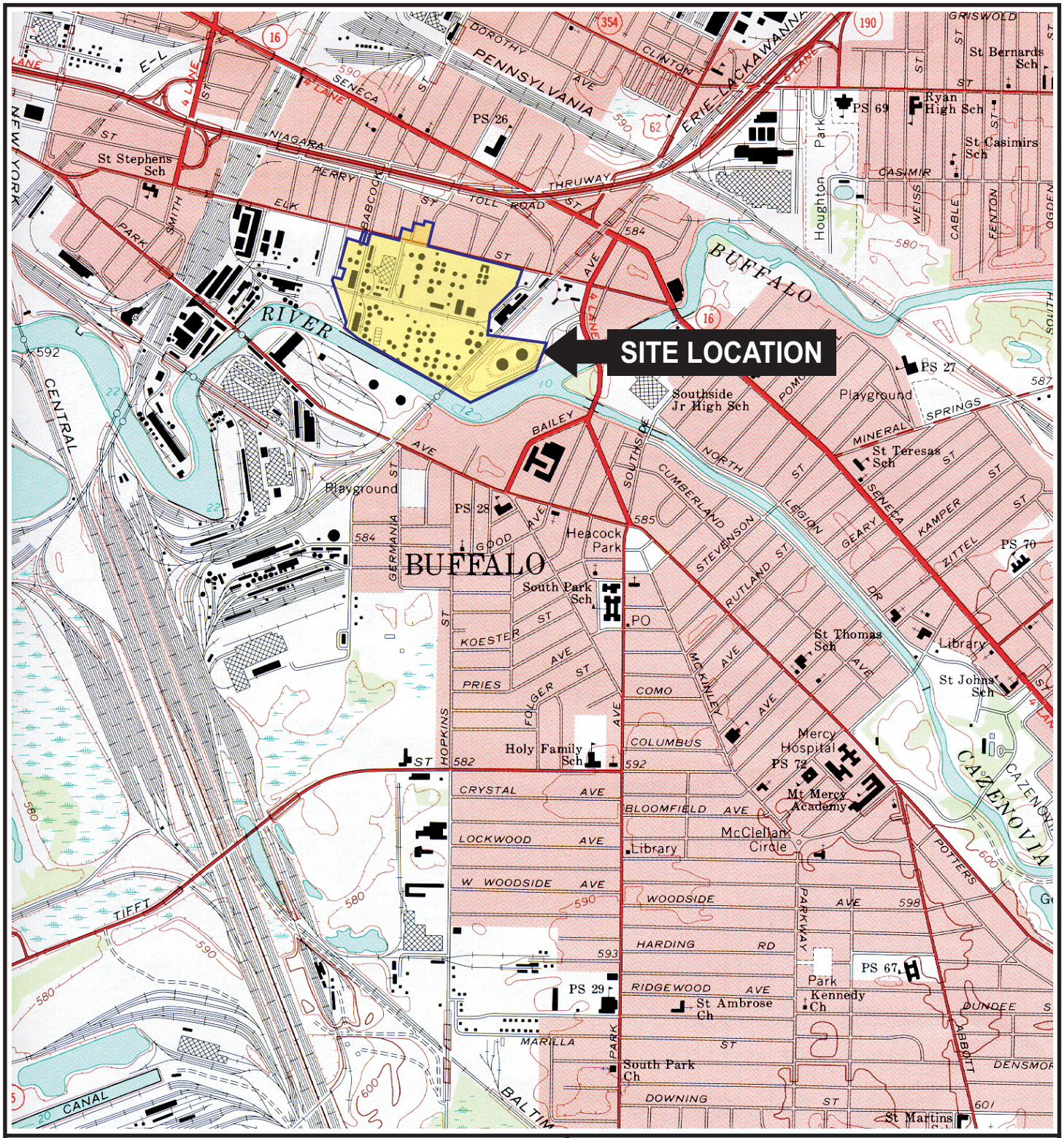
SV-1 (1)		
Date	**Time**	**% LEL**
7/7/2009	8:08	0
	9:00	0
	10:00	0
	11:00	0
	12:00	0
	13:00	0
	14:00	0
	15:00	0
	16:00	0
	16:48	0
7/8/2009	8:06	0
	9:00	0
	10:00	0
	11:00	0
	12:00	0
	13:00	0
	14:00	0
	15:00	0
	16:00	0
	16:37	0

SV-13 (2)		
Date	**Time**	**% LEL**
7/8/2009	8:20	0
	9:00	0
	10:00	0
	11:00	0
	12:00	0
	13:00	0
	14:00	0
	14:58	0
7/9/2009	7:39	0
	9:00	0
	10:00	0
	11:00	0
	12:00	0
	13:00	0
	14:00	0
	15:00	0
	16:00	0

Notes:

(1) The parcel that contained the sampling point SV-1 has two bay doors and one man door. The man door and one bay door were open during sampling on 7/7. Due to the amount of air flow through the building GES requested that the bay doors remain closed for sampling on 7/8. The request was accommodated and the readings from 7/8 were with both bay doors closed however the man door was left open. The sampling point is located between the two bay doors and is approximately 50-60 feet away from the man door.

(2) Air within the crawlspace at SV-13 was screened from a second sample tube. Indoor air was not screened.



QUADRANGLE LOCATION

SOURCE:
USGS; 1965, Buffalo SE, New York
7.5 Minute Topographic Quadrangle

N

0 2000’

Title:

SITE LOCATION MAP

EXXONMOBIL FORMER BUFFALO TERMINAL, BUFFALO, NEW YORK

Prepared for:

EXXONMOBIL OIL CORPORATION

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: W.K.		Date: 06NOV09	FIGURE
Prepared by: G.M.		Scale: AS SHOWN	1
Project Mgr.: N.C.		Office: NY	
File No.: MC5239601		Project No.: 17252Y11	

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OPERABLE UNIT 1

OPERABLE UNIT 2

OPERABLE UNIT 3

OPERABLE UNIT 4

OPERABLE UNIT 5

SV-1 SV-2 SV-3 SV-4 SV-5 SV-6 SV-7 (NOT INSTALLED SEE NOTE 1) SV-8 SV-9 SV-10 SV-11 SV-12 SV-13 SV-14 SV-15 SV-16 SV-17 SV-18 SV-19

ELK STREET
BABCOCK STREET
ORLANDO STREET
GORHAM STREET
WINONA STREET
BRADFORD STREET
PRENATT STREET
BUFFALO RIVER

BABCOCK STREET PROPERTIES AREA
FORMER REFINERY AREA
NORTHERN TANK YARD AREA
ADMINISTRATIVE OFFICES AND OPERATIONS AREA
CENTRAL RAIL AND PROCESS AREA
SOUTHERN TANK YARD AREA
EASTERN TANK YARD AREA
NORTHEAST PROCESS AND STORAGE AREA

BSA 72" SEWER
BUILDING 140 FORMER LAKES DIVISION GARAGE (CURRENTLY VARIOUS ONE BABCOCK STREET TENANTS)
ONE BABCOCK STREET STORAGE FACILITY (FORMER TRUCK LOADING RACK)
BUILDING 135 ONE BABCOCK STREET OFFICES (FORMER BARREL HOUSE)
REMEDIATION BUILDING (FORMER PUMP HOUSE/FIRE HOUSE)
LIFT STATION
LINED TANK FARM ABOVE GROUND OILWATER SEPARATOR
ELECTRICAL SUBSTATION A
LABORATORY BUILDING
BUILDING 152 MAIN OFFICE (FORMER MECHANICAL SHOPS)
BUILDING 152 STORE HOUSE
BUILDING 112 TANK TRUCK LOADING RACK
VAPOR RECOVERY UNIT

TP-12A TP-04 TP-05
B-1MW B-2MW B-3MW B-4MW B-5MW(RR)
MW-1 MW-2 MW-3 MW-5 MW-5URS MW-6 MW-7 MW-9 MW-10 MW-12 MW-13 MW-15 MW-16 MW-17 MW-18 MW-20 MW-22 MW-23 MW-24 MW-25 MW-26 MW-27 MW-29 MW-30 MW-31 MW-32 MW-33 MW-34 (SB-130) MW-35 MW-36R MW-37 MW-38 (SB-108) MW-40 MW-41 MW-42 MW-43 MW-44 MW-45 MW-46 MW-47 MW-48 MW-49 MW-50 MW-51 MW-1URS MW-4URS
RW-1 RW-2 RW-3 RW-4 RW-5 RW-6 RW-7 RW-9
SB-7 SB-8 SB-9 SB-10 SB-11/LB-1 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-28 SB-31 SB-37 SB-39 SB-44 SB-65 SB-67 SB-68 SB-101 SB-107 SB-110
GS-T96[1] GS-T96[4]
ESI-1 ESI-2 ESI-3 ESI-4
BTC-1 BTC-4
LF-1S LF-3 LF-4 LF-5 P-15 B-6MW SB-74 W-1
BSPA-383 BSPA-1-2-3/0 SB-190 SB-191
75 90 99 38 97 87 104 105 171 176 175

SOIL VAPOR SAMPLE LOCATION COMPLETED IN OCTOBER/NOVEMBER 2008
SOIL VAPOR SAMPLE LOCATION COMPLETED IN 2008/2009 (SAMPLE POINT SV-1 WAS RESAMPLED IN JULY 2009)
SOIL VAPOR SAMPLE LOCATION COMPLETED IN JULY 2009
CRAWLSPACE AIR SAMPLE LOCATION COMPLETED IN JULY 2009

PROPERTY OWNED AND OPERATED BY ONE BABCOCK STREET, INC. SINCE 1994
PROPERTY OWNED AND OPERATED BY BUCKEYE TERMINALS, LLC AS OF MAY 4, 2005
NOTE: EXXONMOBIL OWNS ALL PROPERTY WITHIN THE BCP SITE BOUNDARY THAT IS NOT OWNED BY ONE BABCOCK STREET, INC OR BUCKEYE TERMINALS LLC.
BCP SITE BOUNDARY
OPERABLE UNIT BOUNDARY
GEOGRAPHIC AREA BOUNDARY
FENCELINE

EXISTING STRUCTURE
EXISTING OCCUPIED BUILDING TO BE ASSESSED DURING SOIL VAPOR INVESTIGATION
HISTORICAL AND CURRENT SEPARATE-PHASE PRODUCT
EXISTING ROAD
ACTIVE ABOVE GROUND TANK BERMS
SANITARY SEWER SYSTEM
72" BUFFALO SEWER AUTHORITY (BSA) SEWER
NATURAL GAS LINE

STORM SEWER PIPING (ONLY SELECTED PIPING IN THE BSPA SHOWN)
STORM SEWER CATCH BASIN (ONLY SELECTED CATCH BASINS IN THE BSPA SHOWN)
SOIL SAMPLE IN THE VICINITY OF PROPOSED VAPOR SAMPLE LOCATIONS
MONITORING WELL

NOTE 1: SV-7 COULD NOT BE INSTALLED AFTER SEVERAL ATTEMPTS DUE TO SHALLOW WATER ENCOUNTERED AT 1.5 FEET BELOW GRADE.

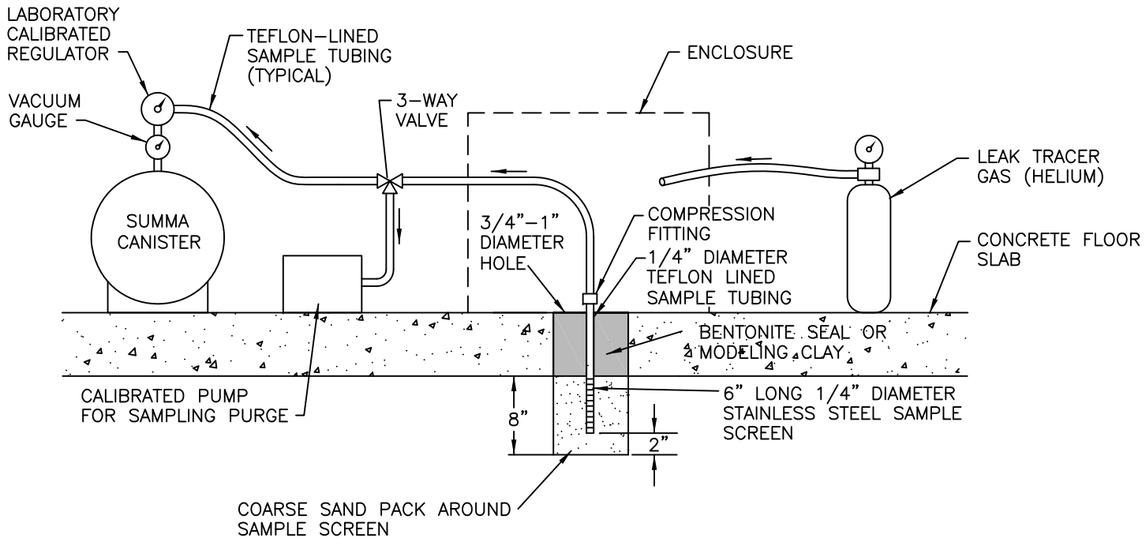
N
100' 0 100'

Title:
SOIL VAPOR, SUB SLAB VAPOR AND CRAWLSPACE AIR SAMPLING LOCATIONS

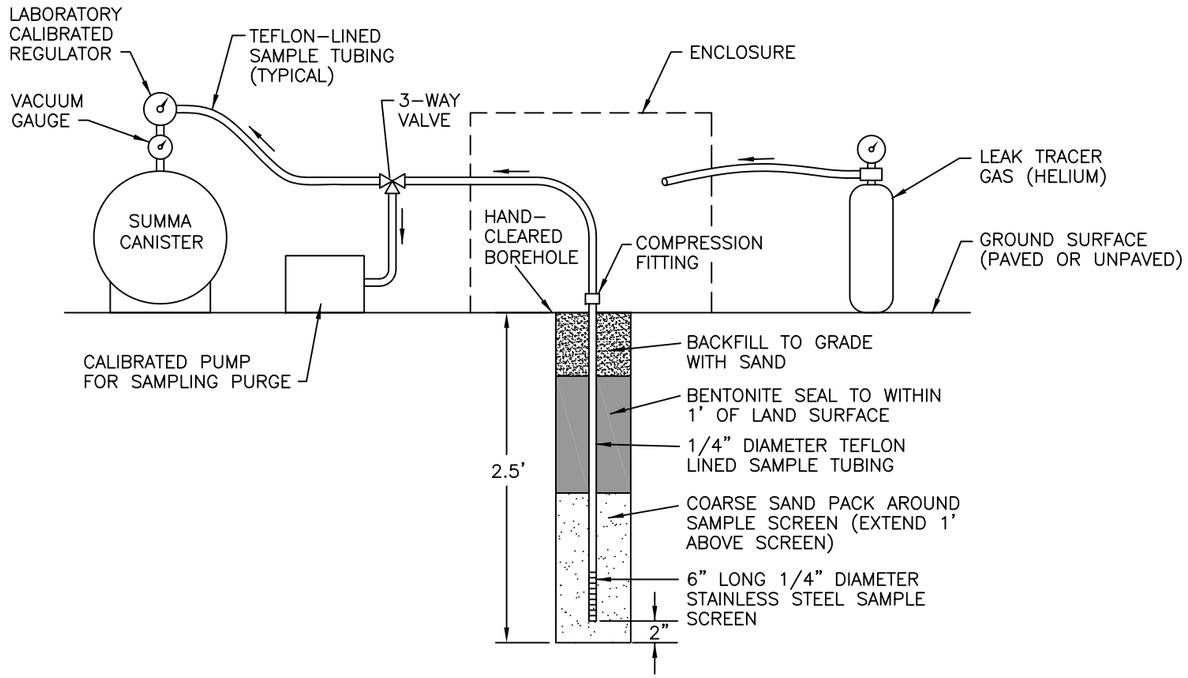
Prepared For:
EXXONMOBIL OIL CORPORATION

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by: NC	Date: August 12, 2009	FIGURE
Prepared by: NC	Scale: AS SHOWN	2
Project Mgr: NC	Office: NY	
File No: MC5239601.WOR	Project: 1725ZY11	



TYPICAL TEMPORARY SUB–SLAB VAPOR MONITORING POINT FOR VOCs



TYPICAL TEMPORARY SOIL VAPOR MONITORING POINT FOR VOCs

Title:

TYPICAL TEMPORARY SUB-SLAB VAPOR AND SOIL VAPOR MONITORING POINT AND SAMPLING SCHEME FOR VOCs

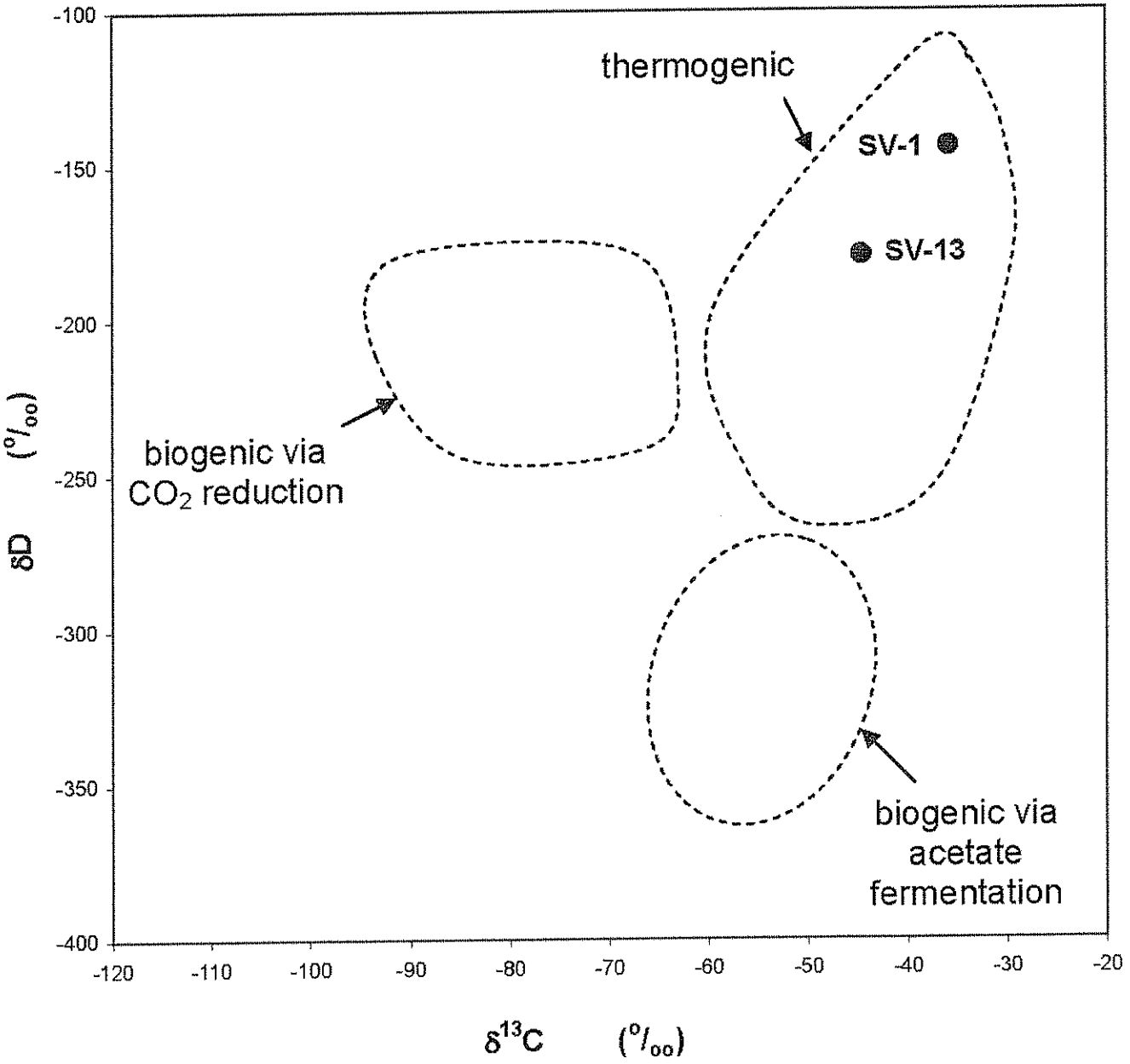
Prepared For:

EXXONMOBIL OIL CORPORATION

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: N.C.	Date: 06NOV09	FIGURE
Prepared by: G.M.	Scale: NTS	3
Project Mgr: N.C.	Office: NY	
File No: MC5239602	Project: 17252Y11	

N:\PROJECTS\MC172Y\MC52Y\396\MC5239602.DWG



LEGEND:

δ ^{13} C - STABLE ISOTOPE RATIO OF CARBON 13 TO CARBON 12
δ D - STABLE ISOTOPE RATIO OF DEUTERIUM TO HYDROGEN

NOTE:

THESE VALUES WERE REPORTED AS ESTIMATES BY ZYMAX DUE TO THE LOW CONCENTRATION OF METHANE IN THESE SAMPLES. GENETIC FIELDS (DASHED-LINES) AFTER COLEMAN ET AL. (1995).

Title:

CROSS-PLOT OF CARBON AND HYDROGEN STABLE ISOTOPIC COMPOSITION OF METHANE IN THE SV-1 AND SV-13 SAMPLES (JULY 2009).

Prepared For:

EXXONMOBIL OIL CORPORATION

ROUX ASSOCIATES INC *Environmental Consulting & Management*	Compiled by: NC	Date: NOV. 5, 2009	FIGURE 4
	Prepared by: NC	Scale: NTS	
	Project Mgr: NC	Office: NY	
	File No: MC5239603	Project: 0172.0052Y011	

APPENDIX A

Soil Vapor Sampling Field Forms

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JS/TP
Sampling Identification #: Ambient Air 1
Summa Canister Identification #: 2253
Flow Regulator ID # 08013
Analysis VOCs

Weather (general description): Partly cloudy
Temperature: ~80°F Humidity: 58%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.53 Barometer Falling /Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: N/A Must be less than 0.2 L/min
Purge Time: N/A note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure:
Helium Rate from sample tubing: N/A Is this rate <20% of the rate at the enclosure Yes

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29" in. of Hg
Starting Time: 0828
Ending Time: 1641
Ending Pressure: 2 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: N/A ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 2253
DATE CLEANED: 061609B
CLIENT SAMPLE #: Ambient Air 1
SITE LOCATION: Former xom Buffalo Terminal

VFR ID: 08013
Duration of comp.: 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0828	29"	7/7/09	[illegible]
FINAL FIELD READING	1641	2"	7/7/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/8/09
Time: _____
Sampled By: JLS / TP
Sampling Identification #: Ambient Air 2
Summa Canister Identification #: 1052 C
Flow Regulator ID # 080088
Analysis VOCs

Weather (general description): mostly cloudy
Temperature: 58° F Humidity: 82%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 28.89 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: _____ Must be less than 0.2 L/min
Purge Time: N/A note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: _____
Helium Rate from sample tubing: _____ Is this rate <20% of the rate at the enclosure Yes

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29 in. of Hg
Starting Time: 0832
Ending Time: 1737
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: _____ ml/min
Starting Time: _____
Ending Time: _____
Post-sampling pump flow rate: _____ ml/min

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1052c
DATE CLEANED: 061509B
CLIENT SAMPLE #: Ambient Air 2
SITE LOCATION: Former Kem Buffalo Terminal

VFR ID: 08088
Duration of comp.: 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0832	29"	7/8/09	[illegible]
FINAL FIELD READING	1737	4"	7/8/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JLS | TP
Sampling Identification #: SV-1
Summa Canister Identification #: 10502
Flow Regulator ID #: 05053
Analysis: VOCs

Weather (general description): Partly cloudy
Temperature: ~60° F Humidity: 53%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.57 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec. note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 500,000 ppm
Helium Rate from sample tubing: 1,400 ppm Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 30 in. of Hg
Starting Time: 0805
Ending Time: 1148
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: N/A ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1050c
DATE CLEANED: 06/16/09B
CLIENT SAMPLE #: SV-1
SITE LOCATION: Former Exxon Buffalo Terminal

VFR ID: 08083
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0808	30"	7/7/09	[illegible]
FINAL FIELD READING	1648	4	7/7/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1082c
DATE CLEANED: 061609B
CLIENT SAMPLE #: SV-1 Forensic
SITE LOCATION: Former Kam Buffalo Terminal

VFR ID: 08106
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0806	30"	7/8/09	[illegible]
FINAL FIELD READING	1637	4"	7/8/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/8/09
Time:
Sampled By: JLS | TP
Sampling Identification #: SV-13
Summa Canister Identification #: 1288
Flow Regulator ID # 08021
Analysis VOCs

Weather (general description): mostly cloudy
Temperature: 58° Humidity: 82%
Wind Magnitude: 5-10 mph Wind Direction: variable
Barometric Pressure: 29.59 Barometer Falling / Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: NA Must be less than 0.2 L/min
Purge Time: note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure:
Helium Rate from sample tubing: Is this rate <20% of the rate at the enclosure Yes

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29 in. of Hg
Starting Time: 0830
Ending Time: 1465
Ending Pressure: 1 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1288
DATE CLEANED: 061509B
CLIENT SAMPLE #: SV-13
SITE LOCATION: Former Kem Buffalo Terminal

VFR ID: 08021
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0820	29"	7/8/09	[illegible]
FINAL FIELD READING	1458	1"	7/8/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1187c
DATE CLEANED: 06/6/09B
CLIENT SAMPLE #: SV-13 Forensics
SITE LOCATION: Former Kan Buffalo Terminal

VFR ID: 08086
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0739	30"	7/9/09	[illegible]
FINAL FIELD READING	1635	4"	7/9/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/1/09
Time:
Sampled By: JLS/TP
Sampling Identification #: SV-14
Summa Canister Identification #: 1249
Flow Regulator ID #: 05082
Analysis: VOCs

Weather (general description): Partly cloudy
Temperature: ~60° F Humidity: 58%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.84 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec. note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 520,000 ppm
Helium Rate from sample tubing: 0 Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29.5 in. of Hg
Starting Time: 0835
Ending Time: 1719
Ending Pressure: 3.5 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: NA ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1249
DATE CLEANED: 061609B
CLIENT SAMPLE #: SV-14
SITE LOCATION: Former XOM Buffalo Terminal

VFR ID: 08082
Duration of comp.: 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0835	29.5"	7/7/09	[illegible]
FINAL FIELD READING	1719	3.5"	7/7/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JCS / TP
Sampling Identification #: SV-15
Summa Canister Identification #: 2351
Flow Regulator ID # 0807HO
Analysis VOCs

Weather (general description): Partly cloudy
Temperature: ~60°F Humidity: 58%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.57 Barometer Falling /Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 400,000 ppm
Helium Rate from sample tubing: 25 ppm Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 30 in. of Hg
Starting Time: 0842
Ending Time: 1724
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: N/A ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

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CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 2351
DATE CLEANED: 06/16/09B
CLIENT SAMPLE #: SV-15
SITE LOCATION: Former Xom Buffalo Terminal

VFR ID: 08076
Duration of comp. : 8 (Hrs. / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0842	30"	7/7/09	9S
FINAL FIELD READING	1724	4"	7/7/09	9S

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JS/TP
Sampling Identification #: SV-16
Summa Canister Identification #: 2779
Flow Regulator ID # 05094
Analysis VOCs

Weather (general description): Partly cloudy
Temperature: ~60°F Humidity: 55%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.57 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec. note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 450,000 ppm
Helium Rate from sample tubing: 3,100 ppm Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29 in. of Hg
Starting Time: 0817
Ending Time: 1640
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: N/A ml/min
Starting Time: N/A
Ending Time: N/A
Post-sampling pump flow rate: N/A ml/min

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CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 2779
DATE CLEANED: 061609B
CLIENT SAMPLE #: SV-16
SITE LOCATION: Former Xom Buffalo Terminal

VFR ID: 08094
Duration of comp.: 8 (Hrs.) / mins.
Flow setting: 9.9-10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0817	29"	7/7/09	[illegible]
FINAL FIELD READING	1640	4"	7/7/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JLS/TP
Sampling Identification #: SV-17
Summa Canister Identification #: 2914
Flow Regulator ID # 080910
Analysis VOCs

Weather (general description): Partly cloudy
Temperature: ~60° F Humidity: 58%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.87 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2.4 min Must be less than 0.2 L/min
Purge Time: 75 sec. note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 590,000 ppm
Helium Rate from sample tubing: 1,160 ppm Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 30" in. of Hg
Starting Time: 0855
Ending Time: 1733
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville

CANISTER SERIAL #: 2914

DATE CLEANED: 06/16/09B

CLIENT SAMPLE #: SV-17

SITE LOCATION: Former Xom Buffalo Terminal

VFR ID: 08090

Duration of comp. : 8 (Hrs.) / mins.

Flow setting: 9.9 - 10.4 ml/min

Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0859	30"	7/7/09	JBB
FINAL FIELD READING	1733	4"	7/7/09	JBB

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JCS/TP
Sampling Identification #: SV-18
Summa Canister Identification #: 2366
Flow Regulator ID # 08101
Analysis VOCs

Weather (general description) : Partly cloudy
Temperature: ~60°F Humidity: ~55%
Wind Magnitude: 5-10 mph Wind Direction: from NO
Barometric Pressure: 29.57 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 136,000 PPM
Helium Rate from sample tubing: 2,175 PPM is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 30" in. of Hg
Starting Time: 0910-F
Ending Time: 1230
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: NA ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

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CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 2362
DATE CLEANED: 061509B
CLIENT SAMPLE #: SV-18
SITE LOCATION: Former Xom Buffalo Terminal

VFR ID: 08101
Duration of comp.: 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	[redacted]	30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0907	30"	7/7/09	988
FINAL FIELD READING	1736	4"	7/7/09	988

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/8/09
Time:
Sampled By: JLS/TP
Sampling Identification #: Duplicate SV-18 (DUP)
Summa Canister Identification #: 1098C
Flow Regulator ID # 080165
Analysis VOCs

Weather (general description) : mostly cloudy
Temperature: 58° F Humidity: 82%
Wind Magnitude: 5-10 mph Wind Direction: from W
Barometric Pressure: 29.54 Barometer Falling / Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: _____ Must be less than 0.2 L/min
Purge Time: NA note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: _____
Helium Rate from sample tubing: NA Is this rate <20% of the rate at the enclosure Yes

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 30 in. of Hg
Starting Time: ~~1550~~ 0852
Ending Time: 1757
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: _____ ml/min
Starting Time: NA
Ending Time:
Post-sampling pump flow rate: _____ ml/min

TestAmerica

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1098c
DATE CLEANED: 061509B
CLIENT SAMPLE #: Duplicate SV-18 (DUP)
SITE LOCATION: Former XCM Buffalo Termina

VFR ID: 08065
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0750	30"	7/8/09	[illegible]
FINAL FIELD READING	1757	4"	7/8/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

Appendix A

Soil Vapor Sampling Form
ExxonMobil Former Buffalo Terminal

Date: 7/7/09
Time:
Sampled By: JLS / TP
Sampling Identification #: SV-19
Summa Canister Identification #: 1256
Flow Regulator ID # 03006
Analysis VOCs

Weather (general description): Partly cloudy
Temperature: ~60°F Humidity: 55%
Wind Magnitude: ~10 mph Wind Direction: from W
Barometric Pressure: 29.87 Barometer Falling/Rising (circle one)

Site Condition (i.e. any adjacent facilities, vent pipes, tanks, etc. and what type of basements are present)

Sample Purge and Leak Tracer Test:
Calibrate the Helium detection meter

Purge Rate: 2 L/min Must be less than 0.2 L/min
Purge Time: 75 sec note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing
Helium Rate at enclosure: 300,000 ppm
Helium Rate from sample tubing: 28,000 ppm Is this rate <20% of the rate at the enclosure (Yes)

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Sample Collection for VOCs:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 " of Hg

Starting Pressure: 29 in. of Hg
Starting Time: 0851
Ending Time: 17:29
Ending Pressure: 4 in. of Hg

Sample Collection for Mercury:

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location, the soil vapor sample can be collected with a sample train consisting of a calibrated sample pump, solid sorbent tube and MCE filter cartridge

Pump shall be field calibrated before and after sampling with the complete sample train in line to a flow rate of 210 ml/min (sorbent tube used for initial calibration must be replaced with a new tube immediately prior to sampling)

Pre-sampling pump flow rate: NA ml/min
Starting Time:
Ending Time:
Post-sampling pump flow rate: ml/min

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

CLIENT: TA Nashville
CANISTER SERIAL #: 1256
DATE CLEANED: 06/16/09B
CLIENT SAMPLE #: SV-19
SITE LOCATION: Former Xom Buffalo Terminal

VFR ID: 08006
Duration of comp. : 8 (Hrs.) / mins.
Flow setting: 9.9 - 10.4 ml/min
Initials: [illegible]

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	6/24/09	[illegible]
INITIAL FIELD VACUUM	0851	29"	7/7/09	[illegible]
FINAL FIELD READING	1729	4"	7/7/09	[illegible]

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (Inches Hg / PSIA (circle unit used))			
FINAL PRESSURE (PSIA)			

Pressurization Gas: _____

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

APPENDIX B

Field Equipment Calibration Forms

TESTAMERICA LABORATORIES INC. - 4645 E. Cotton Center Blvd., Bldg. 3, Suite. 189 Phoenix, AZ 85040
602.437.3340 * 866.772.5227 * FAX 602.454.9303 www.testamericainc.com

INDUSTRIAL HYGIENE REQUEST FORM

DATE:	06/23/09	CLIENT P/U DATE & TIME:		
CLIENT:	ExxonMobil Buffalo Terminal	DELIVERY DATE & TIME:	Must receive by 06/26/09	
REQUESTER:	Gail Lage (TA-Nashville)	DELIVERY TYPE:	COURIER:	
ATTENTION:	Andy Janik		FEDEX PRIORITY:	
PROJECT:	Air Monitoring		FEDEX STD OVERNIGHT:	
ADDRESS:	625 Elk Street		FEDEX 2ND DAY:	
CITY, ZIP:	Buffalo, NY 14210		FEDEX EXPRESS SAVER:	
PHONE:	(615) 301-5741 (Gail Lage)		UPS GROUND:	
PROJECT MANAGER:	Denise Harrington		OTHER:	

Media Type	Media Quantity	Number of Pump(s)	Sampling Rate(s)	Method
		1	2.0 LPM	Purge pump

Additional Items	Quantity	Comments
NIOSH Method(s)	0	
Sampling Instructions	0	
Industrial Hygiene Chain of Custody	0	Always Include
Pump Rental Agreement	1	
COOLERS:		

Attention clients: To ensure that all sample hold times are met, samples should be submitted as soon as possible after collection. If samples are received with less than 1/2 of their hold time remaining, a rush analysis surcharge may be applied. Please contact your project manager for more information.

COMMENTS:

SAMPLING KIT PREPARED BY: _____

TESTAMERICA LABORATORIES INC. - 4625 E. Cotton Center Blvd., Suite. 189 Phoenix, AZ 85040
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Sampling Pump Calibration Log

Pre-Calibration					
Client/Project: Exxon Mobil					
	Pump ID	Pump ID	Pump ID	Pump ID	Pump ID
Date: 4/25/09	TA123				
Flow 1	1994.2 ml/min				
Flow 2	1994.7 ml/min				
Flow 3	1995.4 ml/min				
Average	1995.4 ml/min				

Post-Calibration					
Client/Project:					
	Pump ID	Pump ID	Pump ID	Pump ID	Pump ID
Date:					
Flow 1					
Flow 2					
Flow 3					
Average					

NVLAP®
NVLAP Lab Code 200661

Bios
Driving a Higher Standard in Flow Measurement™

Calibration Certificate

Certificate No.	37272	Sold to:	Test America - AZ
Product	Defender 510 Medium Flow		4645 E. Cotton Center Blvd. Suite 189
Serial No.	113864		Phoenix, AZ 85040
Cal. Date	3/26/2009		USA

All calibrations are performed in accordance with ISO 17025 at Bios International Corporation, 10 Park Place, Butler, NJ, 07405, 800-663-4977, an ISO 17025:2005 – accredited laboratory through NVLAP. This report shall not be reproduced except in full without the written approval of the laboratory. Results only relate to the items calibrated. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

All units tested in accordance with Bios International Corporation test number PR17-13 using high-purity bottled nitrogen or dry filtered laboratory air.

As Received Calibration Data

Technician Sonia Otero

Lab. Pressure 763 mmHg
Lab. Temperature 22.3 °C

Instrument Reading	Lab Standard Reading	Deviation	Allowable Deviation	As Received
100.84ccm	100.26ccm	0.58%	1.00%	In Tolerance
1005.5ccm	1002.7ccm	0.28%	1.00%	In Tolerance
5027.4ccm	5007.65ccm	0.39%	1.00%	In Tolerance

Bios International Standards Used

Description	Standard Serial Number	Calibration Date	Calibration Due Date
ML 500-24	113775	5/1/2008	5/1/2009

APPENDIX C

Data Usability Summary Report

Data Validation Services

120 Cobble Creek Road P.O. Box 208
North Creek, NY 12853

Phone 518-251-4429
Facsimile 518-251-4428

September 14, 2009

Noelle Clarke
Roux Associates
209 Shafter St.
Islandia, NY 11749

RE: Data Validation Report for the ExxonMobil Buffalo site
TAL-Nashville SDG No. PSG0612
Soil Vapor and Ambient Air

Dear Ms. Clarke :

Review has been completed for the data packages generated by TestAmerica Laboratories that pertain to air samples collected 07/07/09 and 07/08/09 at the ExxonMobil Buffalo site. Ten 6L summa canisters and a field duplicate were analyzed for volatile analytes by method USEPA TO-15 and six fixed gases by ASTM method D1946.

The raw data and the results of QC evaluations have been reviewed for application of validation qualifiers, with consideration of the analytical methods and the USEPA Region 2 validation SOP HW-31. Although the data packages were to have been full deliverables, many of the summary forms were not available, and in those instances the corresponding raw data were reviewed for the required parameters. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate Standard Recoveries
* Internal Standard Recoveries
* Laboratory Duplicate (Gases only)
* Field Duplicate Correlation
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples (LCSs)
* Instrumental Tunes
* Calibration Standard Responses
* Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable.

In summary, sample processing was primarily compliant with analytical protocol requirements. Sample results are either usable as reported, or usable with qualification of results as quantitatively estimated.

Copies of the laboratory sample identification summary and case narrative are attached to this text, and should be reviewed in conjunction with this narrative. Also included in this submission are sample results forms with recommended qualifiers and edits applied in red ink.

Method TO-15 laboratory processing and data validation were performed using the units of ppbv (as required of the analytical protocol). Random conversions to ug/M3 were checked, and no errors found in the laboratory reporting of those units.

Volatile Analyses by USEPA TO-15

The low-level detections of vinyl chloride in SV-13, SV-18, Ambient Air 2, and Duplicate are considered external contamination, due to the presence of this in the associated method blank. Those results have been edited to reflect non-detection.

The field duplicate of SV-18 shows outlying correlations greater than ±CRDL for four of the analytes, 2-butanone, heptane, hexane, and propene. Results for those affected compounds have been qualified as estimated in value in the parent sample and its duplicate.

The detection of chloromethane in Ambient Air 1 is qualified as being tentative in identification and estimated in value due to mass spectral interferences.

Detections of 1,2,4-trimethylbenzene, 2-hexanone, heptane, and hexane in SV-13, and of cyclohexane in Duplicate, are edited to reflect non-detection due to very poor quality of the mass spectra (indicating improper identification).

The spectra for propene in the samples show many interferences, inherent with that compound mass fragmentation pattern. The acceptance of the detections is made based on the mass ion plots.

Holding times were met, and instrument tune fragmentation is within protocol. Surrogate and internal standard responses were acceptable.

Clean canister certification summaries were not provided for review.

Due to elevated response in the associated CCV/LCS (136%), the detections of 2-hexanone in Ambient Air 1 and SV-19 are considered estimated. Elevated CCV/LCS recoveries for analytes that are not detected in the samples do not affect reported results.

Results for analytes that initially showed responses above the instrument calibration range have been derived from the dilution analyses of the samples.

SV-1, SV14, and SV-16 were processed at initial dilution due to elevated target analyte responses. This resulted in elevated reporting limits for compounds not detected in those samples.

Fixed Gases Analyses by ASTM D-1946

Instrument performance was within validation guidelines, with the exception of an anomaly with one of the method blanks that involved a leak of nitrogen. It was determined that sample reported results were not affected.

The laboratory duplicate of SB-17 shows good correlations. LCSs show acceptable accuracy.

Sample results are substantiated by the raw data, and no qualification is made.

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

Very truly yours,

Judy Harry

VALIDATION DATA QUALIFIER DEFINITIONS

U - The compound was analyzed for, but was not detected above the level of the associated value.

J - The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

UJ - The compound was not detected. The associated reporting limit is an estimate and may be inaccurate or imprecise.

NJ - The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.

R - The data are unusable. The analyte may or may not be present.

EMPC - The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

LABORATORY SAMPLE IDs AND CASE NARRATIVE

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4625 East Cotton Center Blvd. Ste 189 Phoenix, AZ 85040 * (602) 437-3340 * Fax (602) 454-9303

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE	CONTAINER TYPE
NSG0861-01 (SV-1)	PSG0612-01	07/07/09	Summa Canister
NSG0861-02 (SV-14)	PSG0612-02	07/07/09	Summa Canister
NSG0861-03 (SV-15)	PSG0612-03	07/07/09	Summa Canister
NSG0861-04 (SV-16)	PSG0612-04	07/07/09	Summa Canister
NSG0861-05 (SV-17)	PSG0612-05	07/07/09	Summa Canister
NSG0861-06 (SV-18)	PSG0612-06	07/07/09	Summa Canister
NSG0861-07 (SV-19)	PSG0612-07	07/07/09	Summa Canister
NSG0861-08 (Ambient Air 1)	PSG0612-08	07/07/09	Summa Canister
NSG0861-09 (SV-13)	PSG0612-09	07/08/09	Summa Canister
NSG0861-10 (Duplicate)	PSG0612-10	07/08/09	Summa Canister
NSG0861-11 (Ambient Air 2)	PSG0612-11	07/08/09	Summa Canister

TestAmerica
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August 05, 2009

LABORATORY REPORT

Client:
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Attn: Gail Lage

Work Order: PSG0612
Project Name: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal
Date Received: 07/10/09

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica Laboratories, Inc., Phoenix Laboratory certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(602)437-3340

Analyses included in this report were performed by the laboratory shown at the top of this report unless otherwise indicated.

CASE NARRATIVE: SAMPLE RECEIPT: Samples were received intact, at 20°C and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

Approved By:

Denise Harrington

Denise Harrington
Project Manager

QUALIFIED SAMPLE RESULTS FORMS

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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

ANALYTICAL REPORT

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-01 (NSG0861-01 (SV-1))							Sampled: 07/07/09 16:48		
1,1,1-Trichloroethane	<2.5	2.5	<13.6	13.6		5.0	7/27/2009	TR/	EPA TO15
1,1,2,2-Tetrachloroethane	<2.5	2.5	<17.2	17.2		5.0	7/27/2009	TR/	EPA TO15
1,1,2-Trichloroethane	**1.6**	**2.5**	**8.7**	**13.6**	**J**	**5.0**	7/27/2009	TR/	**EPA TO15**
1,1-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/27/2009	TR/	EPA TO15
1,1-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/27/2009	TR/	EPA TO15
1,2,4-Trichlorobenzene	<10	10	<74.2	74.2		5.0	7/27/2009	TR/	EPA TO15
1,2,4-Trimethylbenzene	<2.5	2.5	<12.3	12.3		5.0	7/27/2009	TR/	EPA TO15
1,2-Dibromoethane (EDB)	<2.5	2.5	<19.2	19.2		5.0	7/27/2009	TR/	EPA TO15
1,2-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/27/2009	TR/	EPA TO15
1,2-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/27/2009	TR/	EPA TO15
1,2-Dichloropropane	<2.5	2.5	<11.6	11.6		5.0	7/27/2009	TR/	EPA TO15
1,3,5-Trimethylbenzene	<2.5	2.5	<12.3	12.3		5.0	7/27/2009	TR/	EPA TO15
1,3-Butadiene	<2.5	2.5	<5.52	5.52		5.0	7/27/2009	TR/	EPA TO15
1,3-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/27/2009	TR/	EPA TO15
1,4-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/27/2009	TR/	EPA TO15
2,2,4-Trimethylpentane	**120**	**2.5**	**560**	**11.7**		**5.0**	7/27/2009	TR/	**EPA TO15**
2-Butanone (MEK)	<5.0	5.0	<14.7	14.7		5.0	7/27/2009	TR/	EPA TO15
2-Hexanone	<5.0	5.0	<20.5	20.5		5.0	7/27/2009	TR/	EPA TO15
2-Propanol	<10	10	<24.6	24.6		5.0	7/27/2009	TR/	EPA TO15
4-Ethyltoluene	<2.5	2.5	<12.3	12.3		5.0	7/27/2009	TR/	EPA TO15
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	<20.5	20.5		5.0	7/27/2009	TR/	EPA TO15
Acetone	<25	25	<59.4	59.4		5.0	7/27/2009	TR/	EPA TO15
Allyl Chloride	<2.5	2.5	<7.82	7.82		5.0	7/27/2009	TR/	EPA TO15
Benzene	**2.4**	**2.5**	**7.7**	**7.99**	**J**	**5.0**	7/27/2009	TR/	**EPA TO15**
Benzyl Chloride	<10	10	<51.8	51.8		5.0	7/27/2009	TR/	EPA TO15
Bromodichloromethane	<2.5	2.5	<16.8	16.8		5.0	7/27/2009	TR/	EPA TO15
Bromoethene(Vinyl Bromide)	<2.5	2.5	<10.9	10.9		5.0	7/27/2009	TR/	EPA TO15
Bromoform	<2.5	2.5	<25.8	25.8		5.0	7/27/2009	TR/	EPA TO15
Bromomethane	<2.5	2.5	<9.71	9.71		5.0	7/27/2009	TR/	EPA TO15
Carbon disulfide	**6.6**	**2.5**	**21**	**7.78**		**5.0**	7/27/2009	TR/	**EPA TO15**
Carbon tetrachloride	<2.5	2.5	<15.7	15.7		5.0	7/27/2009	TR/	EPA TO15
Chlorobenzene	<2.5	2.5	<11.5	11.5		5.0	7/27/2009	TR/	EPA TO15
Chloroethane	<2.5	2.5	<6.60	6.60		5.0	7/27/2009	TR/	EPA TO15
Chloroform	<2.5	2.5	<12.2	12.2		5.0	7/27/2009	TR/	EPA TO15
Chloromethane	<2.5	2.5	<5.16	5.16		5.0	7/27/2009	TR/	EPA TO15
cis-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/27/2009	TR/	EPA TO15
cis-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/27/2009	TR/	EPA TO15
Cyclohexane	**40**	**2.5**	**140**	**8.61**		**5.0**	7/27/2009	TR/	**EPA TO15**
Dibromochloromethane	<2.5	2.5	<21.3	21.3		5.0	7/27/2009	TR/	EPA TO15
Dichlorodifluoromethane	<2.5	2.5	<12.4	12.4		5.0	7/27/2009	TR/	EPA TO15
Dichlorotetrafluoroethane(F-114)	<2.5	2.5	<17.5	17.5		5.0	7/27/2009	TR/	EPA TO15
Ethyl Acetate	<2.5	2.5	<9.01	9.01		5.0	7/27/2009	TR/	EPA TO15

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Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-01 (NSG0861-01 (SV-1)) - cont.								Sampled: 07/07/09 16:48	
Ethylbenzene	1.8	2.5	7.8	10.9	J	5.0	7/27/2009	TR/	EPA TO15
Freon 113	<2.5	2.5	<19.2	19.2		5.0	7/27/2009	TR/	EPA TO15
Heptane	1.3	2.5	5.3	10.2	J	5.0	7/27/2009	TR/	EPA TO15
Hexachlorobutadiene	<5.0	5.0	<53.3	53.3		5.0	7/27/2009	TR/	EPA TO15
Hexane	6.3	2.5	22	8.81		5.0	7/27/2009	TR/	EPA TO15
m,p-Xylenes	5.8	5.0	25	21.7		5.0	7/27/2009	TR/	EPA TO15
Methylene Chloride	<2.5	2.5	<8.68	8.68		5.0	7/27/2009	TR/	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<5.0	5.0	<18.0	18.0		5.0	7/27/2009	TR/	EPA TO15
o-Xylene	2.2	2.5	9.6	10.9	J	5.0	7/27/2009	TR/	EPA TO15
Propene	19	2.5	33	4.30		5.0	7/27/2009	TR/	EPA TO15
Styrene	<2.5	2.5	<10.6	10.6		5.0	7/27/2009	TR/	EPA TO15
Tetrachloroethene	<2.5	2.5	<17.0	17.0		5.0	7/27/2009	TR/	EPA TO15
Tetrahydrofuran	<10	10	<29.5	29.5		5.0	7/27/2009	TR/	EPA TO15
Toluene	14	2.5	53	9.42		5.0	7/27/2009	TR/	EPA TO15
trans-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/27/2009	TR/	EPA TO15
trans-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/27/2009	TR/	EPA TO15
Trichloroethene	<2.5	2.5	<13.4	13.4		5.0	7/27/2009	TR/	EPA TO15
Trichlorofluoromethane	<2.5	2.5	<14.0	14.0		5.0	7/27/2009	TR/	EPA TO15
Vinyl Acetate	<2.5	2.5	<8.80	8.80		5.0	7/27/2009	TR/	EPA TO15
Vinyl chloride	<2.5	2.5	<6.39	6.39		5.0	7/27/2009	TR/	EPA TO15
Surrogate: 4-Bromofluorobenzene	*83 %*		*Limit 70-130*						

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Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-02 (NSG0861-02 (SV-14))								Sampled: 07/07/09 17:19	
1,1,1-Trichloroethane	<2.5	2.5	<13.6	13.6		5.0	7/29/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<2.5	2.5	<17.2	17.2		5.0	7/29/2009	TR	EPA TO15
1,1,2-Trichloroethane	<2.5	2.5	<13.6	13.6		5.0	7/29/2009	TR	EPA TO15
1,1-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/29/2009	TR	EPA TO15
1,1-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/29/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<9.9	9.9	<73.5	73.5		5.0	7/29/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**1.5**	**2.5**	**7.4**	**12.3**	**J**	**5.0**	**7/29/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<2.5	2.5	<19.2	19.2		5.0	7/29/2009	TR	EPA TO15
1,2-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/29/2009	TR	EPA TO15
1,2-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/29/2009	TR	EPA TO15
1,2-Dichloropropane	<2.5	2.5	<11.6	11.6		5.0	7/29/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	<2.5	2.5	<12.3	12.3		5.0	7/29/2009	TR	EPA TO15
1,3-Butadiene	<2.5	2.5	<5.52	5.52		5.0	7/29/2009	TR	EPA TO15
1,3-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/29/2009	TR	EPA TO15
1,4-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/29/2009	TR	EPA TO15
2,2,4-Trimethylpentane	<2.5	2.5	<11.7	11.7		5.0	7/29/2009	TR	EPA TO15
2-Butanone (MEK)	<5.0	5.0	<14.7	14.7		5.0	7/29/2009	TR	EPA TO15
2-Hexanone	**1.9**	**5.0**	**7.8**	**20.5**	**J**	**5.0**	**7/29/2009**	**TR**	**EPA TO15**
2-Propanol	<9.9	9.9	<24.3	24.3		5.0	7/29/2009	TR	EPA TO15
4-Ethyltoluene	<2.5	2.5	<12.3	12.3		5.0	7/29/2009	TR	EPA TO15
4-Methyl-2-pentanone (MIBK)	**3.5**	**5.0**	**14**	**20.5**	**J**	**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Acetone	<25	25	<59.4	59.4		5.0	7/29/2009	TR	EPA TO15
Allyl Chloride	<2.5	2.5	<7.82	7.82		5.0	7/29/2009	TR	EPA TO15
Benzene	**3.9**	**2.5**	**13**	**7.99**		**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<9.9	9.9	<51.3	51.3		5.0	7/29/2009	TR	EPA TO15
Bromodichloromethane	<2.5	2.5	<16.8	16.8		5.0	7/29/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<2.5	2.5	<10.9	10.9		5.0	7/29/2009	TR	EPA TO15
Bromoform	<2.5	2.5	<25.8	25.8		5.0	7/29/2009	TR	EPA TO15
Bromomethane	<2.5	2.5	<9.71	9.71		5.0	7/29/2009	TR	EPA TO15
Carbon disulfide	**15**	**2.5**	**47**	**7.78**		**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<2.5	2.5	<15.7	15.7		5.0	7/29/2009	TR	EPA TO15
Chlorobenzene	<2.5	2.5	<11.5	11.5		5.0	7/29/2009	TR	EPA TO15
Chloroethane	<2.5	2.5	<6.60	6.60		5.0	7/29/2009	TR	EPA TO15
Chloroform	**3.5**	**2.5**	**17**	**12.2**		**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Chloromethane	**1.7**	**2.5**	**3.5**	**5.16**	**J**	**5.0**	**7/29/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/29/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/29/2009	TR	EPA TO15
Cyclohexane	**20**	**2.5**	**69**	**8.61**		**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Dibromochloromethane	<2.5	2.5	<21.3	21.3		5.0	7/29/2009	TR	EPA TO15
Dichlorodifluoromethane	<2.5	2.5	<12.4	12.4		5.0	7/29/2009	TR	EPA TO15
Dichlorotetrafluoroethane(F-114)	<2.5	2.5	<17.5	17.5		5.0	7/29/2009	TR	EPA TO15
Ethyl Acetate	<2.5	2.5	<9.01	9.01		5.0	7/29/2009	TR	EPA TO15
Ethylbenzene	**2.0**	**2.5**	**8.7**	**10.9**	**J**	**5.0**	**7/29/2009**	**TR**	**EPA TO15**
Freon 113	<2.5	2.5	<19.2	19.2		5.0	7/29/2009	TR	EPA TO15
Heptane	**7.6**	**2.5**	**31**	**10.2**		**5.0**	**7/29/2009**	**TR**	**EPA TO15**

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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-02 (NSG0861-02 (SV-14)) - cont.								Sampled: 07/07/09 17:19	
Hexachlorobutadiene	<5.0	5.0	<53.3	53.3		5.0	7/29/2009	TR	EPA TO15
Hexane	10	2.5	35	8.81		5.0	7/29/2009	TR	EPA TO15
m,p-Xylenes	6.8	5.0	30	21.7		5.0	7/29/2009	TR	EPA TO15
Methylene Chloride	<2.5	2.5	<8.68	8.68		5.0	7/29/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<5.0	5.0	<18.0	18.0		5.0	7/29/2009	TR	EPA TO15
o-Xylene	3.9	2.5	17	10.9		5.0	7/29/2009	TR	EPA TO15
Propene	28	2.5	48	4.30		5.0	7/29/2009	TR	EPA TO15
Styrene	<2.5	2.5	<10.6	10.6		5.0	7/29/2009	TR	EPA TO15
Tetrachloroethene	<2.5	2.5	<17.0	17.0		5.0	7/29/2009	TR	EPA TO15
Tetrahydrofuran	<9.9	9.9	<29.2	29.2		5.0	7/29/2009	TR	EPA TO15
Toluene	10	2.5	38	9.42		5.0	7/29/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/29/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/29/2009	TR	EPA TO15
Trichloroethene	<2.5	2.5	<13.4	13.4		5.0	7/29/2009	TR	EPA TO15
Trichlorofluoromethane	<2.5	2.5	<14.0	14.0		5.0	7/29/2009	TR	EPA TO15
Vinyl Acetate	<2.5	2.5	<8.80	8.80		5.0	7/29/2009	TR	EPA TO15
Vinyl chloride	<2.5	2.5	<6.39	6.39		5.0	7/29/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*93 %*		*Limit 70-130*						

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Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-03 (NSG0861-03 (SV-15))									**Sampled: 07/07/09 17:24**
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/30/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	7/30/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	7/30/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**0.81**	**0.50**	**4.0**	**2.46**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	7/30/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/30/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/30/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	7/30/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	**0.20**	**0.50**	**0.98**	**2.46**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
1,3-Butadiene	<0.50	0.50	<1.10	1.10		1.0	7/30/2009	TR	EPA TO15
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/30/2009	TR	EPA TO15
1,4-Dichlorobenzene	**0.33**	**0.50**	**2.0**	**3.01**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34		1.0	7/30/2009	TR	EPA TO15
2-Butanone (MEK)	**3.0**	**1.0**	**8.9**	**2.95**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
2-Hexanone	**0.15**	**1.0**	**0.61**	**4.10**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
2-Propanol	<2.0	2.0	<4.92	4.92		1.0	7/30/2009	TR	EPA TO15
4-Ethyltoluene	**0.26**	**0.50**	**1.3**	**2.46**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
4-Methyl-2-pentanone (MIBK)	<1.0	1.0	<4.10	4.10		1.0	7/30/2009	TR	EPA TO15
Acetone	**24**	**5.0**	**57**	**11.9**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	7/30/2009	TR	EPA TO15
Benzene	**0.34**	**0.50**	**1.1**	**1.60**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	7/30/2009	TR	EPA TO15
Bromodichloromethane	<0.50	0.50	<3.35	3.35		1.0	7/30/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	7/30/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	7/30/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	7/30/2009	TR	EPA TO15
Carbon disulfide	**1.0**	**0.50**	**3.1**	**1.56**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	7/30/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	7/30/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	7/30/2009	TR	EPA TO15
Chloroform	**2.6**	**0.50**	**13**	**2.44**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Chloromethane	**0.46**	**0.50**	**0.95**	**1.03**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/30/2009	TR	EPA TO15
Cyclohexane	<0.50	0.50	<1.72	1.72		1.0	7/30/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	7/30/2009	TR	EPA TO15
Dichlorodifluoromethane	<0.50	0.50	<2.47	2.47		1.0	7/30/2009	TR	EPA TO15
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	7/30/2009	TR	EPA TO15
Ethyl Acetate	<0.50	0.50	<1.80	1.80		1.0	7/30/2009	TR	EPA TO15
Ethylbenzene	**0.95**	**0.50**	**4.1**	**2.17**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	7/30/2009	TR	EPA TO15
Heptane	<0.50	0.50	<2.05	2.05		1.0	7/30/2009	TR	EPA TO15

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Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

Volatile Organic Compounds by EPA TO-15

Sample ID: PSG0612-03 (NSG0861-03 (SV-15)) - cont. — **Sampled: 07/07/09 17:24**

	ppbv Result	ppbv PQL	ug/m3 Result	ug/m3 PQL	Data Qualifiers	Dilution	Date Analyzed	Analyst	Method
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	7/30/2009	TR	EPA TO15
Hexane	0.36	0.50	1.3	1.76	J	1.0	7/30/2009	TR	EPA TO15
m,p-Xylenes	3.5	1.0	15	4.34		1.0	7/30/2009	TR	EPA TO15
Methylene Chloride	<0.50	0.50	<1.74	1.74		1.0	7/30/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	0.17	1.0	0.61	3.61	J	1.0	7/30/2009	TR	EPA TO15
o-Xylene	1.2	0.50	5.2	2.17		1.0	7/30/2009	TR	EPA TO15
Propene	<0.50	0.50	<0.861	0.861		1.0	7/30/2009	TR	EPA TO15
Styrene	0.24	0.50	1.0	2.13	J	1.0	7/30/2009	TR	EPA TO15
Tetrachloroethene	<0.50	0.50	<3.39	3.39		1.0	7/30/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	7/30/2009	TR	EPA TO15
Toluene	3.1	0.50	12	1.88		1.0	7/30/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/30/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	7/30/2009	TR	EPA TO15
Trichlorofluoromethane	0.59	0.50	3.3	2.81		1.0	7/30/2009	TR	EPA TO15
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	7/30/2009	TR	EPA TO15
Vinyl chloride	<0.50	0.50	<1.28	1.28		1.0	7/30/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*94 %*		*Limit 70-130*						

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Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

Volatile Organic Compounds by EPA TO-15

Sample ID: PSG0612-04 (NSG0861-04 (SV-16)) — Sampled: 07/07/09 16:40

	ppbv Result	ppbv PQL	ug/m3 Result	ug/m3 PQL	Data Qualifiers	Dilution	Date Analyzed	Analyst	Method
1,1,1-Trichloroethane	<2.5	2.5	<13.6	13.6		5.0	7/30/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<2.5	2.5	<17.2	17.2		5.0	7/30/2009	TR	EPA TO15
1,1,2-Trichloroethane	<2.5	2.5	<13.6	13.6		5.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/30/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<10	10	<74.2	74.2		5.0	7/30/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**1.1**	**2.5**	**5.4**	**12.3**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<2.5	2.5	<19.2	19.2		5.0	7/30/2009	TR	EPA TO15
1,2-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/30/2009	TR	EPA TO15
1,2-Dichloroethane	<2.5	2.5	<10.1	10.1		5.0	7/30/2009	TR	EPA TO15
1,2-Dichloropropane	<2.5	2.5	<11.6	11.6		5.0	7/30/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	<2.5	2.5	<12.3	12.3		5.0	7/30/2009	TR	EPA TO15
1,3-Butadiene	<2.5	2.5	<5.52	5.52		5.0	7/30/2009	TR	EPA TO15
1,3-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/30/2009	TR	EPA TO15
1,4-Dichlorobenzene	<2.5	2.5	<15.0	15.0		5.0	7/30/2009	TR	EPA TO15
2,2,4-Trimethylpentane	<2.5	2.5	<11.7	11.7		5.0	7/30/2009	TR	EPA TO15
2-Butanone (MEK)	**3.5**	**5.0**	**10**	**14.7**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
2-Hexanone	<5.0	5.0	<20.5	20.5		5.0	7/30/2009	TR	EPA TO15
2-Propanol	<10	10	<24.6	24.6		5.0	7/30/2009	TR	EPA TO15
4-Ethyltoluene	<2.5	2.5	<12.3	12.3		5.0	7/30/2009	TR	EPA TO15
4-Methyl-2-pentanone (MIBK)	**2.2**	**5.0**	**9.0**	**20.5**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Acetone	**22**	**25**	**52**	**59.4**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Allyl Chloride	<2.5	2.5	<7.82	7.82		5.0	7/30/2009	TR	EPA TO15
Benzene	**2.5**	**2.5**	**8.0**	**7.99**		**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<10	10	<51.8	51.8		5.0	7/30/2009	TR	EPA TO15
Bromodichloromethane	<2.5	2.5	<16.8	16.8		5.0	7/30/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<2.5	2.5	<10.9	10.9		5.0	7/30/2009	TR	EPA TO15
Bromoform	<2.5	2.5	<25.8	25.8		5.0	7/30/2009	TR	EPA TO15
Bromomethane	<2.5	2.5	<9.71	9.71		5.0	7/30/2009	TR	EPA TO15
Carbon disulfide	**8.1**	**2.5**	**25**	**7.78**		**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<2.5	2.5	<15.7	15.7		5.0	7/30/2009	TR	EPA TO15
Chlorobenzene	<2.5	2.5	<11.5	11.5		5.0	7/30/2009	TR	EPA TO15
Chloroethane	<2.5	2.5	<6.60	6.60		5.0	7/30/2009	TR	EPA TO15
Chloroform	<2.5	2.5	<12.2	12.2		5.0	7/30/2009	TR	EPA TO15
Chloromethane	<2.5	2.5	<5.16	5.16		5.0	7/30/2009	TR	EPA TO15
cis-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/30/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/30/2009	TR	EPA TO15
Cyclohexane	**2.2**	**2.5**	**7.6**	**8.61**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Dibromochloromethane	<2.5	2.5	<21.3	21.3		5.0	7/30/2009	TR	EPA TO15
Dichlorodifluoromethane	<2.5	2.5	<12.4	12.4		5.0	7/30/2009	TR	EPA TO15
Dichlorotetrafluoroethane(F-114)	<2.5	2.5	<17.5	17.5		5.0	7/30/2009	TR	EPA TO15
Ethyl Acetate	<2.5	2.5	<9.01	9.01		5.0	7/30/2009	TR	EPA TO15
Ethylbenzene	**1.4**	**2.5**	**6.1**	**10.9**	**J**	**5.0**	**7/30/2009**	**TR**	**EPA TO15**
Freon 113	<2.5	2.5	<19.2	19.2		5.0	7/30/2009	TR	EPA TO15
Heptane	<2.5	2.5	<10.2	10.2		5.0	7/30/2009	TR	EPA TO15

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Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-04 (NSG0861-04 (SV-16)) - cont.									**Sampled: 07/07/09 16:40**
Hexachlorobutadiene	<5.0	5.0	<53.3	53.3		5.0	7/30/2009	TR	EPA TO15
Hexane	3.2	2.5	11	8.81		5.0	7/30/2009	TR	EPA TO15
m,p-Xylenes	4.1	5.0	18	21.7	J	5.0	7/30/2009	TR	EPA TO15
Methylene Chloride	<2.5	2.5	<8.68	8.68		5.0	7/30/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<5.0	5.0	<18.0	18.0		5.0	7/30/2009	TR	EPA TO15
o-Xylene	2.0	2.5	8.7	10.9	J	5.0	7/30/2009	TR	EPA TO15
Propene	95	2.5	160	4.30		5.0	7/30/2009	TR	EPA TO15
Styrene	<2.5	2.5	<10.6	10.6		5.0	7/30/2009	TR	EPA TO15
Tetrachloroethene	<2.5	2.5	<17.0	17.0		5.0	7/30/2009	TR	EPA TO15
Tetrahydrofuran	<10	10	<29.5	29.5		5.0	7/30/2009	TR	EPA TO15
Toluene	5.7	2.5	22	9.42		5.0	7/30/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<2.5	2.5	<9.91	9.91		5.0	7/30/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<2.5	2.5	<11.3	11.3		5.0	7/30/2009	TR	EPA TO15
Trichloroethene	<2.5	2.5	<13.4	13.4		5.0	7/30/2009	TR	EPA TO15
Trichlorofluoromethane	<2.5	2.5	<14.0	14.0		5.0	7/30/2009	TR	EPA TO15
Vinyl Acetate	1.7	2.5	6.0	8.80	J	5.0	7/30/2009	TR	EPA TO15
Vinyl chloride	<2.5	2.5	<6.39	6.39		5.0	7/30/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*100 %*		*Limit 70-130*						

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Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

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	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-05 (NSG0861-05 (SV-17))									**Sampled: 07/07/09 17:33**
Acetone	45	25	110	59.4		5.0	7/30/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*86 %*		*Limit 70-130*						
Sample ID: PSG0612-05RE1 (NSG0861-05 (SV-17))									**Sampled: 07/07/09 17:33**
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/30/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	7/30/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/30/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	7/30/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**3.5**	**0.50**	**17**	**2.46**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	7/30/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/30/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/30/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	7/30/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	**0.75**	**0.50**	**3.7**	**2.46**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
1,3-Butadiene	<0.50	0.50	<1.10	1.10		1.0	7/30/2009	TR	EPA TO15
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/30/2009	TR	EPA TO15
1,4-Dichlorobenzene	**0.50**	**0.50**	**3.0**	**3.01**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34	C, L	1.0	7/30/2009	TR	EPA TO15
2-Butanone (MEK)	**12**	**1.0**	**35**	**2.95**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
2-Propanol	<2.0	2.0	<4.92	4.92		1.0	7/30/2009	TR	EPA TO15
4-Ethyltoluene	**1.2**	**0.50**	**5.9**	**2.46**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	7/30/2009	TR	EPA TO15
Benzene	**1.1**	**0.50**	**3.5**	**1.60**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	7/30/2009	TR	EPA TO15
Bromodichloromethane	**0.41**	**0.50**	**2.8**	**3.35**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	7/30/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	7/30/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	7/30/2009	TR	EPA TO15
Carbon disulfide	**4.0**	**0.50**	**13**	**1.56**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	7/30/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	7/30/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	7/30/2009	TR	EPA TO15
Chloroform	**1.7**	**0.50**	**8.3**	**2.44**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Chloromethane	<0.50	0.50	<1.03	1.03		1.0	7/30/2009	TR	EPA TO15
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/30/2009	TR	EPA TO15
Cyclohexane	<0.50	0.50	<1.72	1.72		1.0	7/30/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	7/30/2009	TR	EPA TO15
Dichlorodifluoromethane	<0.50	0.50	<2.47	2.47		1.0	7/30/2009	TR	EPA TO15
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	7/30/2009	TR	EPA TO15
Ethyl Acetate	**0.38**	**0.50**	**1.4**	**1.80**	**J**	**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Ethylbenzene	**1.7**	**0.50**	**7.4**	**2.17**		**1.0**	**7/30/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	7/30/2009	TR	EPA TO15

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Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-05RE1 (NSG0861-05 (SV-17)) - cont.								Sampled: 07/07/09 17:33	
Heptane	0.95	0.50	3.9	2.05		1.0	7/30/2009	TR	EPA TO15
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	7/30/2009	TR	EPA TO15
Hexane	1.6	0.50	5.6	1.76		1.0	7/30/2009	TR	EPA TO15
m,p-Xylenes	6.4	1.0	28	4.34		1.0	7/30/2009	TR	EPA TO15
Methylene Chloride	<0.50	0.50	<1.74	1.74		1.0	7/30/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	7/30/2009	TR	EPA TO15
o-Xylene	2.6	0.50	11	2.17		1.0	7/30/2009	TR	EPA TO15
Propene	0.57	0.50	0.98	0.861		1.0	7/30/2009	TR	EPA TO15
Styrene	0.34	0.50	1.5	2.13	J	1.0	7/30/2009	TR	EPA TO15
Tetrachloroethene	5.1	0.50	35	3.39		1.0	7/30/2009	TR	EPA TO15
Tetrahydrofuran	2.2	2.0	6.5	5.90		1.0	7/30/2009	TR	EPA TO15
Toluene	7.0	0.50	26	1.88		1.0	7/30/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/30/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/30/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	7/30/2009	TR	EPA TO15
Trichlorofluoromethane	0.70	0.50	3.9	2.81		1.0	7/30/2009	TR	EPA TO15
Vinyl Acetate	0.19	0.50	0.67	1.76	J	1.0	7/30/2009	TR	EPA TO15
Vinyl chloride	<0.50	0.50	<1.28	1.28		1.0	7/30/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*99 %*		*Limit 70-130*						
Sample ID: PSG0612-05RE2 (NSG0861-05 (SV-17))								Sampled: 07/07/09 17:33	
2-Hexanone	1.0	1.0	4.1	4.10		1.0	8/3/2009	TR	EPA TO15
4-Methyl-2-pentanone (MIBK)	0.78	1.0	3.2	4.10	J	1.0	8/3/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*88 %*		*Limit 70-130*						

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Volatile Organic Compounds by EPA TO-15

Sample ID: PSG0612-06 (NSG0861-06 (SV-18)) — Sampled: 07/07/09 17:36

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
1,1,1-Trichloroethane	11	0.50	60	2.73		1.0	8/4/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	8/4/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/4/2009	TR	EPA TO15
1,1-Dichloroethane	0.32	0.50	1.3	2.02	J	1.0	8/4/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/4/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	8/4/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	1.7	0.50	8.4	2.46		1.0	8/4/2009	TR	EPA TO15
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	8/4/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/4/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/4/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	8/4/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	0.35	0.50	1.7	2.46	J	1.0	8/4/2009	TR	EPA TO15
1,3-Butadiene	<0.50	0.50	<1.10	1.10		1.0	8/4/2009	TR	EPA TO15
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/4/2009	TR	EPA TO15
1,4-Dichlorobenzene	0.53	0.50	3.2	3.01		1.0	8/4/2009	TR	EPA TO15
2,2,4-Trimethylpentane	0.60	0.50	2.8	2.34		1.0	8/4/2009	TR	EPA TO15
2-Butanone (MEK)	2.4	1.0	7.1	2.95	J	1.0	8/4/2009	TR	EPA TO15
2-Hexanone	0.88	1.0	3.6	4.10	J	1.0	8/4/2009	TR	EPA TO15
2-Propanol	1.1	2.0	2.7	4.92	J	1.0	8/4/2009	TR	EPA TO15
4-Ethyltoluene	0.69	0.50	3.4	2.46		1.0	8/4/2009	TR	EPA TO15
4-Methyl-2-pentanone (MIBK)	0.81	1.0	3.3	4.10	J	1.0	8/4/2009	TR	EPA TO15
Acetone	28	5.0	67	11.9		1.0	8/4/2009	TR	EPA TO15
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	8/4/2009	TR	EPA TO15
Benzene	0.84	0.50	2.7	1.60		1.0	8/4/2009	TR	EPA TO15
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	8/4/2009	TR	EPA TO15
Bromodichloromethane	0.30	0.50	2.0	3.35	J	1.0	8/4/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	8/4/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	8/4/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	8/4/2009	TR	EPA TO15
Carbon disulfide	3.7	0.50	12	1.56		1.0	8/4/2009	TR	EPA TO15
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	8/4/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	8/4/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	8/4/2009	TR	EPA TO15
Chloroform	0.66	0.50	3.2	2.44		1.0	8/4/2009	TR	EPA TO15
Chloromethane	<0.50	0.50	<1.03	1.03		1.0	8/4/2009	TR	EPA TO15
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/4/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/4/2009	TR	EPA TO15
Cyclohexane	0.54	0.50	1.9	1.72		1.0	8/4/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	8/4/2009	TR	EPA TO15
Dichlorodifluoromethane	0.78	0.50	3.9	2.47		1.0	8/4/2009	TR	EPA TO15
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	8/4/2009	TR	EPA TO15
Ethyl Acetate	<0.50	0.50	<1.80	1.80		1.0	8/4/2009	TR	EPA TO15
Ethylbenzene	0.95	0.50	4.1	2.17		1.0	8/4/2009	TR	EPA TO15
Freon 113	<0.50	0.50	<3.83	3.83		1.0	8/4/2009	TR	EPA TO15
Heptane	1.1	0.50	4.5	2.05	J	1.0	8/4/2009	TR	EPA TO15

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	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-06 (NSG0861-06 (SV-18)) - cont.									**Sampled: 07/07/09 17:36**
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	8/4/2009	TR	EPA TO15
Hexane	1.1	0.50	3.9	1.76	J	1.0	8/4/2009	TR	EPA TO15
m,p-Xylenes	3.7	1.0	16	4.34		1.0	8/4/2009	TR	EPA TO15
Methylene Chloride	0.16	0.50	0.56	1.74	J	1.0	8/4/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	8/4/2009	TR	EPA TO15
o-Xylene	1.5	0.50	6.5	2.17		1.0	8/4/2009	TR	EPA TO15
Propene	1.2	0.50	2.1	0.861	J	1.0	8/4/2009	TR	EPA TO15
Styrene	0.30	0.50	1.3	2.13	J	1.0	8/4/2009	TR	EPA TO15
Tetrachloroethene	23	0.50	160	3.39		1.0	8/4/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	8/4/2009	TR	EPA TO15
Toluene	4.5	0.50	17	1.88		1.0	8/4/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/4/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/4/2009	TR	EPA TO15
Trichloroethene	0.28	0.50	1.5	2.69	J	1.0	8/4/2009	TR	EPA TO15
Trichlorofluoromethane	0.35	0.50	2.0	2.81	J	1.0	8/4/2009	TR	EPA TO15
Vinyl Acetate	0.35	0.50	1.2	1.76	J	1.0	8/4/2009	TR	EPA TO15
Vinyl chloride < 0.5	~~0.25~~	0.50	<1.28 ~~0.64~~	1.28	U	1.0	8/4/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*101 %*		*Limit 70-130*						

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	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-07 (NSG0861-07 (SV-19))									**Sampled: 07/07/09 17:29**
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/31/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	7/31/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/31/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/31/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	7/31/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**1.0**	**0.50**	**4.9**	**2.46**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	7/31/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/31/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/31/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	7/31/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	**0.22**	**0.50**	**1.1**	**2.46**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
1,3-Butadiene	**0.21**	**0.50**	**0.46**	**1.10**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/31/2009	TR	EPA TO15
1,4-Dichlorobenzene	**0.57**	**0.50**	**3.4**	**3.01**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34	C, L	1.0	7/31/2009	TR	EPA TO15
2-Butanone (MEK)	**4.3**	**1.0**	**13**	**2.95**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
2-Hexanone	**0.29**	**1.0**	**1.2**	**4.10**	**C, L, J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
2-Propanol	<2.0	2.0	<4.92	4.92		1.0	7/31/2009	TR	EPA TO15
4-Ethyltoluene	**0.55**	**0.50**	**2.7**	**2.46**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
4-Methyl-2-pentanone (MIBK)	<1.0	1.0	<4.10	4.10	C, L	1.0	7/31/2009	TR	EPA TO15
Acetone	**29**	**5.0**	**69**	**11.9**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	7/31/2009	TR	EPA TO15
Benzene	**0.39**	**0.50**	**1.3**	**1.60**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	7/31/2009	TR	EPA TO15
Bromodichloromethane	<0.50	0.50	<3.35	3.35		1.0	7/31/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	7/31/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	7/31/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	7/31/2009	TR	EPA TO15
Carbon disulfide	**5.0**	**0.50**	**16**	**1.56**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	7/31/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	7/31/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	7/31/2009	TR	EPA TO15
Chloroform	<0.50	0.50	<2.44	2.44		1.0	7/31/2009	TR	EPA TO15
Chloromethane	**0.35**	**0.50**	**0.72**	**1.03**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/31/2009	TR	EPA TO15
Cyclohexane	<0.50	0.50	<1.72	1.72		1.0	7/31/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	7/31/2009	TR	EPA TO15
Dichlorodifluoromethane	**0.24**	**0.50**	**1.2**	**2.47**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	7/31/2009	TR	EPA TO15
Ethyl Acetate	<0.50	0.50	<1.80	1.80		1.0	7/31/2009	TR	EPA TO15
Ethylbenzene	**1.1**	**0.50**	**4.8**	**2.17**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	7/31/2009	TR	EPA TO15
Heptane	<0.50	0.50	<2.05	2.05		1.0	7/31/2009	TR	EPA TO15

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-07 (NSG0861-07 (SV-19)) - cont.								**Sampled: 07/07/09 17:29**	
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	7/31/2009	TR	EPA TO15
Hexane	**0.22**	**0.50**	**0.78**	**1.76**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
m,p-Xylenes	**3.6**	**1.0**	**16**	**4.34**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Methylene Chloride	<0.50	0.50	<1.74	1.74		1.0	7/31/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	**0.18**	**1.0**	**0.65**	**3.61**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
o-Xylene	**1.4**	**0.50**	**6.1**	**2.17**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Propene	<0.50	0.50	<0.861	0.861		1.0	7/31/2009	TR	EPA TO15
Styrene	**0.29**	**0.50**	**1.2**	**2.13**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Tetrachloroethene	**4.1**	**0.50**	**28**	**3.39**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	7/31/2009	TR	EPA TO15
Toluene	**3.7**	**0.50**	**14**	**1.88**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/31/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	7/31/2009	TR	EPA TO15
Trichlorofluoromethane	**0.65**	**0.50**	**3.7**	**2.81**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	7/31/2009	TR	EPA TO15
Vinyl chloride	<0.50	0.50	<1.28	1.28		1.0	7/31/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*89 %*		*Limit 70-130*						

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189 Phoenix, AZ 85040 * (602) 437-3340 * Fax (602) 454-9303

TestAmerica Nashville	Work Order: PSG0612	Received:	07/10/09
2960 Foster Creighton Drive		Reported:	08/05/09 17:06
Nashville, TN 37204	Project: N_ExxonMobil Buffalo		
Gail Lage	Project Number: Former Exxon Buffalo Terminal		

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-08 (NSG0861-08 (Ambient Air 1))									**Sampled: 07/07/09 16:41**
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/31/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	7/31/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	7/31/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/31/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	7/31/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**0.59**	**0.50**	**2.9**	**2.46**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	7/31/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/31/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	7/31/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	7/31/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	<0.50	0.50	<2.46	2.46		1.0	7/31/2009	TR	EPA TO15
1,3-Butadiene	**0.23**	**0.50**	**0.51**	**1.10**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/31/2009	TR	EPA TO15
1,4-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	7/31/2009	TR	EPA TO15
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34	C, L	1.0	7/31/2009	TR	EPA TO15
2-Butanone (MEK)	**1.6**	**1.0**	**4.7**	**2.95**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
2-Hexanone	**0.35**	**1.0**	**1.4**	**4.10**	**C, L, J** J	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
2-Propanol	<2.0	2.0	<4.92	4.92		1.0	7/31/2009	TR	EPA TO15
4-Ethyltoluene	**0.35**	**0.50**	**1.7**	**2.46**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
4-Methyl-2-pentanone (MIBK)	<1.0	1.0	<4.10	4.10	C, L	1.0	7/31/2009	TR	EPA TO15
Acetone	**21**	**5.0**	**50**	**11.9**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	7/31/2009	TR	EPA TO15
Benzene	**0.42**	**0.50**	**1.3**	**1.60**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	7/31/2009	TR	EPA TO15
Bromodichloromethane	<0.50	0.50	<3.35	3.35		1.0	7/31/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	7/31/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	7/31/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	7/31/2009	TR	EPA TO15
Carbon disulfide	**0.50**	**0.50**	**1.6**	**1.56**		**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	7/31/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	7/31/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	7/31/2009	TR	EPA TO15
Chloroform	<0.50	0.50	<2.44	2.44		1.0	7/31/2009	TR	EPA TO15
Chloromethane	**0.51**	**0.50**	**1.1**	**1.03**	NJ	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/31/2009	TR	EPA TO15
Cyclohexane	<0.50	0.50	<1.72	1.72		1.0	7/31/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	7/31/2009	TR	EPA TO15
Dichlorodifluoromethane	**0.17**	**0.50**	**0.84**	**2.47**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	7/31/2009	TR	EPA TO15
Ethyl Acetate	**0.24**	**0.50**	**0.87**	**1.80**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Ethylbenzene	**0.39**	**0.50**	**1.7**	**2.17**	**J**	**1.0**	**7/31/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	7/31/2009	TR	EPA TO15
Heptane	<0.50	0.50	<2.05	2.05		1.0	7/31/2009	TR	EPA TO15

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THE LEADER IN ENVIRONMENTAL TESTING
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TestAmerica Nashville	Work Order:	PSG0612	Received: 07/10/09
2960 Foster Creighton Drive			Reported: 08/05/09 17:06
Nashville, TN 37204	Project:	N_ExxonMobil Buffalo	
Gail Lage	Project Number:	Former Exxon Buffalo Terminal	

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-08 (NSG0861-08 (Ambient Air 1)) - cont.									**Sampled: 07/07/09 16:41**
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	7/31/2009	TR	EPA TO15
Hexane	0.50	0.50	1.8	1.76		1.0	7/31/2009	TR	EPA TO15
m,p-Xylenes	1.3	1.0	5.6	4.34		1.0	7/31/2009	TR	EPA TO15
Methylene Chloride	<0.50	0.50	<1.74	1.74		1.0	7/31/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	7/31/2009	TR	EPA TO15
o-Xylene	0.50	0.50	2.2	2.17		1.0	7/31/2009	TR	EPA TO15
Propene	<0.50	0.50	<0.861	0.861		1.0	7/31/2009	TR	EPA TO15
Styrene	0.25	0.50	1.1	2.13	J	1.0	7/31/2009	TR	EPA TO15
Tetrachloroethene	<0.50	0.50	<3.39	3.39		1.0	7/31/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	7/31/2009	TR	EPA TO15
Toluene	1.9	0.50	7.2	1.88		1.0	7/31/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	7/31/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	7/31/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	7/31/2009	TR	EPA TO15
Trichlorofluoromethane	0.27	0.50	1.5	2.81	J	1.0	7/31/2009	TR	EPA TO15
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	7/31/2009	TR	EPA TO15
Vinyl chloride	<0.50	0.50	<1.28	1.28		1.0	7/31/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*105 %*		*Limit 70-130*						

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THE LEADER IN ENVIRONMENTAL TESTING
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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

Volatile Organic Compounds by EPA TO-15

Sample ID: PSG0612-09 (NSG0861-09 (SV-13)) — Sampled: 07/08/09 14:58

	ppbv Result	ppbv PQL	ug/m3 Result	ug/m3 PQL	Data Qualifiers	Dilution	Date Analyzed	Analyst	Method
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/3/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	8/3/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/3/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/3/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	< 0.50 ~~0.29~~	**0.50**	< 2.46 ~~1.4~~	2.46	U R	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	8/3/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	8/3/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	<0.50	0.50	<2.46	2.46		1.0	8/3/2009	TR	EPA TO15
1,3-Butadiene	<0.50	0.50	<1.10	1.10		1.0	8/3/2009	TR	EPA TO15
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,4-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34		1.0	8/3/2009	TR	EPA TO15
2-Butanone (MEK)	**3.5**	**1.0**	**10**	2.95		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Hexanone	< 1.0 ~~0.18~~	**1.0**	< 4.10 ~~0.74~~	4.10	U R	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Propanol	**1.1**	**2.0**	**2.7**	4.92	J	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
4-Ethyltoluene	<0.50	0.50	<2.46	2.46		1.0	8/3/2009	TR	EPA TO15
4-Methyl-2-pentanone (MIBK)	<1.0	1.0	<4.10	4.10		1.0	8/3/2009	TR	EPA TO15
Acetone	**32**	**5.0**	**76**	11.9		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	8/3/2009	TR	EPA TO15
Benzene	**0.31**	**0.50**	**0.99**	**1.60**	J	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	8/3/2009	TR	EPA TO15
Bromodichloromethane	<0.50	0.50	<3.35	3.35		1.0	8/3/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	8/3/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	8/3/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	8/3/2009	TR	EPA TO15
Carbon disulfide	**0.17**	**0.50**	**0.53**	**1.56**	J	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	8/3/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	8/3/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	8/3/2009	TR	EPA TO15
Chloroform	<0.50	0.50	<2.44	2.44		1.0	8/3/2009	TR	EPA TO15
Chloromethane	**0.51**	**0.50**	**1.1**	**1.03**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Cyclohexane	<0.50	0.50	<1.72	1.72		1.0	8/3/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	8/3/2009	TR	EPA TO15
Dichlorodifluoromethane	**0.71**	**0.50**	**3.5**	**2.47**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	8/3/2009	TR	EPA TO15
Ethyl Acetate	**0.23**	**0.50**	**0.83**	**1.80**	J	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Ethylbenzene	**0.30**	**0.50**	**1.3**	**2.17**	J	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	8/3/2009	TR	EPA TO15
Heptane	< 0.50 ~~0.45~~	**0.50**	< ~~2.05~~ 1.8	2.05	U R	**1.0**	**8/3/2009**	**TR**	**EPA TO15**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4625 East Cotton Center Blvd. Ste 189 Phoenix, AZ 85040 * (602) 437-3340 * Fax (602) 454-9303

TestAmerica Nashville	Work Order:	PSG0612	Received: 07/10/09
2960 Foster Creighton Drive			Reported: 08/05/09 17:06
Nashville, TN 37204	Project:	N_ExxonMobil Buffalo	
Gail Lage	Project Number:	Former Exxon Buffalo Terminal	

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-09 (NSG0861-09 (SV-13)) - cont.								**Sampled: 07/08/09 14:58**	
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	8/3/2009	TR	EPA TO15
Hexane	< 0.50 ~~0.19~~	0.50	<1.7 ~~0.67~~	1.76	U J	1.0	8/3/2009	TR	EPA TO15
m,p-Xylenes	0.94	1.0	4.1	4.34	J	1.0	8/3/2009	TR	EPA TO15
Methylene Chloride	0.23	0.50	0.80	1.74	J	1.0	8/3/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	8/3/2009	TR	EPA TO15
o-Xylene	0.31	0.50	1.4	2.17	J	1.0	8/3/2009	TR	EPA TO15
Propene	<0.50	0.50	<0.861	0.861		1.0	8/3/2009	TR	EPA TO15
Styrene	<0.50	0.50	<2.13	2.13		1.0	8/3/2009	TR	EPA TO15
Tetrachloroethene	<0.50	0.50	<3.39	3.39		1.0	8/3/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	8/3/2009	TR	EPA TO15
Toluene	9.6	0.50	36	1.88		1.0	8/3/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	8/3/2009	TR	EPA TO15
Trichlorofluoromethane	0.31	0.50	1.7	2.81	J	1.0	8/3/2009	TR	EPA TO15
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	8/3/2009	TR	EPA TO15
Vinyl chloride	< 0.50 ~~0.16~~	0.50	<1.28 ~~0.41~~	1.28	J U	1.0	8/3/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*100 %*		*Limit 70-130*						

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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-10 (NSG0861-10 (Duplicate))								Sampled: 07/08/09 17:57	
1,1,1-Trichloroethane	**10**	**0.50**	**55**	**2.73**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	8/3/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/3/2009	TR	EPA TO15
1,1-Dichloroethane	**0.28**	**0.50**	**1.1**	**2.02**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**1.4**	**0.50**	**6.9**	**2.46**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	8/3/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	8/3/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	**0.31**	**0.50**	**1.5**	**2.46**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,3-Butadiene	**0.45**	**0.50**	**0.99**	**1.10**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,4-Dichlorobenzene	**0.38**	**0.50**	**2.3**	**3.01**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2,2,4-Trimethylpentane	<0.50	0.50	<2.34	2.34		1.0	8/3/2009	TR	EPA TO15
2-Butanone (MEK)	**4.3**	**1.0**	**13**	**2.95**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Hexanone	**0.69**	**1.0**	**2.8**	**4.10**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Propanol	**2.4**	**2.0**	**5.9**	**4.92**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
4-Ethyltoluene	**0.56**	**0.50**	**2.8**	**2.46**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
4-Methyl-2-pentanone (MIBK)	**0.47**	**1.0**	**1.9**	**4.10**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Acetone	**26**	**5.0**	**62**	**11.9**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	8/3/2009	TR	EPA TO15
Benzene	**0.76**	**0.50**	**2.4**	**1.60**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Benzyl Chloride	<2.0	2.0	<10.4	10.4		1.0	8/3/2009	TR	EPA TO15
Bromodichloromethane	**0.21**	**0.50**	**1.4**	**3.35**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	8/3/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	8/3/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	8/3/2009	TR	EPA TO15
Carbon disulfide	**3.7**	**0.50**	**12**	**1.56**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	8/3/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	8/3/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	8/3/2009	TR	EPA TO15
Chloroform	**0.55**	**0.50**	**2.7**	**2.44**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Chloromethane	<0.50	0.50	<1.03	1.03		1.0	8/3/2009	TR	EPA TO15
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Cyclohexane	<0.50 ~~0.27~~	0.50	<1.72 ~~0.93~~	1.72	J	1.0	8/3/2009	TR	EPA TO15
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	8/3/2009	TR	EPA TO15
Dichlorodifluoromethane	**0.73**	**0.50**	**3.6**	**2.47**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	8/3/2009	TR	EPA TO15
Ethyl Acetate	**0.37**	**0.50**	**1.3**	**1.80**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Ethylbenzene	**1.1**	**0.50**	**4.8**	**2.17**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	8/3/2009	TR	EPA TO15
Heptane	**0.54**	**0.50**	**2.2**	**2.05**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**

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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-10 (NSG0861-10 (Duplicate)) - cont.								Sampled: 07/08/09 17:57	
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	8/3/2009	TR	EPA TO15
Hexane	0.38	0.50	1.3	1.76	J J	1.0	8/3/2009	TR	EPA TO15
m,p-Xylenes	4.1	1.0	18	4.34		1.0	8/3/2009	TR	EPA TO15
Methylene Chloride	0.18	0.50	0.63	1.74	J	1.0	8/3/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	8/3/2009	TR	EPA TO15
o-Xylene	1.5	0.50	6.5	2.17		1.0	8/3/2009	TR	EPA TO15
Propene	0.51	0.50	0.88	0.861	J	1.0	8/3/2009	TR	EPA TO15
Styrene	0.20	0.50	0.85	2.13	J	1.0	8/3/2009	TR	EPA TO15
Tetrachloroethene	16	0.50	110	3.39		1.0	8/3/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	8/3/2009	TR	EPA TO15
Toluene	4.7	0.50	18	1.88		1.0	8/3/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	8/3/2009	TR	EPA TO15
Trichlorofluoromethane	0.33	0.50	1.9	2.81	J	1.0	8/3/2009	TR	EPA TO15
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	8/3/2009	TR	EPA TO15
Vinyl chloride <0.50	~~0.18~~	0.50	<1.28 ~~0.46~~	1.28	U	1.0	8/3/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*86 %*		*Limit 70-130*						

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TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-11 (NSG0861-11 (Ambient Air 2))									**Sampled: 07/08/09 17:37**
1,1,1-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/3/2009	TR	EPA TO15
1,1,2,2-Tetrachloroethane	<0.50	0.50	<3.43	3.43		1.0	8/3/2009	TR	EPA TO15
1,1,2-Trichloroethane	<0.50	0.50	<2.73	2.73		1.0	8/3/2009	TR	EPA TO15
1,1-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/3/2009	TR	EPA TO15
1,1-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trichlorobenzene	<2.0	2.0	<14.8	14.8		1.0	8/3/2009	TR	EPA TO15
1,2,4-Trimethylbenzene	**0.48**	**0.50**	**2.4**	**2.46**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,2-Dibromoethane (EDB)	<0.50	0.50	<3.84	3.84		1.0	8/3/2009	TR	EPA TO15
1,2-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloroethane	<0.50	0.50	<2.02	2.02		1.0	8/3/2009	TR	EPA TO15
1,2-Dichloropropane	<0.50	0.50	<2.31	2.31		1.0	8/3/2009	TR	EPA TO15
1,3,5-Trimethylbenzene	<0.50	0.50	<2.46	2.46		1.0	8/3/2009	TR	EPA TO15
1,3-Butadiene	**0.23**	**0.50**	**0.51**	**1.10**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
1,3-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
1,4-Dichlorobenzene	<0.50	0.50	<3.01	3.01		1.0	8/3/2009	TR	EPA TO15
2,2,4-Trimethylpentane	**0.23**	**0.50**	**1.1**	**2.34**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Butanone (MEK)	**3.3**	**1.0**	**9.7**	**2.95**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Hexanone	**0.43**	**1.0**	**1.8**	**4.10**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
2-Propanol	<2.0	2.0	<4.92	4.92		1.0	8/3/2009	TR	EPA TO15
4-Ethyltoluene	**0.16**	**0.50**	**0.79**	**2.46**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
4-Methyl-2-pentanone (MIBK)	<1.0	1.0	<4.10	4.10		1.0	8/3/2009	TR	EPA TO15
Acetone	**18**	**5.0**	**43**	**11.9**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Allyl Chloride	<0.50	0.50	<1.56	1.56		1.0	8/3/2009	TR	EPA TO15
Benzene	**0.57**	**0.50**	**1.8**	**1.60**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Benzyl Chloride	**0.34**	**2.0**	**1.8**	**10.4**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Bromodichloromethane	<0.50	0.50	<3.35	3.35		1.0	8/3/2009	TR	EPA TO15
Bromoethene(Vinyl Bromide)	<0.50	0.50	<2.19	2.19		1.0	8/3/2009	TR	EPA TO15
Bromoform	<0.50	0.50	<5.17	5.17		1.0	8/3/2009	TR	EPA TO15
Bromomethane	<0.50	0.50	<1.94	1.94		1.0	8/3/2009	TR	EPA TO15
Carbon disulfide	**0.28**	**0.50**	**0.87**	**1.56**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Carbon tetrachloride	<0.50	0.50	<3.15	3.15		1.0	8/3/2009	TR	EPA TO15
Chlorobenzene	<0.50	0.50	<2.30	2.30		1.0	8/3/2009	TR	EPA TO15
Chloroethane	<0.50	0.50	<1.32	1.32		1.0	8/3/2009	TR	EPA TO15
Chloroform	<0.50	0.50	<2.44	2.44		1.0	8/3/2009	TR	EPA TO15
Chloromethane	**0.49**	**0.50**	**1.0**	**1.03**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
cis-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
cis-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Cyclohexane	**0.16**	**0.50**	**0.55**	**1.72**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Dibromochloromethane	<0.50	0.50	<4.26	4.26		1.0	8/3/2009	TR	EPA TO15
Dichlorodifluoromethane	**0.70**	**0.50**	**3.5**	**2.47**		**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Dichlorotetrafluoroethane(F-114)	<0.50	0.50	<3.50	3.50		1.0	8/3/2009	TR	EPA TO15
Ethyl Acetate	<0.50	0.50	<1.80	1.80		1.0	8/3/2009	TR	EPA TO15
Ethylbenzene	**0.39**	**0.50**	**1.7**	**2.17**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**
Freon 113	<0.50	0.50	<3.83	3.83		1.0	8/3/2009	TR	EPA TO15
Heptane	**0.21**	**0.50**	**0.86**	**2.05**	**J**	**1.0**	**8/3/2009**	**TR**	**EPA TO15**

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Nashville, TN 37204
Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/05/09 17:06

	ppbv		ug/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Volatile Organic Compounds by EPA TO-15									
Sample ID: PSG0612-11 (NSG0861-11 (Ambient Air 2)) - cont.								**Sampled: 07/08/09 17:37**	
Hexachlorobutadiene	<1.0	1.0	<10.7	10.7		1.0	8/3/2009	TR	EPA TO15
Hexane	0.24	0.50	0.85	1.76	J	1.0	8/3/2009	TR	EPA TO15
m,p-Xylenes	1.3	1.0	5.6	4.34		1.0	8/3/2009	TR	EPA TO15
Methylene Chloride	0.32	0.50	1.1	1.74	J	1.0	8/3/2009	TR	EPA TO15
Methyl-tert-butyl Ether (MTBE)	<1.0	1.0	<3.61	3.61		1.0	8/3/2009	TR	EPA TO15
o-Xylene	0.47	0.50	2.0	2.17	J	1.0	8/3/2009	TR	EPA TO15
Propene	0.43	0.50	0.74	0.861	J	1.0	8/3/2009	TR	EPA TO15
Styrene	<0.50	0.50	<2.13	2.13		1.0	8/3/2009	TR	EPA TO15
Tetrachloroethene	<0.50	0.50	<3.39	3.39		1.0	8/3/2009	TR	EPA TO15
Tetrahydrofuran	<2.0	2.0	<5.90	5.90		1.0	8/3/2009	TR	EPA TO15
Toluene	1.3	0.50	4.9	1.88		1.0	8/3/2009	TR	EPA TO15
trans-1,2-Dichloroethene	<0.50	0.50	<1.98	1.98		1.0	8/3/2009	TR	EPA TO15
trans-1,3-Dichloropropene	<0.50	0.50	<2.27	2.27		1.0	8/3/2009	TR	EPA TO15
Trichloroethene	<0.50	0.50	<2.69	2.69		1.0	8/3/2009	TR	EPA TO15
Trichlorofluoromethane	0.30	0.50	1.7	2.81	J	1.0	8/3/2009	TR	EPA TO15
Vinyl Acetate	<0.50	0.50	<1.76	1.76		1.0	8/3/2009	TR	EPA TO15
Vinyl chloride	<0.50 ~~0.47~~	0.50	<1.28 ~~0.74~~	1.28	U J	1.0	8/3/2009	TR	EPA TO15
Surrogate: 4-Bromofluorobenzene	*86 %*		*Limit 70-130*						

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Gail Lage

Work Order: PSG0612
Project: N_ExxonMobil Buffalo
Project Number: Former Exxon Buffalo Terminal

Received: 07/10/09
Reported: 08/06/09 11:13

ANALYTICAL REPORT

	ppmv		mg/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Fixed Gases by EPA 3C/ASTM D-1946									
Sample ID: PSG0612-01 (NSG0861-01 (SV-1))								Sampled: 07/07/09 16:48	
Hydrogen	<367.0	367.0	<30.26	30.26		1.0	7/29/2009	ZN	3C/D-1946
Carbon Monoxide	<14.80	14.80	<16.95	16.95		1.0	7/29/2009	ZN	3C/D-1946
Methane	7007	14.68	4600	9.632		1.0	7/29/2009	ZN	3C/D-1946
Carbon Dioxide	2568	14.80	4620	26.64		1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-01RE1 (NSG0861-01 (SV-1))								Sampled: 07/07/09 16:48	
Oxygen	196400	18430	257000	24120	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	768400	18350	880000	21020	B3, RL7	1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-02 (NSG0861-02 (SV-14))								Sampled: 07/07/09 17:19	
Hydrogen	<364.6	364.6	<30.06	30.06		1.0	7/29/2009	ZN	3C/D-1946
Carbon Monoxide	<14.70	14.70	<16.84	16.84		1.0	7/29/2009	ZN	3C/D-1946
Methane	19.55	14.58	12.80	9.566		1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-02RE1 (NSG0861-02 (SV-14))								Sampled: 07/07/09 17:19	
Oxygen	138600	18300	181000	23950	RL7	1.0	8/3/2009	AY	3C/D-1946
Nitrogen	834900	18230	957000	20890	RL7	1.0	8/3/2009	AY	3C/D-1946
Carbon Dioxide	33700	735.0	60700	1323	RL7	1.0	8/3/2009	AY	3C/D-1946
Sample ID: PSG0612-03 (NSG0861-03 (SV-15))								Sampled: 07/07/09 17:24	
Hydrogen	<377.0	377.0	<31.08	31.08		1.0	7/30/2009	AY	3C/D-1946
Carbon Monoxide	<15.20	15.20	<17.41	17.41		1.0	7/30/2009	AY	3C/D-1946
Methane	<15.08	15.08	<9.895	9.895		1.0	7/30/2009	AY	3C/D-1946
Carbon Dioxide	5042	15.20	9080	27.36		1.0	7/30/2009	AY	3C/D-1946
Sample ID: PSG0612-03RE1 (NSG0861-03 (SV-15))								Sampled: 07/07/09 17:24	
Oxygen	191300	18920	250000	24760	RL7	1.0	7/30/2009	AY	3C/D-1946
Nitrogen	784700	18850	899000	21600	RL7	1.0	7/30/2009	AY	3C/D-1946
Sample ID: PSG0612-04 (NSG0861-04 (SV-16))								Sampled: 07/07/09 16:40	
Hydrogen	<386.9	386.9	<31.90	31.90		1.0	7/30/2009	AY	3C/D-1946
Carbon Monoxide	<15.60	15.60	<17.87	17.87		1.0	7/30/2009	AY	3C/D-1946
Methane	321.8	15.48	211.0	10.16		1.0	7/30/2009	AY	3C/D-1946
Sample ID: PSG0612-04RE1 (NSG0861-04 (SV-16))								Sampled: 07/07/09 16:40	
Oxygen	33750	18180	44200	23790	RL7	1.0	8/3/2009	AY	3C/D-1946
Nitrogen	797400	18100	914000	20740	RL7	1.0	8/3/2009	AY	3C/D-1946
Carbon Dioxide	81110	730.0	146000	1314	RL7	1.0	8/3/2009	AY	3C/D-1946
Sample ID: PSG0612-05 (NSG0861-05 (SV-17))								Sampled: 07/07/09 17:33	
Hydrogen	<377.0	377.0	<31.08	31.08		1.0	7/30/2009	AY	3C/D-1946
Carbon Monoxide	<15.20	15.20	<17.41	17.41		1.0	7/30/2009	AY	3C/D-1946
Methane	<15.08	15.08	<9.895	9.895		1.0	7/30/2009	AY	3C/D-1946
Carbon Dioxide	297.4	15.20	535.0	27.36		1.0	7/30/2009	AY	3C/D-1946
Sample ID: PSG0612-05RE1 (NSG0861-05 (SV-17))								Sampled: 07/07/09 17:33	
Oxygen	195500	18920	256000	24760	RL7	1.0	7/30/2009	AY	3C/D-1946
Nitrogen	754700	18850	865000	21600	B3, RL7	1.0	7/30/2009	AY	3C/D-1946

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	ppmv		mg/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Fixed Gases by EPA 3C/ASTM D-1946									
Sample ID: PSG0612-06 (NSG0861-06 (SV-18))									Sampled: 07/07/09 17:36
Hydrogen	<367.0	367.0	<30.26	30.26		1.0	7/29/2009	ZN	3C/D-1946
Carbon Monoxide	<14.80	14.80	<16.95	16.95		1.0	7/29/2009	ZN	3C/D-1946
Methane	<14.68	14.68	<9.632	9.632		1.0	7/29/2009	ZN	3C/D-1946
Carbon Dioxide	4664	14.80	8400	26.64		1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-06RE1 (NSG0861-06 (SV-18))									Sampled: 07/07/09 17:36
Oxygen	202300	18430	265000	24120	RL7	1.0	8/4/2009	AY	3C/D-1946
Nitrogen	822100	18350	942000	21020	RL7	1.0	8/4/2009	AY	3C/D-1946
Sample ID: PSG0612-07 (NSG0861-07 (SV-19))									Sampled: 07/07/09 17:29
Hydrogen	<386.9	386.9	<31.90	31.90		1.0	7/28/2009	ZN	3C/D-1946
Carbon Monoxide	<15.60	15.60	<17.87	17.87		1.0	7/28/2009	ZN	3C/D-1946
Methane	<15.48	15.48	<10.16	10.16		1.0	7/28/2009	ZN	3C/D-1946
Sample ID: PSG0612-07RE1 (NSG0861-07 (SV-19))									Sampled: 07/07/09 17:29
Oxygen	141900	19420	186000	25420	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	784600	19340	899000	22160	RL7	1.0	7/29/2009	ZN	3C/D-1946
Carbon Dioxide	45540	780.0	82000	1404	RL7	1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-08 (NSG0861-08 (Ambient Air 1))									Sampled: 07/07/09 16:41
Hydrogen	<381.9	381.9	<31.49	31.49		1.0	7/28/2009	ZN	3C/D-1946
Carbon Monoxide	<15.40	15.40	<17.64	17.64		1.0	7/28/2009	ZN	3C/D-1946
Methane	<15.28	15.28	<10.03	10.03		1.0	7/28/2009	ZN	3C/D-1946
Carbon Dioxide	390.4	15.40	703.0	27.72		1.0	7/28/2009	ZN	3C/D-1946
Sample ID: PSG0612-08RE1 (NSG0861-08 (Ambient Air 1))									Sampled: 07/07/09 16:41
Oxygen	194300	19170	254000	25090	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	778000	19100	891000	21880	RL7	1.0	7/29/2009	ZN	3C/D-1946
Sample ID: PSG0612-09 (NSG0861-09 (SV-13))									Sampled: 07/08/09 14:58
Hydrogen	<347.2	347.2	<28.63	28.63		1.0	7/28/2009	ZN	3C/D-1946
Carbon Monoxide	<14.00	14.00	<16.04	16.04		1.0	7/28/2009	ZN	3C/D-1946
Methane	<13.89	13.89	<9.114	9.114		1.0	7/28/2009	ZN	3C/D-1946
Carbon Dioxide	384.0	14.00	691.0	25.20		1.0	7/28/2009	ZN	3C/D-1946
Sample ID: PSG0612-09RE1 (NSG0861-09 (SV-13))									Sampled: 07/08/09 14:58
Oxygen	202300	17430	265000	22810	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	800600	17360	917000	19890	RL7	1.0	7/29/2009	ZN	3C/D-1946

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	ppmv		mg/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Fixed Gases by EPA 3C/ASTM D-1946									
Sample ID: PSG0612-10 (NSG0861-10 (Duplicate))								Sampled: 07/08/09 17:57	
Hydrogen	<379.4	379.4	<31.28	31.28		1.0	7/28/2009	ZN	3C/D-1946
Carbon Monoxide	<15.30	15.30	<17.53	17.53		1.0	7/28/2009	ZN	3C/D-1946
Methane	<15.18	15.18	<9.960	9.960		1.0	7/28/2009	ZN	3C/D-1946
Carbon Dioxide	4452	15.30	8010	27.54		1.0	7/28/2009	ZN	3C/D-1946
Sample ID: PSG0612-10RE1 (NSG0861-10 (Duplicate))								Sampled: 07/08/09 17:57	
Oxygen	187600	19050	246000	24930	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	776600	18970	890000	21740	RL7	1.0	7/29/2009	ZN	3C/D-1946

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	ppmv		mg/m3		Data		Date		
	Result	PQL	Result	PQL	Qualifiers	Dilution	Analyzed	Analyst	Method
Fixed Gases by EPA 3C/ASTM D-1946									
Sample ID: PSG0612-11 (NSG0861-11 (Ambient Air 2))									Sampled: 07/08/09 17:37
Hydrogen	<374.5	374.5	<30.88	30.88		1.0	7/29/2009	ZN	3C/D-1946
Oxygen	192900	18800	252000	24600	RL7	1.0	7/29/2009	ZN	3C/D-1946
Nitrogen	773400	18720	886000	21450	RL7	1.0	7/29/2009	ZN	3C/D-1946
Carbon Monoxide	<15.10	15.10	<17.30	17.30		1.0	7/29/2009	ZN	3C/D-1946
Methane	<14.98	14.98	<9.829	9.829		1.0	7/29/2009	ZN	3C/D-1946
Carbon Dioxide	396.5	15.10	714.0	27.18		1.0	7/29/2009	ZN	3C/D-1946