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October 20, 2011

Mr. Christopher Brown, P.G.
State of Delaware
Department of Natural Resources and Environmental Control
Underground Storage Tank Section
391 Lukens Drive
New Castle, DE 19720-2770

Subject: **Supplemental Vapor Intrusion Investigation Report**
Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware 19703
Facility ID# 3-000712
Project ID# N8811068

Dear Mr. Brown:

Enclosed please find two copies of the Supplemental Vapor Intrusion Investigation Report for the above referenced project.

Kleinfelder appreciates the opportunity to be of assistance on this project. Please do not hesitate to contact us at (410) 850-0404 if you have questions or require additional information.

Sincerely,
Kleinfelder East, Inc

Natalie Morales Hendricks, P.G. (FL #2689)
Senior Environmental Scientist

Mark C Steele
Senior Project Manager

Attachments

SUPPLEMENTAL VAPOR INTRUSION INVESTIGATION REPORT
Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

October 20, 2011

Facility ID# 3-000712
Project ID# N8811068

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SUPPLEMENTAL VAPOR INTRUSION INVESTIGATION REPORT

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
Facility ID# 3-000712
Project ID# N8811068

QUALITY ASSURANCE/QUALITY CONTROL

The following personnel have reviewed this report for accuracy, content and quality of presentation:

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1.0 INTRODUCTION

Kleinfelder East, Inc. (Kleinfelder) has been retained by the State of Delaware, Department of Natural Resources and Environmental Control (DNREC) Tank Management Section (TMS) to perform a supplemental vapor intrusion investigation and human health risk assessment for the former service station referred to as Ron's Discount Energy Mart (Site) located at 2509 Philadelphia Pike in Claymont, Delaware. The DNREC goals for the supplemental vapor intrusion investigation were:

- Assess health hazards that may be associated with petroleum vapor migration into future structures associated with the proposed redevelopment within the boundaries of the Site with respect to temporal variability.

- Assess the potential for volatile organic compounds (VOCs) related to petroleum hydrocarbon releases from the Site to migrate as vapors into off-site residences along Hillside Road, and if appropriate, provide recommendations for vapor mitigation if health-based standards for indoor air are exceeded.

Kleinfelder has completed the supplemental investigation in general accordance with the guidelines of the DNREC-TMS and the DNREC Site Investigation and Restoration Branch (SIRB) March 2007 *Policy Concerning the Investigation, Risk Determination and Remediation for the Vapor Intrusion Pathway*. The activities were completed as proposed in the December 1, 2009 *Proposal for Additional Assessment and Vapor Intrusion Mitigation* and approved by DNREC-TMS on February 15, 2010. The activities completed to meet the DNREC goals included the sampling of soil vapor monitoring points (SVMPs), indoor air sampling of three residences on Hillside Road, mitigation activities at 9 Hillside Road, interim mitigation activities and completion of sub-slab soil vapor sampling at 10 Hillside Road, and preparation of this report.

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2.0 SITE OVERVIEW

2.1 Site Description

Ron's Discount Energy Mart is a former service station (Penny Hill Mobil) located in a commercial area at the intersection of Philadelphia Pike and Riverview Avenue (**Figure 1**). The Site is currently leased and operated as an automotive repair business. The Site consists of a 0.35 acre parcel of land located in a commercial and residential zoned area and is situated at an approximate elevation of 91 feet above mean sea level.

Located on the Site is a 1,521 square foot, one story, cinder block building with slab-on-grade construction which contains one service repair bay and the automotive repair facility, and a canopy. Former underground storage tanks (USTs) were located in the northeast portion of the Site and were removed in 1993. The area in the vicinity of the Site along Philadelphia Pike is slated for redevelopment. At this time, the nature of the redevelopment of the Site and vicinity, if any, is not known.

2.2 Adjacent Land Use

Land use in the vicinity of the Site consists of mixed commercial and residential properties. The area to the east/southeast of the Site consists of single family residential homes with basements along Hillside Road. There is a downward slope of approximately 60 feet in elevation to the east/southeast of the Site down Hillside Road towards the Delaware River (**Figure 1**). To the north of the Site across Riverview Avenue is a restaurant, to the northwest and west of the Site are residential properties, adjacent to the southwest side of the Site is a former hardware store. An area map is provided as **Figure 2**.

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2.3 Previous Site Activities

Based on a review of DNREC - TMS files, the following is a summary of environmental activities performed at the Site from November 1988 through October 2009:

- In November 1988, occupants of several residences along Hillside Road complained of petroleum vapors in their basements. The origin of the vapors was traced to the sanitary sewer line by DNREC-TMS. The vapor source was identified as a petroleum release from the UST system at Ron's Discount Energy Mart (DNREC 2008).

- In response to the detection of vapors, DNREC-TMS assumed control of the Ron's Discount Energy Mart project and extensive investigation and remedial actions were conducted. The investigations have included indoor air surveys using hand held volatile organic carbon (VOC) meters, test pits, geophysical surveys, monitoring well installation, soil and groundwater sampling, and soil vapor surveys.

- In 1988 and 1989, the remedial actions have included redirection of groundwater and mitigation of vapor intrusion into the residences at 10, 11, and 12 Hillside Road. Depth to groundwater in the area of these residences is approximately 4 feet below grade and is at or above the level of the basements.

- The vapor mitigation efforts at 10 Hillside Road were completed in 1989 and included the installation of perforated pipe in a groundwater interceptor trench upslope of the basement. The perforated pipe connects to the sanitary sewer and is designed for the vapors captured in the pipe to passively vent to the atmosphere. Also, cracks in the basement walls and floor were sealed and a trap was installed in the basement floor drain.

- Mitigation at 11 Hillside Road was completed in 1989 and included enclosing the French drain system and sump in the basement, passively venting vapors captured in the piping to the atmosphere, and repairing and sealing the basement floor.

- A subsurface drainage system was installed at 12 Hillside Road in 1989 to mitigate a groundwater seep in the driveway and intercepted groundwater is diverted to the backfill of the sanitary sewer trench below Hillside Road.

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- In August 2005, the injection of oxygen releasing compound (ORC) was completed in the upper section of Hillside Road to enhance biodegradation of the dissolved phase hydrocarbon plume.

- In 2009, the vapor intrusion investigation was divided into three zones; Zone 1 includes the Site (former Ron's Discount Energy facility); Zone 2 includes off-site properties along Hillside Road where average water table elevations are below the basement depths; and Zone 3 includes off-site properties along Hillside Road where average water table depths have the potential to intersect with basements.

- Soil vapor monitoring points (SVMPs) were installed and sampled in May 2009 to approximately 8 feet below grade in Zones 1 and 2 to evaluate the potential for vapor intrusion into indoor air. Site specific target levels (SSTLs) were calculated to compare analytical results obtained from the SVMPs. A review of the analytical results indicated that VOCs were not detected above the SSTLs calculated for Zones 1 and 2 with exception of one sample from a Zone 1 SVMP which indicated the potential for vapor intrusion above DNREC risk levels if a future building was built over the southeast corner of the Site.

- In May through July 2009, indoor air sampling was completed in homes along Hillside Road located in Zone 3. Detected VOCs were below indoor air target levels with exception of samples collected from 9 and 10 Hillside Road.

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3.0 GEOLOGY AND HYDROGEOLOGY

The vapor intrusion investigation was completed in such a manner as to address the variability of subsurface hydrogeology in the area of the Site and off-site study area. The topographic elevation changes and the variable depth to groundwater dictated the methods used in the vapor investigative approach. The geologic and hydrogeologic settings of the area and site specific data are presented in the following paragraphs.

The Site is located on the United States Geological Survey (USGS) Marcus Hook topographic quadrangle map at 39 degrees 47 minutes 33.75 seconds N latitude and 75 degrees 28 minutes 12.05 seconds W longitude (NAD88) at an approximate elevation of 91 feet (NAVD88) in New Castle County, Delaware. The City of Claymont, New Castle County, Delaware is located within the Piedmont Physiographic Province. Based on a review of the Delaware Geological Survey (DGS) *2007 Geologic Map of New Castle County*, the area is underlain by the Wilmington Complex. Subsurface materials in this formation generally consist of crystalline bedrock overlain by fluvial sedimentary deposits.

The subsurface materials encountered during historic subsurface investigation at the Site included interbedded brown silt and silty clay to depths of approximately eight feet below grade with brown to tan sand from eight to 16 feet below grade underlain by clay from approximately 17 to 25 feet below grade. The lower clay unit was not encountered in the off-site monitoring wells with exception of HR-4 which indicates clay from grade to six feet, sand from six feet to 14 feet, and clay from 14 to the termination depth of the boring at 16 feet. The surficial groundwater at the Site appears to exist as a partially confined aquifer within the unconsolidated sedimentary sandy material and appears to be bounded above by silty clay and below by clay. The off-site aquifer thickness is unknown as the lower confining unit was not encountered during off-site subsurface investigations except at the location of well HR-4.

Depths to groundwater in the on-site monitoring wells range from 11.78 feet to 16.65 feet below top of casing. The depth to groundwater decreases in the monitoring wells to the south/southeast along Hillside Road with depth to water as shallow as 1.09 feet below top of casing in well SMW-1 (**Table 1**). A review of the groundwater contour/hydrocarbon distribution map (July 26, 2011) indicates that the apparent groundwater flow direction is toward the southeast under a hydraulic gradient of 0.065 foot/foot (ft/ft) between monitoring wells MW-7 and HR-6 (**Figure 3**).

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4.0 DISSOLVED HYDROCARBON PLUME STABILITY

The volatilization of dissolved phase hydrocarbons into soil vapor or directly into indoor air are the two pathways of concern at the Site. Therefore, the stability of the dissolved phase hydrocarbon plume was evaluated. Stability is a measure of the general trend of the concentrations of the constituents of concern (COC); concentrations in a groundwater plume are identified as increasing, decreasing, or stable. Various statistical tests are available to assess stability. Time-series evaluation of the log of COC concentrations was selected for use in this evaluation because the data for individual COCs over time irrespective of groundwater elevation (Newell et al 2002).

There are three on-site and six off-site monitoring wells associated with the Site and these wells have been sampled regularly since June 1999. Analytical data since August 2007 is summarized in **Table 2** and the most recent groundwater contour / hydrocarbon distribution map (July 2011) is attached as **Figure 3**. A review of **Table 2** indicates that the most frequently detected constituents of concern have been benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and methyl tertiary butyl ether (MTBE).

An updated time-series evaluation of the log of benzene and MTBE concentrations was completed for the monitoring wells to evaluate dissolved phase hydrocarbon plume stability. Trend analysis was not completed for monitoring wells SMW-1, MW-1 and HR-5 as the benzene and MTBE concentrations have not been detected above 5 microgram per liter (µg/L) for the past three years. The trend analysis for each selected well is depicted graphically in **Appendix A**.

A review of the groundwater analytical data indicates that benzene concentrations have ranged from below the laboratory reporting limits to 3,000 µg/L (HR-2) since August 2007. The benzene concentrations in the monitoring wells are below the most conservative Tier 1 risk based screening level (RBSL) of 29 µg/L with the exception of HR-2 and seasonal fluctuations in HR-6 and MW-2. A review of the trend analysis for benzene indicates linear trend line slopes ranging from slightly increasing in HR-6 to decreasing in wells HR-1, HR-2, HR-4, HR-5, HR-7, and MW-2. A review of the trend analysis from monitoring well HR-2 indicates that between April 2009 and July of 2010 benzene concentrations increased from an estimated 52 µg/L to 3,000 µg/L in July 2010. Since July 2010, a decrease in benzene concentrations in HR-2 are noted as the current benzene concentration of 600 µg/L is reported for the July 26, 2011 sampling event.

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A graphical representation of the benzene concentrations in monitoring well HR-2 versus groundwater elevation is included in **Appendix B** and depicts the increase in benzene concentrations initially coincides with an increase in the observed groundwater elevation in HR-2. This may suggest that adsorbed phase hydrocarbons are present above the groundwater interface in the area of HR-2 that will continue to act as a source to dissolved phase hydrocarbons. However, based on the overall trend in dissolved-phase benzene, the data suggests that the rate of degradation of dissolved phase benzene within the plume appears to exceed the rate of release of benzene from the adsorbed phase to dissolved phase in the plume.

A review of the groundwater analytical data indicates that MTBE concentrations have ranged from below the laboratory reporting limits to 140 µg/L since August 2007. With the exception of one sampling event in monitoring well HR-4, the MTBE concentrations detected in the wells are below the most conservative Tier 1 RBSLs. Based on a trend analysis of the MTBE data for the monitoring wells, MTBE concentrations in the monitoring wells have linear trend line slopes ranging from slightly increasing in monitoring well HR-5 to stable / decreasing in wells HR-1, HR-2, HR-4, HR-6, HR-7 and MW-2.

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5.0 VAPOR INVESTIGATION APPROACH

As previously presented, the study area for the vapor intrusion investigation was divided into three zones indicated in the table below.

Investigation Summary				
Zone	**Area**	**Conceptual Site Model**	**Exposure Scenario**	**Scope of Work Performed**
1	Site	Future Vapor Intrusion	Commercial	Soil Vapor Investigation
2	2-8 Hillside Road	Vapor Intrusion	Residential	Soil Vapor Investigation
3	9-12 Hillside Road	Groundwater Intrusion / Preferential Pathway	Residential	Indoor Air Sampling

The delineation between the Zones is depicted on **Figure 2** and a site conceptual model diagram is included as **Figure 4**.

5.1 ZONE 1

To evaluate potential health hazards that may be associated with vapor intrusion under a commercial land use exposure scenario on the Site, soil vapor samples were collected from four SVMP locations at depths of 8 feet below grade. The soil vapor collection locations were selected based on proximity to the former UST system and to provide horizontal delineation across the Site. Soil vapor samples were analyzed by EPA Method TO-15 to assess concentrations of COCs related to the former operation of a retail service station. The health hazards that may be associated with migration of volatile COCs to indoor air were evaluated by the comparison of soil vapor concentrations of the COCs to site-specific target levels (SSTL) for each of the COCs. A SSTL is a health risk-based concentration in a given medium (soil, water, or air) for a COC that will be protective of human health, including sensitive sub-populations (e.g., children, the elderly, and the infirm). A SSTL can also be a cleanup goal (DNREC 2002).

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SSTLs for the Site were previously calculated (Kleinfelder 2009) using site-specific information, default assumptions (where site-specific information was not available) and the Johnson and Ettinger (J&E) model (US EPA 2004). The J&E model was developed to assess vapor migration from subsurface sources into buildings and the U.S. EPA has produced a spreadsheet version of this model that was used in the present evaluation.

Zone 1 was evaluated under a commercial land use exposure scenario because the Site is currently used for commercial purposes and is likely to remain a commercial site. Should land use change, a re-evaluation of potential health hazards that may be associated with releases at the Site may be appropriate.

5.2 ZONE 2

To evaluate potential health hazards that may be associated with vapor intrusion under a residential land use exposure scenario along Zone 2 in Hillside Road, soil vapor samples were collected from 13 SVMP locations at depths of 8 feet below grade. The soil vapor collection locations were selected based on proximity to the basements of the residences. Soil vapor samples were analyzed by EPA Method TO-15 to assess concentrations of COCs related to the former operation of a retail service station upgradient from the residences. The health hazards that may be associated with migration of volatile COCs to indoor air were evaluated by the comparison of soil vapor concentrations of the COCs to SSTL for each of the COCs. SSTLs for Zone 2 were previously calculated (Kleinfelder 2009) using site-specific information, default assumptions (where site-specific information was not available) and the J&E model (US EPA 2004).

Zone 2 was evaluated under a residential land use exposure scenario because the properties in Zone 2 are currently used for residential purposes and are likely to remain residential in the future. Should land use change, a re-evaluation of potential health hazards that may be associated with releases at the Site may be appropriate.

5.3 ZONE 3

Zone 3 comprises the four homes located at Numbers 9, 10, 11, and 12 Hillside Road and is topographically and hydraulically downgradient of Zone 2. The occupied structures in Zone 3 consist of brick, two story homes with basements and attached garages similar to the construction of the homes in Zone 2.

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The residents in Zone 3 have a history of petroleum odor complaints and the last reported complaint of odors was in December 2009 at 10 Hillside Road. The depth to groundwater at these residences ranges from approximately four to six feet below grade and may be seasonally in contact with the basement slab or walls. To reduce or eliminate the potential for odors potentially associated with groundwater to enter these homes, engineering controls to redirect groundwater and passively vent vapors were installed at 10 and 11 Hillside Road in 1989. Prior to mitigation efforts by DNREC – TMS, groundwater seeps were documented in the basement of 11 Hillside Road and the driveway of 12 Hillside Road. In May through July 2009, indoor air sampling was completed in homes along Hillside Road located in Zone 3. Detected VOCs were below indoor air target levels with exception of samples collected from 9 and 10 Hillside Road.

The residents of 9 and 10 Hillside Road in Zone 3 have indicated that odors are the strongest after a heavy rainfall event. Each residence in Zone 3 has complained of water intrusion into their basements. The residents of 9, 11, and 12 Hillside Road have installed a French drain with a sump pump system in their basements. Field screening with a photoionization detector (PID) in the basement of each residence has indicated the highest readings in or around drains; however, PID readings are non-specific and not representative of individual VOC concentrations. Vapor intrusion can occur through direct volatilization of contaminants from groundwater into indoor air. This can occur when, for example, a basement slab is in contact with contaminated groundwater, contaminated groundwater enters (floods) or contaminated groundwater enters a sump pit drainage system. In such cases, volatile chemicals can be transferred directly from groundwater to indoor air without the intervening contamination of soil vapor.

In the absence of target indoor air concentrations as defined by DNREC, the indoor air data from Zone 3 were compared to EPA Region 3 Regional Screening Levels (RSLs) (EPA 2010) for residential indoor air. Regional Screening Levels are risk-based concentrations derived from standardized equations combining exposure assumptions with EPA toxicity data. The RSLs are considered by the Agency to be protective for humans (including sensitive sub-populations) over a lifetime; however, RSLs are not always applicable to a particular site and do not address non-human health endpoints. The RSLs presented are generic and are calculated without site-specific information. They may be re-calculated using site-specific data. They are used for site "screening" and as initial cleanup goals, if applicable. The RSLs are not de facto cleanup standards and should not be applied as such.

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The EPA Region 3 RSLs are based upon a target cancer risk of 1×10^{-6}; therefore, the RSLs were adjusted to reflect DNREC guidelines, which are based on a cancer risk of 1×10^{-5} (DNREC 2007). RSLs and DNREC guidelines for noncancerous health effects are based on a target hazard quotient of 1.0 (DNREC 2007). Additionally, the indoor air data compared to the ranges of indoor and outdoor concentrations as reported in the 1988 EPA National Ambient Volatile Organic Compounds database (NYSDOH 2006).

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6.0 SUPPLEMENTAL VAPOR INVESTIGATION IMPLEMENTATION

The supplemental vapor investigation consisted of a second round of soil vapor sampling from Zones 1 and 2. In Zone 3, interim mitigation and indoor air sampling was completed at 9 and 10 Hillside Road. Additionally, a concurrent sub slab vapor and indoor air sampling event was completed at 10 Hillside Road. A second indoor air sampling event was completed at 12 Hillside Road.

6.1 Zones 1 and 2 - SVMP Sampling

On May 13, 2010, Kleinfelder completed a second sampling event of the SVMPs located in Zones 1 and 2. The first sampling event was completed in May 2009. The locations of the SVMPs are depicted on **Figure 2**. Soil vapor samples were not collected from SVMP-9 at 5 Hillside Road and SVMP-11 and SVMP-12 at 7 Hillside Road as the points were destroyed and removed by the property owners. Only one round of soil vapor sampling was conducted at SVMP-9, SVMP-11 and SVMP-12 to assess the vapor intrusion hazard.

Before collecting soil vapor samples, each SVMP was checked for leaks using a helium tracer system. The helium tracer system involves placing a shroud over the SVMP and filling the shroud with helium. The helium concentration within the shroud is then measured with a calibrated helium detector and recorded. The SVMPs are then purged of approximately three times the volume of each SVMP using a calibrated air sampling pump at a rate of approximate 200 milliliters per minute (mL/min) to remove ambient air inside the SVMP that could dilute samples of soil vapor. A sample of the purged air is captured in a Tedlar™ bag and the helium concentration from within the bag is compared to the measured concentration of helium within the shroud. According to the Interstate Technology Regulatory Council (ITRC) (2007), helium concentrations of less than 10% in screened samples are considered acceptable. Helium concentrations of 0% to 1.1% were observed in the leak detection samples collected in the supplemental investigation in Zones 1 and 2; therefore, all soil vapor collection probes were considered to be acceptable for sampling in this investigation. The SVMP samples were collected using six-liter SUMMA canisters with laboratory-calibrated flow controllers set to collect vapor samples at a rate of approximately 200 mL/min.

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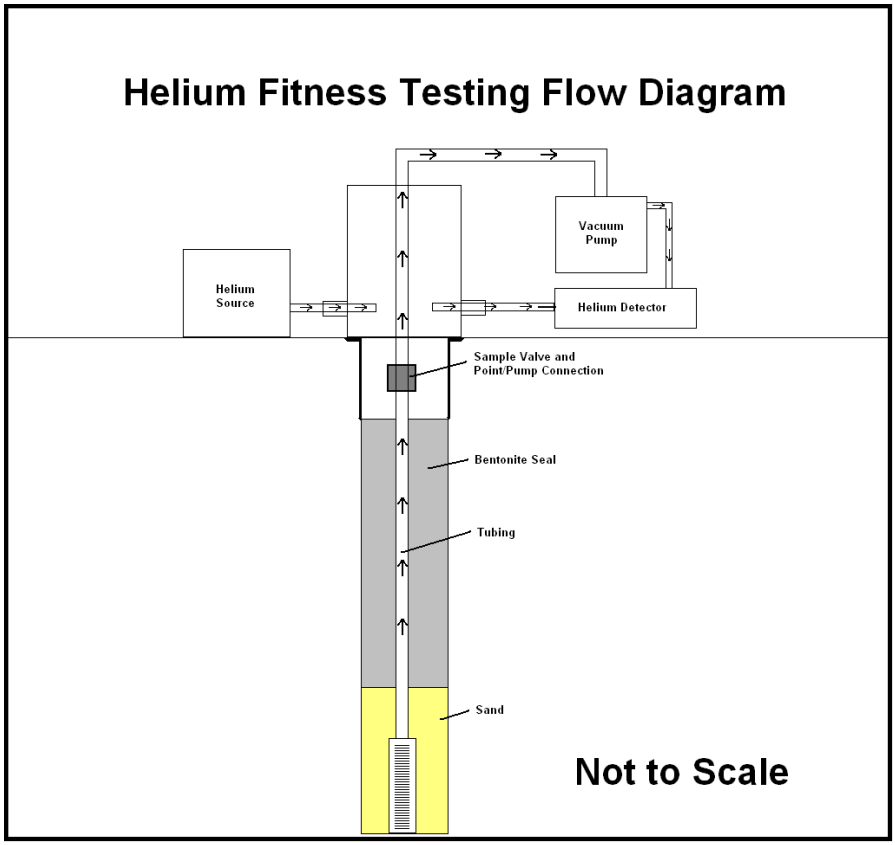
A flow diagram illustrating the helium tracer system is included below.



During SVMP sampling, an ambient air sample was collected to provide background atmospheric concentrations of VOCs against which the SVMP sampling results could be compared. On May 13, 2010, an ambient air sample was collected from the front yard of 2 Hillside Road. The ambient air sample was collected using a six-liter SUMMA canister with a laboratory-calibrated flow controller calibrated to approximately 200 mL/min.

Following collection of the soil vapor and ambient air samples, the samples were submitted to Lancaster Laboratories via courier for analysis of VOCs using EPA Method TO-15 and methane using EPA Method 3C.

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6.1.1 Zone 1 – SVMP Sample Results

On May 13, 2010, Kleinfelder completed sampling of the SVMPs (SVMP-1 through 4) located in Zone 1 according to the procedure summarized in *Section 6.1*. The locations of the SVMPs are depicted on **Figure 2**. The soil vapor analytical data is summarized in **Table 3**. The Lancaster Laboratories Analysis Report is included in **Appendix C**.

Gasoline-related compounds including benzene and ethylbenzene were detected in some Zone 1 soil vapor samples. Acetone and methyl methacrylate, both non-gasoline-related compounds, were also detected in some soil vapor samples and acetone was detected in the outdoor ambient air sample. No other constituents of concern were detected in the outdoor or soil vapor samples collected within Zone 1.

6.1.2 Zone 2 – SVMP Sample Results

On May 13, 2010, Kleinfelder completed sampling of the SVMPs (SVMP-5 through SVMP-8, SVMP-10, and SVMP-13 through 16) located in Zone 2 according to the procedure summarized in *Section 6.1*. The locations of the SVMPs are depicted on **Figure 2**. The soil vapor analytical data is summarized in **Table 4**. The Lancaster Laboratories Analysis Report is included in **Appendix C**.

Gasoline-related compounds, including benzene, toluene, ethylbenzene, total xylenes, tertiary butyl alcohol (TBA), isopropylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 4-ethyltoluene were detected in some of the Zone 2 soil vapor samples. Non-gasoline-related compounds, including acetone, carbon disulfide, 2-butanone, chloroform, dichlorodifluoromethane, styrene, and tetrachloroethene were also detected in the Zone 2 soil vapor samples.

Acetone was detected in the ambient air sample collected from Zone 2 on May 13, 2010. No other VOCs were detected in the outdoor or soil vapor samples collected from within Zone 2.

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6.2 Zone 3 Investigation and Mitigation

Kleinfelder completed indoor air sampling of the residences located at 9, 10, and 12 Hillside Road, mitigation activities at 9 and 10 Hillside Road, and sub-slab sampling at 10 Hillside Road. The sampling was completed in general accordance with the procedures of the DNREC-SIRB (2007), and the results for each property are detailed below. Two indoor air sampling events were completed at 11 Hillside Road in 2009 and further sampling was not considered warranted (Kleinfelder 2009). For each property, the DNREC-SIRB *Vapor Intrusion Policy* Attachment IV forms were completed and are included as **Appendix D**.

6.2.1 9 Hillside Road Mitigation, Sampling, and Results

Due to resident complaints of odors from a basement floor drain which their sump pump discharges to, DNREC-TMS requested Kleinfelder to seal the floor drain. On June 14, 2010, Kleinfelder completed a visit at 9 Hillside Road to assess options to seal the floor drain. On June 22, 2010, the pre-sampling inspection and the sump discharge retrofit were completed at 9 Hillside Road. The discharge line from the sealed sump was reconstructed using 1-1/4-inch diameter PVC connected to a PVC union and a ball valve to enable sump access without disturbing the floor drain seal. The connection to the floor drain was completed using a 4-inch diameter sanitary seal with two openings that allowed for the sump discharge line and the dehumidifier drain line to be sealed to the floor drain. Silicone caulking was used at the joints to form a vapor seal. Photo-documentation of the pre and post retrofit conditions is included in **Appendix E**.

During the pre-sampling inspection, Kleinfelder noted that two active battery-powered air fresheners had been installed since the May 2009 sampling event and cans of paint and related products were being stored in the basement. After discussion with the residents of 9 Hillside Road, the paint and related products and air fresheners were removed prior to the scheduled indoor air sampling event.

On June 29 and 30, 2010 indoor air sampling was completed in the basement and first floor, and an ambient air sample was collected outside the residence. SUMMA canisters were placed locations similar to the previous sampling event conducted in May 2009. The sampling was completed using six-liter SUMMA canisters connected to 12.5 mL/min laboratory calibrated flow controllers with resultant sample collection times of approximately 24 hours.

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Following sample collection, the SUMMA canisters were sent to Lancaster Laboratories via courier for laboratory analysis of VOCs using EPA Method TO-15. A copy of the laboratory analytical report is included in **Appendix F**.

The detected analytes from the indoor air sampling event at 9 Hillside Road are summarized in **Table 5**. Gasoline-related compounds, toluene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, hexane, and pentane, were detected in the basement air sample. Gasoline-related compounds, toluene, 1,2,4-trimethylbenzene and 1,2-dichloroethane (EDC), were detected in the first floor air sample and these compounds were detected at higher concentrations than in the basement air sample. Non-gasoline-related compounds, 2-butanone, acetone, carbon disulfide, chloromethane, and ethyl acetate, were detected in the first floor and basement air samples. No other constituents of concern were detected in the June 2010 air samples collected from 9 Hillside Road.

In March 2011, the residents of 9 Hillside Road reported nuisance odors to DNREC-TMS and additional investigation and mitigation of the odors was initiated and completed. The activities at 9 Hillside Road involved the investigation of the basement sump and drain systems, and the installation of a ventilation system on the basement sump. The activities were documented in the *9 Hillside Road – Nuisance Odor & Vapor Mitigation Report* dated July 25, 2011. A copy of this report is provided in **Appendix G**. Quarterly operation and maintenance (O&M) visits of the 9 Hillside sump ventilation system are scheduled for one year. The results of the O&M visits will be reported in the quarterly groundwater monitoring reports to DNREC-TMS.

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6.2.2 10 Hillside Road Interim Mitigation, Sampling, and Results

In 2009, some VOCs were detected above DNREC prescribed target risk levels in the basement indoor air at 10 Hillside Road and additional investigation at the residence was completed. The additional investigation included an inspection of the basement upon receipt of an odor complaint from the residents, indoor air sampling and a concurrent sub slab vapor and indoor air sampling event.

6.2.2.1 Field Inspection and Interim Mitigation

On Wednesday December 2, 2009, Kleinfelder met with DNREC-TMS representatives at 10 Hillside Road to investigate a resident report of odors in the basement. DNREC and Kleinfelder met with the owner of 10 Hillside Road and completed an inspection of the basement. The 1988 vapor intrusion mitigation efforts were observed in the basement and included an epoxy-like coating on the walls and floor and a sealant at the intersection of the flooring and base of the exterior walls. Field screening for VOCs was completed during the inspection using a PID and readings were collected from ambient air in the basement, some cracks observed at the base of the walls, and a 4-inch floor drain located in the northeast corner of the basement. The PID readings from ambient air in the basement ranged from 60 to 88 parts per billion (ppb), PID readings from the cracks observed at the base of the walls ranged 254 to 540 ppb, and the maximum reading within the floor drain was 1,950 ppb. The field screening results suggest that VOCs may be entering the basement of 10 Hillside Road through preferential pathways such cracks and the floor drain.

Based upon the visual inspection and field screening results, DNREC-TMS approved Kleinfelder to cap the floor drain with a removable gripper plug and seal the cracks. The visible cracks observed in the seal and areas where PID readings were detected at the base of the basement walls were re-sealed using a low VOC caulk. Some areas of the basement, primarily the base of the south basement wall, were inaccessible for inspection due to the storage of personal belongings in those areas. Photo documentation of the activities is included in **Appendix E**.

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6.2.2.2 Pre-Sampling Site Visit

On June 14, 2010, Kleinfelder reviewed the files of the 1988 mitigation efforts completed at 10 Hillside Road at the DNREC-TMS office and completed a site visit. During the site visit, Kleinfelder observed that several of the cleanouts for the drainage system were accessible and one of the two vents for the system was intact.

6.2.2.3 Indoor Air Sampling and Results

On June 29 and 30, 2010, indoor air sampling was completed in the basement and first floor, and air sampling was conducted outside the residence with canister placement in locations similar to the previous sampling event conducted in May 2009. The sampling was completed using six-liter SUMMA canisters connected to 12.5 mL/min laboratory calibrated flow controllers with resultant sample collection times of approximately 24 hours. Following sample collection, the SUMMA canisters were sent to Lancaster Laboratories via courier for laboratory analysis of VOCs using EPA Method TO-15. A copy of the laboratory analytical report is included in **Appendix F**.

The detected analytes from the indoor air sampling event at 10 Hillside Road are summarized in **Table 6**. Gasoline-related compounds, benzene, toluene, xylenes, 1,2,4-trimethylbenzene, 2,2,4-trimethylpentane, hexane, n-heptane, and pentane were detected in the basement air sample. Non-gasoline related compounds, acetone and methylene chloride, were detected in the basement air sample. Gasoline related compounds, ethylbenzene, 2,2,4-trimethylpentane, m/p xylene, pentane, and hexane were detected in the first floor air sample and these compounds were detected at lower concentrations than the basement air sample. Non-gasoline related compounds, acetone, methylene chloride, carbon disulfide, and ethyl acetate, were detected in the first floor air samples. Acetone was the only VOC detected in the outside ambient air sample. No other VOCs were detected in the June 2010 air samples collected from 10 Hillside Road.

6.2.2.4 Sub-slab Vapor Sampling and Results

On November 10, 2010, Kleinfelder collected an indoor air sample from the basement and sampled sub-slab vapors to compare the relative concentrations of VOCs in sub-slab vapors and indoor air of the basement of 10 Hillside Road. Two sub-slab vapor sampling locations were selected near to the northwestern and southeastern corners of the basement slab.

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The points were advanced through the concrete slab (2-inches thick) to depths of approximately 7 inches into the gravel sub-base using a ½ inch diameter impact drill. A 6-inch long 3/8" diameter stainless steel screen connected to 3/8" diameter tubing was lowered into the open borehole. The concrete slab was sealed using a non-volatile duct sealant and samples were collected using 6 liter stainless steel SUMMA canisters with laboratory calibrated flow controllers set to a flow rate of approximately 200 mL/min. Following sample collection, the stainless steel screens and tubing were removed from the sample locations and the sub-slab boreholes were abandoned using a non-VOC grout. Following collection the samples were delivered, via courier, to Lancaster Laboratories for analysis of VOCs using EPA Method TO-15.

The sub-slab vapor sampling results at 10 Hillside Road are summarized in **Table 7** and a copy of the laboratory analytical report is included in **Appendix H**. Eleven different VOCs were detected in at least one of the sub-slab samples. Of the 11 detected VOCs in the sub-slab samples, four of the VOCs are not gasoline-related compounds. The remaining seven VOCs detected in the sub-slab samples are gasoline-related and include 1,2,4-trimethylbenzene, ethylbenzene, isopropylbenzene, m/p-xylene, o-xylene, tert-butyl alcohol, and toluene. Benzene was not detected in the sub-slab vapor samples.

Eight VOCs were detected in the basement air sample. Of the eight detected COCs in the indoor air sample, two of the VOCs are not gasoline-related compounds. The remaining six VOCs detected in the sub-slab samples are gasoline-related and include 1,2,4-trimethylbenzene, benzene, ethylbenzene, m/p-xylene, o-xylene, and toluene.

Of the seven gasoline-related VOCs detected in at least one sub-slab vapor sample, two VOCs were detected in the basement ambient air sample at a higher concentration; two VOC were detected in one sub-slab sample at a concentration greater than the ambient air sample, while the VOC concentration in the second sub-slab sample was and less than the ambient air sample concentration; and three VOCs detected in the sub-slab samples were either not detected or were detected at lower concentrations in the ambient air samples. In addition, benzene and methylene chloride were not detected in either sub-slab vapor sample, yet were detected in the ambient indoor air sample.

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Based on this comparison of gasoline-related VOC concentrations in the sub-slab samples and the basement ambient air samples, there is no conclusive correlation indicative of a completed pathway from sub-slab vapor to indoor air, e.g. consistently higher concentrations in sub-slab vapor than in ambient air samples indicative of sub-slab vapor migration and attenuation into the basement ambient air. Furthermore, not all VOCs detected in sub-slab vapor samples were detected in basement ambient air. Therefore, sub-slab soil vapor does not appear to significantly affect indoor air quality.

6.2.3 12 Hillside Road Sampling and Results

On June 22, 2010, a pre-sampling inspection was completed at 12 Hillside Road. During the pre-sampling inspection, Kleinfelder noted that the residents had recently installed a sub-slab drainage system connected to a sealed sump with a pump in their basement. The discharge location of the sump pump is unknown to the homeowner and was not visually apparent to Kleinfelder. During the inspection of 12 Hillside Road, the indoor use of tobacco smoking products was also noted.

On June 29 and 30, 2010, indoor air sampling was completed in the basement and first floor, and air sampling was conducted outside the residence with canister placement in locations similar to the previous sampling event conducted in May 2009. The sampling was completed using six-liter SUMMA canisters connected to 12.5 mL/min laboratory calibrated flow controllers with resultant sample collection times of approximately 24 hours. Following sample collection, the SUMMA canisters were sent to Lancaster Laboratories of Lancaster Pennsylvania via courier for laboratory analysis of VOCs using EPA Method TO-15. A copy of the laboratory analytical report is included in **Appendix F**.

The detected analytes from the indoor air sampling event at 12 Hillside Road are summarized in **Table 8**. Acetone, methylene chloride, ethylbenzene and xylenes, were detected in the ambient outdoor air sample. Acetone and hexane were the only VOCs detected in the basement indoor air sample. Acetone, chloromethane, and methylene chloride were detected in the first floor indoor air sample. The detected VOCs in the indoor air samples are not considered to be gasoline-related. No other constituents of concern were detected in the June 2010 air samples collected from 12 Hillside Road.

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7.0 VAPOR INTRUSION HEALTH SCREENING EVALUATION

This section contains the health screening evaluation for each Zone. The soil vapor data collected in Zone 1 was compared to SSTLs calculated using a commercial land use exposure scenario. The soil vapor data collected in Zone 2 was compared to SSTLs calculated using a residential exposure scenario. The indoor air data collected in Zone 3 was compared to EPA Region 3 RSLs.

7.1. Zone 1 Health Screening Evaluation

A health screening evaluation was performed for the Site by comparing SSTLs to soil vapor concentrations for each of the COCs measured on-site. The existing Site structure is situated above an area where soil vapor concentrations under a commercial land use scenario within and around the Site structure are below the SSTLs. At SVMP-3, which is outside the footprint of the existing Site structure, the benzene concentration (160 mg/m^3) exceeded the SSTL of 77 mg/m^3 in the May 2009 sampling event. SVMP-3 is located approximately 55 feet east-southeast of the existing Site structure. In June 2010, however, the benzene concentration in SVMP-3 was below the laboratory detection limit of 64 mg/m^3 which is below the SSTL and no other VOCs were detected above the SSTLs. A summary of the Zone 1 concentrations compared to the SSTLs is provided in **Table 3**.

7.2 Zone 2 Health Screening Evaluation

A health screening evaluation was performed for residences located along Hillside Road in Zone 2 by comparing SSTLs to soil vapor concentrations for each of the COCs measured within Zone 2. The assessment revealed that the soil vapor concentrations measured adjacent to the residences, in both the May 2009 and May 2010 sample results, are lower than the SSTLs calculated based on DNREC guidelines. A summary of the Zone 2 concentrations compared to the SSTLs is provided in **Table 4**.

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7. 3 Zone 3 Health Screening Evaluation

7.3.1 9 Hillside Road Health Screening Evaluation

Gasoline-related VOCs were not detected above the RSLs in the basement air sample collected in June 2010. In the indoor air sample collected from the first floor, 1,2,4-trimethylbenzene was measured at a concentration of 0.011 mg/m^3, which exceeds the RSL of 0.0073 mg/m^3. Additionally, EDC was detected at a concentration of 0.0043 mg/m^3 in the sample collected from the first floor, which exceeds the RSL of 0.00094 mg/m^3. Gasoline-related compounds, including toluene, 1,2,4-trimethylbenzene and EDC, were detected in the first floor air sample at higher concentrations than in the basement air sample; therefore, vapor intrusion is unlikely to explain indoor air concentrations of the gasoline-related compounds. The concentrations of the remaining VOCs in the indoor air samples from 9 Hillside Road were below their respective RSLs. Acetone was the only VOC detected in the ambient air sample at a concentration lower than both the basement and first floor samples.

7.3.2 10 Hillside Road Health Screening Evaluation

Benzene was measured at a concentration of 0.0072 mg/m^3 in the two basement air samples collected in June and November 2010. This concentration exceeds the benzene RSL of 0.0031 mg/m^3 (**Table 6**). The 2010 benzene concentrations, however, were slightly lower than the July 2009 sampling results (0.012 mg/m^3) and within the range of indoor air concentrations reported in NYSDOH (2006) (0.0033 to 0.021 mg/m^3) (**Table 6**). The concentrations of the remaining detected VOCs in the indoor air samples from 10 Hillside Road were below their respective RSLs.

7.3.3 12 Hillside Road Health Screening Evaluation

A review of the June 2010 air analytical results indicates that gasoline-related VOCs were below the laboratory detection limits and concentrations of detected non-gasoline related VOCs were below their respective RSLs.

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8.0 SUMMARY AND CONCLUSIONS

Kleinfelder has completed a supplemental vapor intrusion investigation and health screening evaluation at the Ron's Discount Energy Mart located at 2509 Philadelphia Pike, Claymont, Delaware. The scope of work completed included the sampling of 13 soil vapor monitoring points, mitigation activities at two residences, indoor air sampling of three residences, and preparation of this report.

The results of the vapor investigation and health screening evaluation are summarized below:

- The stability of the dissolved phase hydrocarbon plume has been evaluated and the plume is stable to decreasing over time. Therefore, the following conclusions are drawn:

- The Zone 1 SVMPs were sampled and the analytical results were compared against SSTLs. The current concentrations of VOCs in soil vapor do not pose a vapor intrusion hazard within the existing structure; therefore, consistent with DNREC guidelines, further investigation, mitigation, or remediation are not warranted.

- The Zone 2 SVMPs were sampled and the analytical results were compared against SSTLs. Soil vapor concentrations of the VOCs were lower than SSTLs; therefore, consistent with DNREC guidelines, further investigation, mitigation, or remediation are not warranted.

- Indoor air sampling was conducted at 9 Hillside Road and the results were compared to the EPA RSLs. EDC and 1,2,4-trimethylbenzene were detected in the indoor air sample collected from the first floor at concentrations that exceeded the RSLs. These concentrations are higher than the concentrations reported in the basement air sample, which supports the conclusion that migration of the VOCs from subsurface sources (i.e., vapor intrusion) does not adversely affect indoor air. Other than EDC and 1,2,4-trimethylbenzene, no VOCs were reported at concentrations greater than an RSL in the samples collected from 9 Hillside Road.

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- Air samples were collected from the basement, first floor, and outside of 10 Hillside Road in June 2010. A second basement indoor air sample was collected in November 2010 during the sub-slab vapor sampling event. In both basement air samples, benzene was detected at a concentration of 0.0072 mg/m^3 which is above the RSL of 0.0031 mg/m^3, yet within the range of indoor air concentrations reported in Appendix C of NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Benzene was not detected in either sub-slab sample. There were no other detections of VOCs above the RSLs in the air samples submitted from 10 Hillside Road. Because benzene was present in indoor air but not sub-slab soil vapor and because the VOCs detected in indoor air did not match the VOCs detected in sub-slab soil vapor, vapor intrusion does not appear to significantly affect indoor air quality.

- Air samples were collected from the basement, first floor, and outside of 12 Hillside Road in June 2010. There were no detections of gasoline-related VOCs in the residence; which supports the conclusion that migration of the VOCs from subsurface sources (i.e., vapor intrusion) does not adversely affect indoor air.

- The residents in Zone 3 have complained of nuisance odors in the past after heavy rainfall events and field screening readings are highest near floor drains. These odors may be from direct volatilization of COCs from groundwater into indoor air when the basement slab is in contact with groundwater, when the basement floods, or when groundwater enters an unsealed basement sump system. As presented in **Table 2** and **Figure 4**, the individual dissolved phase hydrocarbon concentrations in Zone 3 are generally less than 50 µg/L and may be contributing to the reported nuisance conditions. However, there are no regulatory standards or thresholds for nuisance odors. Based on the results of the data collected in Zone 3 using the means and methods described in this report, vapor intrusion does not appear to impact indoor air quality above the risk based screening levels. However, mitigation may be warranted to address nuisance odors.

- Based on continued reports and observations of nuisance odors and presence of dissolved phase hydrocarbons in the sump water of the basement of 9 Hillside Road, a mitigation system was installed. The mitigation included retrofit of the laundry sink trap, active ventilation with a blower of the basement sump, and resealing of the sump and clean outs.

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9.0 RECOMMENDATIONS

Based on the results of the vapor intrusion health screening evaluation and in consultation with DNREC-TMS, Kleinfelder recommends the following:

- In the case of future development, excavation, or construction in Zone 1, the property owner or developer should file a plan with DNREC-TMS regarding any planned change in Site conditions or usage. The plan should include a vapor intrusion evaluation for the proposed structure and include proposed controls to prevent vapor intrusion.

- Two rounds of soil vapor sampling have been completed at the residences along Hillside Road in Zone 2 and VOC concentrations are below SSTLs; therefore, future soil vapor sampling events are not considered warranted at this time.

- Benzene has been detected above the RSL in two basement air samples at 10 Hillside Road yet within the range of indoor air concentrations reported in published literature and nuisance odors have been reported by the residents. Soils beneath the residence are likely saturated for prolonged periods of time due to high groundwater which contains VOCs. The area directly beneath the basement slab appears to be relatively dry and this is likely due to the exterior drain tile and terracotta piping noted beneath the residence. However, the resident has indicated water intrusion continues during heavy rain events and odors are strongest after these rain events. This suggests the exterior drain tile system installed in 1989 is not capable of handling peak rain events. The detection of VOCs at cracks and joints in the basement also suggests that groundwater with VOCs is in contact with the residence and the geomembrane applied to the exterior of the foundation and or the epoxy sealant applied in 1989 may not be effective. A combination of mitigation technologies to redirect groundwater containing VOCs and remove preferential pathways is considered warranted. An interior French drain system with a sump pit can be installed in the interior of the basement along the exterior wall. This system would assist with controlling groundwater around the foundation. The drain and sump system would be depressurized with a fan (typical of radon mitigation system) to remove vapors. The depressurization of the French drain system will help control vapor entry at the joint between the foundation wall and slab where VOCs have been detected. Additionally, an interior drain tile system can help distribute the suction field under the slab.

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A comprehensive inspection of the basement interior and field screening of the identified cracks and joints with a PID should be completed. Based on the inspection results, a plan for sealing the basement concurrent with installation of an interior drain / depressurization system will be developed and will include a plan for verification of mitigation performance.

- Quarterly O&M of the mitigation system installed at 9 Hillside Road for one year to document system operation and evaluate its effectiveness.

- Gasoline-related VOCs have not been detected in indoor air samples collected from 12 Hillside; therefore, further evaluation of vapor intrusion at 12 Hillside Road is not considered warranted.

- Continue groundwater sampling to monitor the dissolved phase plume stability. As the plume is stable, a reduction in sampling frequency to semi-annual and the number of wells is considered warranted. A work plan for modification of the groundwater sampling program will be submitted to DNREC-TMS under separate cover.

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10.0 LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the Client and only for the purposes stated for this specific engagement within a reasonable time from its issuance, but in no event later than two (2) years from the date of the report.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that DNREC has reviewed the document and determined that it does not need or want a greater level of service than provided.

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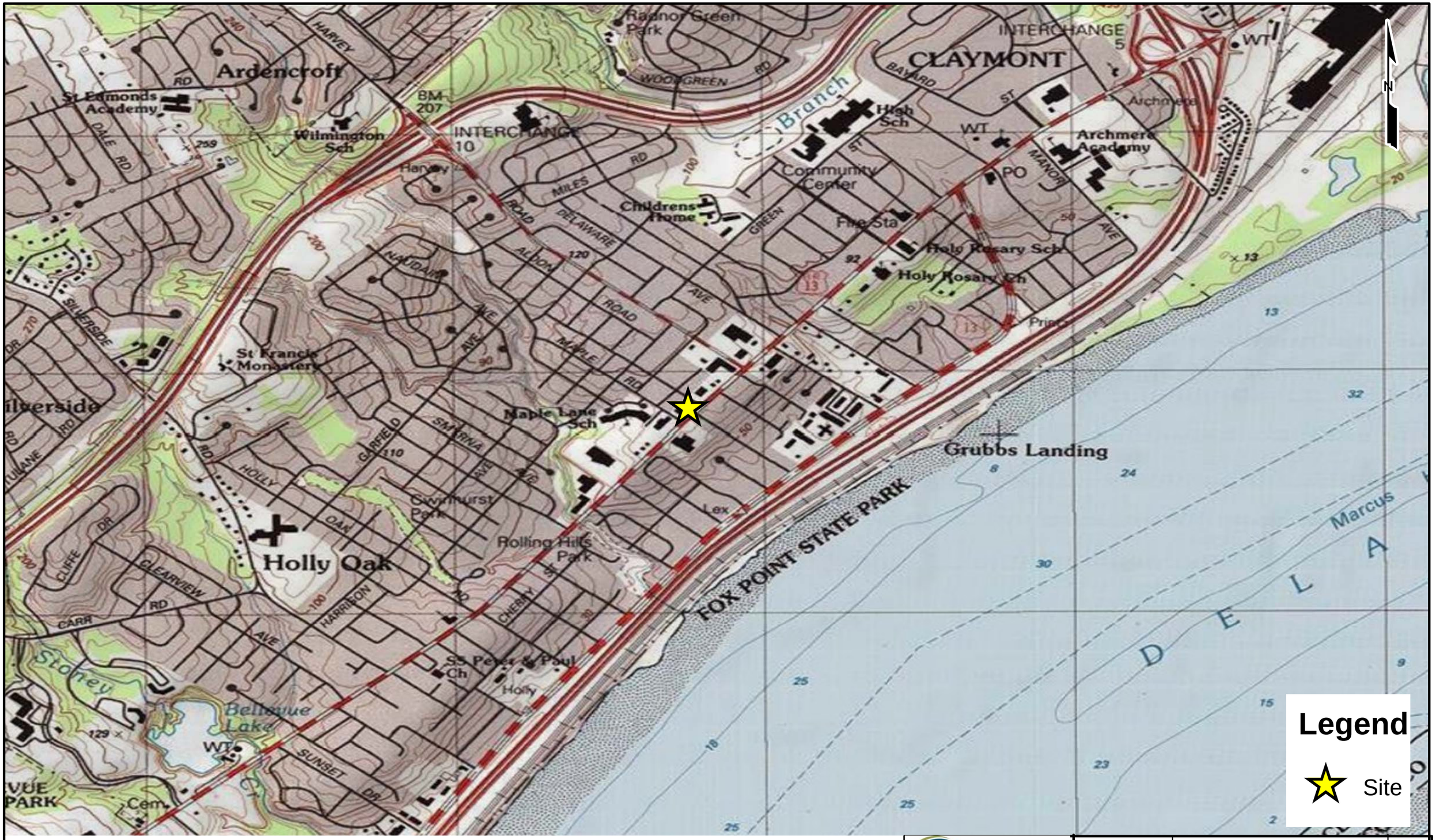
Figures



1,200 600 0 1,200 Feet

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PROJECT NO.	111265
DRAWN:	10/19/11
DRAWN BY:	JR
CHECKED BY:	MCS
FILE NAME:	Rons Regional Area Map 082809.mxd

REGIONAL AREA MAP

FACILITY ID: 3-000712
RON'S DISCOUNT ENERGY MART
2509 PHILADELPHIA PIKE
CLAYMONT, DE

FIGURE 1

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CHECKED BY:	MCS
FILE NAME:	Claymont DE Prop SVP Map 012209.mxd

AREA MAP

FACILITY ID: 3-000712
RON'S DISCOUNT ENERGY MART
2509 PHILADELPHIA PIKE
CLAYMONT, DE

FIGURE
2

0 35 70 140 Feet

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DRAWN BY:	JR
CHECKED BY:	NH
FILE NAME:	ClaymontDE_HDMap_122309.mxd

HYDROCARBON DISTRIBUTION/
GROUNDWATER CONTOUR MAP
JULY 27, 2011

FACILITY ID: 3-000712
RON'S DISCOUNT ENERGY MART
2509 PHILADELPHIA PIKE
CLAYMONT, DE

FIGURE
3

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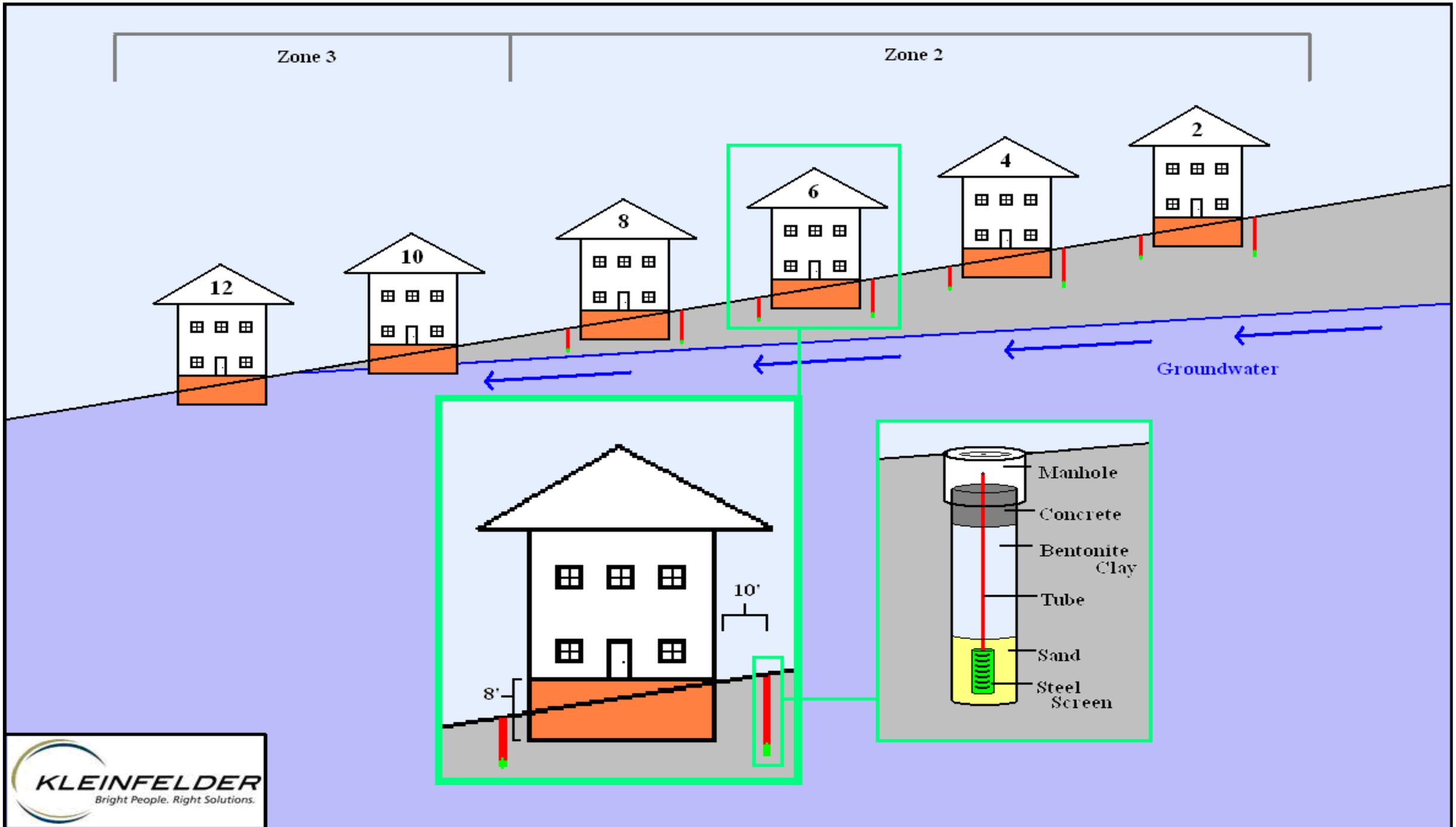

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SITE CONCEPTUAL MODEL DIAGRAM

FACILITY ID: 3-000712
RON'S DISCOUNT ENERGY MART
2509 PHILADELPHIA PIKE
CLAYMONT, DELAWARE

FIGURE
4

Tables

Table 1

Monitoring Well Gauging Data Summary

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
April 28, 2009 through July 26, 2011

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Correction Factor (feet)	Corrected GW Elevation (feet)	Comments
HR-1	04/28/2009	94.10	17.35	ND	ND	N/A	76.75	
	08/04/2009	94.10	16.49	ND	ND	N/A	77.61	
	11/17/2009	94.10	16.85	ND	ND	N/A	77.25	
	03/31/2010	94.10	14.45	ND	ND	N/A	79.65	
	07/08/2010	94.10	16.70	ND	ND	N/A	77.40	
	10/21/2010	94.10	17.89	ND	ND	N/A	76.21	
	04/19/2011	94.10	15.96	ND	ND	N/A	78.14	
	07/26/2011	94.10	17.10	ND	ND	N/A	77.00	
HR-2	04/28/2009	92.81	16.71	ND	ND	N/A	76.10	
	08/04/2009	92.81	16.26	ND	ND	N/A	76.55	
	11/17/2009	92.81	16.55	ND	ND	N/A	76.26	
	03/31/2010	92.81	14.50	ND	ND	N/A	78.31	
	07/08/2010	92.81	16.58	ND	ND	N/A	76.23	
	10/21/2010	92.81	17.38	ND	ND	N/A	75.43	
	04/19/2011	92.81	15.60	ND	ND	N/A	77.21	
	07/26/2011	92.81	16.85	ND	ND	N/A	75.96	
HR-4	04/28/2009	73.70	5.89	ND	ND	N/A	67.81	
	08/04/2009	73.70	5.75	ND	ND	N/A	67.95	
	11/17/2009	73.70	6.03	ND	ND	N/A	67.67	
	03/31/2010	73.70	5.25	ND	ND	N/A	68.45	
	07/08/2010	73.70	6.48	ND	ND	N/A	67.22	
	10/21/2010	73.70	6.98	ND	ND	N/A	66.72	
	04/19/2011	73.70	5.41	ND	ND	N/A	68.29	
	07/26/2011	73.70	6.61	ND	ND	N/A	67.09	
HR-5	04/28/2009	68.64	2.80	ND	ND	N/A	65.84	
	08/04/2009	68.64	4.76	ND	ND	N/A	63.88	
	11/17/2009	68.64	2.57	ND	ND	N/A	66.07	
	03/31/2010	68.64	2.01	ND	ND	N/A	66.63	
	07/08/2010	68.64	5.20	ND	ND	N/A	63.44	
	10/21/2010	68.64	4.19	ND	ND	N/A	64.45	
	04/19/2011	68.64	1.49	ND	ND	N/A	67.15	
	07/26/2011	68.64	5.65	ND	ND	N/A	62.99	
HR-6	04/28/2009	50.71	7.59	ND	ND	N/A	43.12	
	08/04/2009	50.71	8.79	ND	ND	N/A	41.92	
	11/17/2009	50.71	8.21	ND	ND	N/A	42.50	
	03/31/2010	50.71	4.95	ND	ND	N/A	45.76	
	07/08/2010	50.71	10.80	ND	ND	N/A	39.91	
	10/21/2010	50.71	9.90	ND	ND	N/A	40.81	
	04/19/2011	50.71	5.74	ND	ND	N/A	44.97	
	07/26/2011	50.71	7.10	ND	ND	N/A	43.61	

Kleinfelder
1340 Charwood Road, Suite I, Hanover, MD

Table 1 (Continued)

Monitoring Well Gauging Data Summary

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
April 28, 2009 through July 26, 2011

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Correction Factor (feet)	Corrected GW Elevation (feet)	Comments
HR-7	04/28/2009	94.81	16.09	ND	ND	N/A	78.72	
	08/04/2009	94.81	14.93	ND	ND	N/A	79.88	
	11/17/2009	94.81	15.31	ND	ND	N/A	79.50	
	03/31/2010	94.81	11.78	ND	ND	N/A	83.03	
	07/08/2010	94.81	15.49	ND	ND	N/A	79.32	
	10/21/2010	94.81	16.65	ND	ND	N/A	78.16	
	04/19/2011	94.81	14.58	ND	ND	N/A	80.23	
	07/26/2011	94.81	15.59	ND	ND	N/A	79.22	
SMW-1	04/28/2009	NSVD	2.60	ND	ND	N/A	NSVD	
	08/04/2009	NSVD	2.59	ND	ND	N/A	NSVD	
	11/17/2009	NSVD	2.55	ND	ND	N/A	NSVD	
	03/31/2010	NSVD	1.09	ND	ND	N/A	NSVD	
	07/08/2010	NSVD	2.75	ND	ND	N/A	NSVD	
	10/21/2010	NSVD	2.65	ND	ND	N/A	NSVD	
	04/19/2011	NSVD	1.44	ND	ND	N/A	NSVD	
	07/26/2011	NSVD	2.66	ND	ND	N/A	NSVD	
MW-1	04/28/2009	94.55	15.39	ND	ND	N/A	79.16	
	08/04/2009	94.55	14.59	ND	ND	N/A	79.96	
	11/17/2009	94.55	14.99	ND	ND	N/A	79.56	
	03/31/2010	94.55	12.86	ND	ND	N/A	81.69	
	07/08/2010	94.55	15.09	ND	ND	N/A	79.46	
	10/21/2010	94.55	16.39	ND	ND	N/A	78.16	
	04/19/2011	94.55	14.15	ND	ND	N/A	80.40	
	07/26/2011	94.55	15.27	ND	ND	N/A	79.28	
MW-2	04/28/2009	95.32	15.20	ND	ND	N/A	80.12	
	08/04/2009	95.32	14.40	ND	ND	N/A	80.92	
	11/17/2009	95.32	14.60	ND	ND	N/A	80.72	
	03/31/2010	95.32	12.80	ND	ND	N/A	82.52	
	07/08/2010	95.32	14.65	ND	ND	N/A	80.67	
	10/21/2010	95.32	15.79	ND	ND	N/A	79.53	
	04/19/2011	95.32	14.28	ND	ND	N/A	81.04	
	07/26/2011	95.32	14.95	ND	ND	N/A	80.37	

Notes:

GW - Groundwater
ND - Not detected
NM - Not monitored
NSVD - Not surveyed to vertical datum

Table 2

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	Naph-thalene (µg/L)	Iso-propyl-benzene (Cumene) (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	Comments
HR-1	08/02/2007	7 J	54	960	3200	4221 J	ND	NA	NA	NA	NA	NA	NA	
	10/29/2007	ND	12 J	370	1200	1582 J	ND	ND	200	51	ND	NA	NA	
	07/03/2008	6 J	48	840	2700	3594 J	1 J	ND	300	65	ND	NA	NA	
	10/08/2008	4 J	28	670	2000	2702 J	ND	ND	240	56	ND	NA	NA	
	01/22/2009	3 J	31	710	2000	2744 J	ND	ND	240	62	ND	NA	NA	
	04/28/2009	3 J	36	850	2600	3489 J	ND(0.6)	ND(44)	320	61	ND(0.5)	ND(1)	ND(1)	
	08/04/2009	3 J	41 J	860	2700	3604 J	ND(0.3)	ND(22)	300	65	ND(0.2)	ND(0.6)	ND(0.5)	
	11/17/2009	3 J	34 J	1100	3100	4237 J	ND(0.3)	ND(22)	530	77	ND(0.2)	ND(0.6)	ND(0.5)	
	03/31/2010	4 J	38 J	950	2000	2992 J	ND(0.3)	ND(22)	440	63	ND(0.3)	ND(0.6)	ND(0.5)	
	07/08/2010	5 J	50	810	3100	3965 J	ND(0.3)	52	400	67	ND(0.3)	ND(0.6)	ND(0.5)	
	10/21/2010	3 J	31 J	1200	3700	4934 J	ND(0.5)	ND(56)	410	72	ND(0.9)	ND(1)	ND(1)	
	04/19/2011	3 J	41 J	1000	NA	3744 J	ND(0.3)	ND(22)	320	73	ND(0.3)	ND(0.6)	ND(0.5)	
	07/26/2011	ND(0.6)	47 J	990	NA	4137 J	ND(0.5)	ND(56)	410	59	ND(0.9)	ND(1)	ND(1)	
HR-2	10/29/2007	940	15 J	1600	2000	4555 J	5 J	ND	360	68	ND	NA	NA	
	07/03/2008	310	95	2000	6300	8705	ND	ND	360	69	ND	NA	NA	
	10/08/2008	220	12	1500	1800	3532	2 J	ND	270	53	ND	NA	NA	
	01/22/2009	110	28	1700	4100	5938	ND	ND	380	64	ND	NA	NA	
	04/28/2009	52 J	17	1600	2900	4569 J	ND(0.6)	ND(44)	380	53 J	ND(0.5)	ND(1)	ND(1)	
	08/04/2009	160	34 J	1800	3100	5094 J	ND(0.3)	ND(22)	350	69	ND(0.2)	ND(0.6) J	ND(0.5)	
	11/17/2009	680	34 J	2000	3400	6114 J	ND(0.6)	ND(44)	570	74 J	ND(0.5)	ND(1)	ND(1)	
	03/31/2010	1900	200	2600	3600	8300	ND(0.6)	ND(44)	510	80 J	ND(0.5)	ND(1)	ND(1)	
	07/08/2010	3000	180	2400	4500	10080	ND(0.6)	ND(44)	460	64 J	ND(0.5)	ND(1)	ND(1)	
	10/21/2010	2400	46 J	2400	4700	9546 J	ND(0.9)	ND(110)	530	64 J	ND(2)	ND(3)	ND(3)	
	04/19/2011	550	82 J	2500	NA	7732 J	ND(0.6)	ND(44)	420	86 J	ND(0.5)	ND(1)	ND(1)	
	07/26/2011	600	45 J	2100	NA	5845 J	ND(0.5)	ND(56)	490	63	ND(0.9)	ND(1)	ND(1)	

Kleinfelder
1340 Charwood Road, Suite I, Hanover, MD

Table 2 (Continued)

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	Naph-thalene (µg/L)	Iso-propyl-benzene (Cumene) (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	Comments
HR-4	08/02/2007	280	9	270	19	578	33	NA	NA	NA	NA	NA	NA	
	10/29/2007	67	1 J	140	6	214 J	5	ND	32	10	ND	NA	NA	
	07/03/2008	270	7	120	2 J	399 J	14	ND	5 J	9	ND	NA	NA	
	10/08/2008	170	3 J	170	ND	343 J	6	ND	27	20	ND	NA	NA	
	01/22/2009	18	ND	32	5	55	7	ND	19	17	ND	NA	NA	
	04/28/2009	150	2	93	7 J	252 J	13	ND(4)	30	21	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	3 J	0.09 J	ND(0.2)	ND(0.5)	3 J	1 J	ND(4)	3 J	2 J	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	2 J	ND(0.07)	0.4 J	ND(0.5)	2 J	1 J	ND(4)	1 J	0.8 J	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	6 J	0.2 J	4 J	0.8 J	11 J	140	ND(4)	0.4 J	2 J	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	17	0.3 J	4 J	0.4 J	22 J	27	ND(4)	0.4 J	2 J	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	5 J	ND(0.08)	ND(0.2)	ND(0.4)	5 J	2 J	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	5 J	ND(0.07)	0.9 J	NA	6 J	3 J	ND(4)	ND(0.3)	0.7 J	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	4 J	0.2 J	2 J	NA	6 J	18	ND(11)	0.6 J	2 J	ND(0.2)	ND(0.3)	ND(0.3)	
HR-5	08/02/2007	0.6 J	ND	ND	ND	0.6 J	20	NA	NA	NA	NA	NA	NA	
	10/29/2007	ND	ND	ND	ND	BRL	29	13 J	1	ND	ND	NA	NA	
	07/03/2008	0.9 J	ND	ND	ND	0.9 J	25	ND	ND	ND	ND	NA	NA	
	10/08/2008	ND	ND	ND	ND	BRL	33	16 J	ND	ND	ND	NA	NA	
	01/22/2009	ND	ND	ND	ND	BRL	14	ND	ND	ND	ND	NA	NA	
	04/28/2009	0.5 J	0.2 J	3 J	0.9 J	5 J	13	ND(4)	ND(0.2)	1	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	2 J	2 J	ND(0.2)	ND(0.5)	4 J	24	ND(4)	ND(0.2)	0.3 J	0.3 J	ND(0.1)	ND(0.1)	
	11/17/2009	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	30	ND(4)	ND(0.2)	ND(0.1)	0.2 J	ND(0.1)	ND(0.1)	
	03/31/2010	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	4 J	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	0.3 J	0.2 J	ND(0.2)	ND(0.5)	0.5 J	22	ND(4)	ND(0.3)	ND(0.1)	0.3 J	ND(0.1)	ND(0.1)	
	10/21/2010	ND(0.1)	ND(0.08)	ND(0.2)	ND(0.4)	BRL	33	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	ND(0.08)	ND(0.07)	ND(0.2)	NA	BRL	1 J	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	0.3 J	ND(0.08)	0.4 J	NA	0.7 J	33	ND(11)	ND(0.2)	0.4 J	ND(0.2)	ND(0.3)	ND(0.3)	

Table 2 (Continued)

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	Naph-thalene (µg/L)	Iso-propyl-benzene (Cumene) (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	Comments
HR-6	08/02/2007	ND	ND	ND	ND	BRL	11	NA	NA	NA	NA	NA	NA	
	10/29/2007	ND	ND	4 J	ND	4 J	ND	ND	3 J	3 J	ND	NA	NA	
	07/03/2008	ND	ND	ND	ND	BRL	17	13 J	ND	ND	ND	NA	NA	
	10/07/2008	0.9 J	ND	ND	ND	0.9 J	17	13 J	ND	ND	ND	NA	NA	
	01/23/2009	5 J	ND	ND	ND	5 J	18	15 J	ND	1	ND	NA	NA	
	04/28/2009	4 J	0.5 J	1 J	2 J	8 J	7 J	ND(4)	0.4 J	0.9 J	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	2 J	0.3 J	0.3 J	0.8 J	3 J	16	ND(4)	0.4 J	2 J	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	3 J	0.4 J	0.6 J	0.7 J	5 J	12	ND(4)	0.6 J	1 J	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	36	99	340	420	895	ND(0.06)	ND(4)	270	77	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	18	2 J	0.5 J	1 J	22 J	20	ND(4)	0.8 J	14	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	68	6 J	8 J	9 J	91 J	16	ND(11)	1 J	20	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	49	78	300	NA	797 J	ND(0.06)	ND(4)	170	78	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	26	0.7 J	2 J	NA	31 J	22	ND(11)	2 J	8 J	ND(0.2)	ND(0.3)	ND(0.3)	
HR-7	08/02/2007	55	1 J	5	1 J	62 J	1 J	NA	NA	NA	NA	NA	NA	
	10/30/2007	89	2 J	13	10 J	114 J	0.7 J	ND	1	ND	ND	NA	NA	
	07/03/2008	17	ND	0.9 J	ND	18 J	ND	ND	ND	ND	ND	NA	NA	
	10/07/2008	280	7	41	23	351	1 J	ND	1 J	3 J	ND	NA	NA	
	01/22/2009	29	ND	2 J	ND	31 J	ND	ND	ND	ND	ND	NA	NA	
	04/28/2009	0.2 J	ND(0.07)	ND(0.2)	ND(0.5)	0.2 J	ND(0.06)	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	13	0.1 J	ND(0.2)	ND(0.5)	13 J	ND(0.06)	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	5 J	2 J	ND(0.2)	ND(0.5)	7 J	ND(0.06)	ND(4)	ND(0.2)	0.1 J	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	3 J	ND(0.07)	ND(0.2)	ND(0.5)	3 J	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	44	0.9 J	2 J	3 J	50 J	ND(0.09)	ND(11)	ND(0.2)	0.3 J	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	ND(0.08)	0.09 J	ND(0.2)	NA	0.09 J	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	3 J	ND(0.08)	ND(0.2)	NA	3 J	ND(0.09)	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	

Kleinfelder
1340 Charwood Road, Suite I, Hanover, MD

Table 2 (Continued)

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	Naph-thalene (µg/L)	Iso-propyl-benzene (Cumene) (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	Comments
SMW-1	08/03/2007	2 J	0.7 J	8	0.8 J	12 J	ND	NA	NA	NA	NA	NA	NA	
	10/08/2008	ND	ND	ND	ND	BRL	4 J	ND	ND	ND	ND	NA	NA	
	01/23/2009	ND	ND	ND	ND	BRL	7	ND	ND	ND	ND	NA	NA	
	04/28/2009	0.2 J	ND(0.07)	ND(0.2)	ND(0.5)	0.2 J	15	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	0.8 J	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	ND(0.06)	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	0.8 J	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	0.3 J	0.2 J	ND(0.2)	ND(0.5)	0.5 J	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	ND(0.1)	ND(0.08)	ND(0.2)	ND(0.4)	BRL	ND(0.09)	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	0.7 J	0.08 J	ND(0.2)	NA	0.8 J	8 J	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	ND(0.1)	ND(0.08)	ND(0.2)	NA	BRL	ND(0.09)	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	
MW-1	08/02/2007	ND	ND	ND	ND	BRL	ND	NA	NA	NA	NA	NA	NA	
	10/30/2007	ND	ND	ND	ND	BRL	0.5 J	ND	ND	ND	ND	NA	NA	
	07/03/2008	ND	ND	ND	ND	BRL	0.5 J	ND	ND	ND	ND	NA	NA	
	10/07/2008	ND	ND	ND	ND	BRL	ND	ND	ND	ND	ND	NA	NA	
	01/22/2009	ND	ND	ND	ND	BRL	ND	ND	ND	ND	ND	NA	NA	
	04/28/2009	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	ND(0.06)	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	0.3 J	0.07 J	ND(0.2)	ND(0.5)	0.4 J	0.6 J	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	0.2 J	ND(0.07)	ND(0.2)	ND(0.5)	0.2 J	1 J	ND(4)	ND(0.2)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	ND(0.08)	ND(0.07)	ND(0.2)	ND(0.5)	BRL	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	ND(0.08)	0.2 J	ND(0.2)	ND(0.5)	0.2 J	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	ND(0.1)	ND(0.08)	ND(0.2)	ND(0.4)	BRL	ND(0.09)	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	ND(0.08)	ND(0.07)	ND(0.2)	NA	BRL	ND(0.06)	ND(4)	ND(0.3)	ND(0.1)	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	ND(0.1)	ND(0.08)	ND(0.2)	NA	BRL	1 J	ND(11)	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.3)	ND(0.3)	

Table 2 (Continued)

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	Naph-thalene (µg/L)	Iso-propyl-benzene (Cumene) (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	Comments
MW-2	08/02/2007	80	7	2 J	29	118 J	9	NA	NA	NA	NA	NA	NA	
	10/30/2007	49	3 J	2 J	4 J	58 J	4 J	ND	ND	8	ND	NA	NA	
	07/03/2008	54	3 J	6	14	77 J	6	11 J	3 J	10	ND	NA	NA	
	10/07/2008	40	6	2	25	73	3 J	ND	4 J	15	ND	NA	NA	
	01/22/2009	33	4 J	3 J	8	48 J	2 J	ND	ND	14	ND	NA	NA	
	04/28/2009	23	3 J	0.9 J	6 J	33 J	ND(0.06)	ND(4)	ND(0.2)	9 J	ND(0.05)	ND(0.1)	ND(0.1)	
	08/04/2009	49	4 J	5 J	10	68 J	ND(0.06)	ND(4)	1 J	11	ND(0.05)	ND(0.1)	ND(0.1)	
	11/17/2009	23	3 J	3 J	11	40 J	ND(0.06)	ND(4)	4 J	19	ND(0.05)	ND(0.1)	ND(0.1)	
	03/31/2010	7 J	0.3 J	6 J	ND(0.5)	13 J	ND(0.06)	ND(4)	ND(0.3)	0.3 J	ND(0.05)	ND(0.1)	ND(0.1)	
	07/08/2010	43	2 J	6 J	4 J	55 J	ND(0.06)	ND(4)	0.9 J	2 J	ND(0.05)	ND(0.1)	ND(0.1)	
	10/21/2010	58	2 J	9 J	6 J	75 J	ND(0.09)	ND(11)	0.8 J	4 J	ND(0.2)	ND(0.3)	ND(0.3)	
	04/19/2011	4 J	0.8 J	0.4 J	NA	7 J	ND(0.06)	ND(4)	2 J	3 J	ND(0.05)	ND(0.1)	ND(0.1)	
	07/26/2011	12	2 J	1 J	NA	18 J	ND(0.09)	ND(11)	0.4 J	4 J	ND(0.2)	ND(0.3)	ND(0.3)	

Table 2 (Continued)

Historical Groundwater Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware
August 2, 2007 through July 26, 2011

Notes:

µg/L - micrograms per liter
BRL - Below laboratory reporting limits
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
J - Indicates an estimated value
MTBE - Methyl tertiary butyl ether
NA - Not analyzed
ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
NS - Not sampled
TAME - Tertiary amyl methyl ether
TBA - Tertiary butyl alcohol

TABLE 3

Zone 1 - Soil Vapor Analytical Data
Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, DE

May 19, 2009 through May 13, 2010

Sample ID	Date	Benzene (mg/m3)	Toluene (mg/m3)	Ethyl-benzene (mg/m3)	Total Xylenes (mg/m3)	Methyl Tertiary Butyl Ether (mg/m3)	Isopropyl-benzene (mg/m3)	1,2-Dichloro-ethane (EDC) (mg/m3)	1,2,4-Trimethyl-benzene (mg/m3)	1,3,5-Trimethyl-benzene (mg/m3)	2,2,4-Trimethyl-pentane (mg/m3)	Acetone (mg/m3)	Aceto-nitrile (mg/m3)	Carbon disulfide (mg/m3)	CFC-11 (Trichloro-fluoro-methane) (mg/m3)	CFC-12 (Dichloro-difluoro-methane) (mg/m3)	Chloro-difluoro-methane (mg/m3)	Dichloro-methane (Methylene chloride) (mg/m3)	Chloro-form (mg/m3)	Chloro-methane (mg/m3)	Hexane (mg/m3)	n-Heptane (mg/m3)	Octane (mg/m3)	Pentane (mg/m3)
Facilty/Ambient	5/19/2009	ND(0.0032)	0.0056	ND(0.0043)	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	ND(0.0047)	0.016	ND(0.0034)	ND(0.0031)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0035)	ND(0.0049)	ND(0.0021)	ND(0.0035)	ND(0.0041)	ND(0.0047)	0.0037
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	0.013	ND(0.0034)	ND(0.0031)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	NA	NA	NA
SVMP-1	5/19/2009	ND(3.2)	ND(3.8)	ND(4.3)	ND(4.3)	ND(3.6)	ND(4.9)	ND(4)	ND(4.9)	ND(4.9)	360	ND(4.8)	ND(3.4)	ND(3.1)	ND(5.6)	ND(4.9)	ND(3.5)	ND(3.5)	ND(4.9)	ND(2.1)	8.3	4.1	ND(4.7)	10
	5/13/2010	ND(0.64)	ND(0.75)	ND(0.87)	ND(0.87)	ND(0.72)	ND(0.98)	ND(0.81)	ND(0.98)	ND(0.98)	NA	1.3	ND(0.67)	ND(0.62)	ND(1.1)	ND(0.99)	ND(0.71)	ND(0.69)	ND(0.98)	ND(0.41)	NA	NA	NA	NA
SVMP-2	5/19/2009	ND(32)	ND(38)	ND(43)	ND(43)	ND(36)	ND(49)	ND(40)	ND(49)	ND(49)	2100	160	ND(34)	82	ND(56)	ND(49)	ND(35)	ND(35)	ND(49)	ND(21)	1100	320	55	890
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.019	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	0.02	ND(0.0034)	ND(0.0031)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	NA	NA	NA
SVMP-3	5/19/2009	**160**	ND(38)	68	ND(43)	ND(36)	ND(49)	ND(40)	ND(49)	ND(49)	4400	ND(48)	ND(34)	110	ND(56)	ND(49)	ND(35)	ND(35)	ND(49)	ND(21)	3100	690	110	2700
	5/13/2010	ND(64)	ND(75)	ND(87)	ND(87)	ND(72)	ND(98)	ND(81)	ND(98)	ND(98)	NA	160	ND(67)	ND(62)	ND(110)	ND(99)	ND(71)	ND(69)	ND(98)	ND(41)	NA	NA	NA	NA
SVMP-4	5/19/2009	41	ND(38)	ND(43)	ND(43)	ND(36)	ND(49)	ND(40)	ND(49)	ND(49)	3000	180	ND(34)	90	ND(56)	ND(49)	ND(35)	ND(35)	ND(49)	ND(21)	1300	350	ND(47)	1400
	5/13/2010	57	ND(7.5)	23	ND(8.7)	ND(7.2)	ND(9.8)	ND(8.1)	ND(9.8)	ND(9.8)	NA	ND(9.5)	ND(6.7)	ND(6.2)	ND(11)	ND(9.9)	ND(7.1)	ND(6.9)	ND(9.8)	ND(4.1)	NA	NA	NA	NA
DNREC SSTLs		**77**	**8500**	**22000**	**2100**	**65000**	**8700**	**23**	**130**	**130**	**NA**	**7200**	**1250**	**15000**	**15000**	**4400**	**1050000**	**1250**	**26**	**580**	**4000**	**NA**	**NA**	**NA**

Notes:

This table summarizes the soil vapor monitoring point analytical data for common gasoline constituents including BTEX and MTBE as well as detections of the analytes reported by the laboratory.
mg/m3 - milligrams per cubic meter
NA - Chemical Specific properties for this analyte are not included in the US EPA properties table associated with the Johnson and Ettinger model or laboratory analysis was not requested for this analyte.
ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
NS - Not sampled
DNREC SSTLs - Delaware Department of Naturals and Envionmrntal Control Site Specific Target Levels. Please note that the DNREC SSTLs were calculated using the US EPA Johnson and Ettinger models. The model outputs as depicted are not absolute and are subject to the parameters and assumptions of model input. For more information on the Johnson and Ettinger model and US EPA guidance on use of the model please reference: http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm

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TABLE 4

Zone 2 - Soil Vapor Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

May 19, 2009 through May 13, 2010

Sample ID	Date	Benzene (mg/m3)	Toluene (mg/m3)	Ethyl benzene (mg/m3)	Total Xylenes (mg/m3)	Methyl Tertiary Butyl Ether (mg/m3)	Isopropyl benzene (mg/m3)	1,2-Dichloro ethane (EDC) (mg/m3)	1,2,4-Trimethyl benzene (mg/m3)	1,3,5-Trimethyl benzene (mg/m3)	2,2,4-Trimethylp entane (mg/m3)	2-Butanone (MEK) (mg/m3)	4-Ethyl toluene (mg/m3)	Acetone (mg/m3)	Aceto nitrile (mg/m3)	CFC-11 (Trichloro fluoro methane) (mg/m3)	CFC-12 (Dichlorodi fluoro methane) (mg/m3)	Chlorodi fluoro methane (mg/m3)	Chloroform (mg/m3)	Chlorom ethane (mg/m3)	Hexane (mg/m3)	Methylene chloride (mg/m3)	Propylene (Propene) (mg/m3)	Styrene (Monomer) (mg/m3)	Tert-butyl Alcohol (mg/m3)	Tetrachloroe thene (PCE) (mg/m3)
SVMP-5	5/19/2009	0.63	0.17	1.3	ND(0.087)	ND(0.072)	ND(0.098)	ND(0.081)	0.51	0.33	5.4	ND(0.12)	0.17	0.46	ND(0.067)	ND(0.11)	ND(0.099)	ND(0.071)	ND(0.098)	ND(0.041)	2.8	0.18	ND(0.034)	ND(0.085)	ND(0.061)	ND(0.14)
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.028	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	ND(0.0059)	ND(0.0049)	0.012	ND(0.0034)	ND(0.0056)	0.015	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	ND(0.0035)	NA	0.0048	ND(0.003)	0.013
SVMP-6	5/19/2009	0.37	0.086	0.74	ND(0.087)	ND(0.072)	ND(0.098)	ND(0.081)	ND(0.098)	0.11	5.9	ND(0.12)	ND(0.098)	0.42	ND(0.067)	ND(0.11)	ND(0.099)	ND(0.071)	ND(0.098)	ND(0.041)	2.3	0.18	ND(0.034)	ND(0.085)	ND(0.061)	ND(0.14)
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.029	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	ND(0.0059)	ND(0.0049)	0.0083	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	ND(0.0035)	NA	ND(0.0043)	ND(0.003)	ND(0.0068)
SVMP-7	5/19/2009	0.1	ND(0.038)	0.22	ND(0.043)	ND(0.036)	ND(0.049)	ND(0.04)	0.13	0.071	0.96	ND(0.059)	ND(0.049)	ND(0.048)	ND(0.034)	ND(0.056)	ND(0.049)	ND(0.035)	ND(0.049)	ND(0.021)	0.59	ND(0.035)	ND(0.017)	ND(0.043)	ND(0.03)	ND(0.068)
	5/13/2010	ND(0.064)	ND(0.075)	ND(0.087)	ND(0.087)	ND(0.072)	ND(0.098)	ND(0.081)	ND(0.098)	ND(0.098)	NA	ND(0.12)	ND(0.098)	0.33	ND(0.067)	ND(0.11)	ND(0.099)	ND(0.071)	ND(0.098)	ND(0.041)	NA	ND(0.069)	NA	ND(0.085)	ND(0.061)	ND(0.14)
SVMP-8	5/19/2009	0.52	0.093	1.4	ND(0.087)	ND(0.072)	0.18	ND(0.081)	0.12	0.26	6.2	ND(0.12)	0.11	0.25	ND(0.067)	ND(0.11)	ND(0.099)	ND(0.071)	ND(0.098)	ND(0.041)	2.6	0.34	ND(0.034)	ND(0.085)	ND(0.061)	ND(0.14)
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.064	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	0.012	ND(0.0049)	0.051	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	ND(0.0035)	NA	0.012	0.0066	ND(0.0068)
SVMP-9	5/20/2009	0.28	0.097	0.77	ND(0.043)	ND(0.036)	0.06	ND(0.04)	0.6	0.31	1	ND(0.059)	0.16	0.14	ND(0.034)	ND(0.056)	ND(0.049)	0.041	ND(0.049)	ND(0.021)	0.91	0.31	0.27	ND(0.043)	ND(0.03)	ND(0.068)
	5/13/2010	*NS																								
SVMP-10	5/20/2009	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	ND(0.0047)	ND(0.0059)	ND(0.0049)	0.012	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	ND(0.0035)	ND(0.0035)	ND(0.0017)	ND(0.0043)	ND(0.003)	ND(0.0068)
	5/13/2010	0.049	ND(0.0075)	0.048	ND(0.0087)	ND(0.0072)	0.046	ND(0.0081)	ND(0.0098)	ND(0.0098)	NA	ND(0.012)	ND(0.0098)	0.025	ND(0.0067)	ND(0.011)	ND(0.0099)	ND(0.0071)	ND(0.0098)	ND(0.0041)	NA	ND(0.0069)	NA	ND(0.0085)	ND(0.0061)	ND(0.014)
SVMP-11	5/20/2009	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	ND(0.0047)	ND(0.0059)	ND(0.0049)	0.048	0.004	0.01	0.0059	ND(0.0035)	0.0088	0.0026	ND(0.0035)	0.042	ND(0.0017)	ND(0.0043)	ND(0.003)	ND(0.0068)
	5/13/2010	*NS																								
SVMP-12	5/20/2009	ND(0.0032)	ND(0.0038)	0.0075	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	0.03	ND(0.0059)	ND(0.0049)	0.021	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	0.0072	ND(0.0021)	0.011	0.027	ND(0.0017)	ND(0.0043)	ND(0.003)	ND(0.0068)
	5/13/2010	*NS																								
SVMP-13	5/20/2009	0.2	0.12	0.58	0.14	ND(0.036)	0.07	ND(0.04)	ND(0.049)	0.088	4.1	ND(0.059)	ND(0.049)	0.47	ND(0.034)	ND(0.056)	ND(0.049)	ND(0.035)	ND(0.049)	ND(0.021)	1.3	0.22	0.045	ND(0.043)	ND(0.03)	ND(0.068)
	5/13/2010	0.11	0.031	0.14	ND(0.0087)	ND(0.0072)	0.053	ND(0.0081)	0.073	0.044	NA	ND(0.012)	0.032	0.023	ND(0.0067)	ND(0.011)	ND(0.0099)	ND(0.0071)	0.011	ND(0.0041)	NA	ND(0.0069)	NA	ND(0.0085)	0.0063	ND(0.014)
SVMP-14	5/20/2009	0.43	0.12	1	ND(0.043)	ND(0.036)	0.1	ND(0.04)	0.92	0.5	2.3	ND(0.059)	0.25	0.18	ND(0.034)	ND(0.056)	ND(0.049)	ND(0.035)	ND(0.049)	ND(0.021)	1.1	0.089	0.035	ND(0.043)	ND(0.03)	ND(0.068)
	5/13/2010	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.025	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	ND(0.0059)	ND(0.0049)	0.017	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	ND(0.0035)	NA	0.0048	0.0065	ND(0.0068)
SVMP-15	5/20/2009	0.14	0.092	0.48	0.085	ND(0.036)	0.068	ND(0.04)	0.05	0.1	2.5	ND(0.059)	ND(0.049)	0.44	ND(0.034)	ND(0.056)	ND(0.049)	ND(0.035)	ND(0.049)	ND(0.021)	0.79	0.26	0.017	ND(0.043)	ND(0.03)	ND(0.068)
	5/13/2010	0.13	ND(0.075)	ND(0.087)	ND(0.087)	ND(0.072)	ND(0.098)	ND(0.081)	ND(0.098)	ND(0.098)	NA	ND(0.12)	ND(0.098)	ND(0.095)	ND(0.067)	ND(0.11)	ND(0.099)	ND(0.071)	ND(0.098)	ND(0.041)	NA	ND(0.069)	NA	ND(0.085)	ND(0.061)	ND(0.14)
SVMP-16	5/20/2009	ND(0.0032)	ND(0.0038)	ND(0.0043)	ND(0.0043)	ND(0.0036)	ND(0.0049)	ND(0.004)	ND(0.0049)	ND(0.0049)	ND(0.0047)	ND(0.0059)	ND(0.0049)	0.017	0.0055	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	ND(0.0035)	0.06	ND(0.0017)	ND(0.0043)	ND(0.003)	ND(0.0068)
	5/13/2010	ND(0.0032)	0.0039	ND(0.0043)	ND(0.0043)	ND(0.0036)	0.04	ND(0.004)	ND(0.0049)	ND(0.0049)	NA	ND(0.0059)	ND(0.0049)	0.023	ND(0.0034)	ND(0.0056)	ND(0.0049)	ND(0.0035)	ND(0.0049)	ND(0.0021)	NA	ND(0.0035)	NA	ND(0.0043)	0.0035	ND(0.0068)
DNREC SSTLs		**51**	**7000**	**18000**	**1750**	**52000**	**7200**	**15.5**	**105**	**105**	**NA**	**NA**	**NA**	**5900**	**1000**	**12000**	**3500**	**NA**	**18**	**400**	**3100000**	**850**	**NA**	**NA**	**NA**	**2.4**

Notes:
This table summarizes the soil vapor monitoring point analytical data for common gasoline constituents including BTEX and MTBE as well as detections of the analytes reported by the laboratory.
mg/m3 - milligrams per cubic meter
NA - Chemical Specific properties for this analyte are not included in the US EPA properties table associated with the Johnson and Ettinger model or laboratory analysis was not requested for this analyte.
ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
DNREC SSTLs - Delaware Department of Naturals and Envionmrntal Conservation Site Specific Target Levels presented in the October 2009 Vapor Intrusion Investigation Report.
Please note that the DNREC SSTLs were calculated using the US EPA Johnson and Ettinger models. The model outputs as depicted are not absolute and are subject to the parameters
and assumptions of model input. For more information on the Johnson and Ettinger model and US EPA guidance on use of the model please reference:
*NS - Well destroyed by property owner

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Table 5

9 Hillside Road Indoor Air Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

Analyte	Unit	Target Indoor Air Concentration to Satisfy both the Prescribed Risk Level (RL =10^{-5}) and the Target Hazard Index (HI =1)	EPA 1988 National Ambient VOCs Indoor (A)	EPA 1988 National Ambient VOCs Outdoor (A)	5/13/2009	6/29/2010	5/13/2009	6/29/2010	5/13/2009	6/29/2010
					9 Hillside 1st Floor	9 Hillside 1st Floor	9 Hillside Basement	9 Hillside Basement	9 Hillside Ambient	9 Hillside Ambient
Benzene[1]	mg/m3	0.00310	0.0033-0.021	0.002-0.011	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)
Toluene[2]	mg/m3	5.20	0-0	0.0006-0.02	0.0045	0.0094	0.0053	0.0062	ND(0.0038)	ND(0.0038)
Ethylbenzene[1]	mg/m3	0.00970	0.002-0.0096	0.001-0.0054	ND(0.0043)	ND(0.0043)	**0.017**	0.0048	ND(0.0043)	ND(0.0043)
m/p Xylene[2]	mg/m3	0.73	0.0043-0.018	0.002-0.011	ND(0.0043)	ND(0.0043)	0.020	0.015	ND(0.0043)	ND(0.0043)
o-Xylene[2]	mg/m3	0.73	0.002-0.0093	0.001-0.0065	ND(0.0043)	ND(0.0043)	0.0062	0.0095	ND(0.0043)	ND(0.0043)
MTBE1	mg/m3	0.094	NA	NA	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)
Tert-butyl Alcohol[1]	mg/m3	NA	NA	NA	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)
Cumene[2]	mg/m3	0.42	0-0.00084	0-0	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)
1,2-Dibromomethane (EDB)[2]	mg/m3	0.0042	0-0	0-0.00008	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)
1,2-Dichloroethane (EDC)[1]	mg/m3	0.00094	0-0	0-0.00022	ND(0.0040)	**0.0043**	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
Detected VOCs										
1,2,4-Trimethylbenzene[2]	mg/m3	0.0073	0.0006-0.004	0.0028-0.0074	ND(0.0049)	**0.011**	**0.015**	0.0063	ND(0.0049)	ND(0.0049)
2-Butanone (MEK)[2]	mg/m3	5.20	0.012-0.042	0-0	ND(0.0059)	ND(0.0059)	0.0074	0.0084	0.0064	ND(0.0059)
Acetone[2]	mg/m3	32.0	0.011-0.027	0-0.0067	0.015	0.037	0.036	0.026	0.016	0.012
Carbon disulfide[2]	mg/m3	0.73	NA	0.00012-0.0005	0.0054	ND(0.0031)	ND(0.0031)	ND(0.0031)	ND(0.0031)	ND(0.0031)
Chloromethane[2]	mg/m3	0.094	NA	0.0013-0.0015	ND(0.0021)	0.0025	ND(0.0021)	ND(0.0021)	ND(0.0021)	ND(0.0021)
Ethyl acetate[1]	mg/m3	NA	NA	NA	0.0074	0.0044	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)
Hexane[2]	mg/m3	0.73	0-0.004	0.0029-0.01	ND(0.0035)	ND(0.0035)	0.0037	ND(0.0035)	ND(0.0035)	ND(0.0035)
Pentane[2]	mg/m3	1.00	0.0013-0.0053	0.0058-0.018	ND(0.0030)	ND(0.0030)	0.0070	0.0048	ND(0.0030)	ND(0.0030)
Propylene (Propene)[2]	mg/m3	3.10	NA	NA	0.011	ND(0.0017)	0.024	ND(0.0017)	ND(0.0017)	ND(0.0017)

Notes:

mg/m3 - milligrams per cubic meter

VOCs- Volatile Organic Compunds

(A) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Appendix C, Table C-4, National Ambient Volatile Organic Compounds, EPA 1988 database for indoor and outdoor air (25th and 75th percentile)

NA - Not Available

ND(0.0032) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

Bold - Concentration is above the target indoor air concentration

1 Concentrations to satisfy the carcinogenic perscribed risk level of 1x10-5

2 Concentrations to staisfy the non-carcinogenic perscribed risk level of H=1

Table 6

10 Hillside Road Indoor Air Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

Analyte	Unit	Target Indoor Air Concentration to Satisfy both the Prescribed Risk Level (RL =10^{-5}) and the Target Hazard Index (HI =1)	EPA 1988 National Ambient VOCs Indoor (A)	5/13/2009	7/7/2009	6/29/2010	5/13/2009	7/7/2009	6/29/2010	11/10/2010	5/13/2009	7/7/2009	6/29/2010
				10 Hillside 1st Floor	10 Hillside 1st Floor	10 Hillside 1st Floor	10 Hillside Basement	10 Hillside Basement	10 Hillside Basement	10 Hillside Basement	10 Hillside Ambient	10 Hillside Ambient	10 Hillside Ambient
Benzene[1]	mg/m3	0.00310	0.0033-0.021	**0.019**	ND(0.0029)	ND(0.0032)	**0.055**	**0.012**	**0.0072**	**0.0072**	ND(0.0032)	ND(0.0029)	ND(0.0032)
Toluene[2]	mg/m3	5.20	0-0	0.083	0.0055	0.015	0.23	0.083	0.029	0.045	ND(0.0038)	ND(0.0034)	ND(0.0038)
Ethylbenzene[1]	mg/m3	0.0097	0.002-0.0096	0.0071	ND(0.0039)	ND(0.0043)	**0.023**	**0.028**	ND(0.0043)	0.0062	ND(0.0043)	ND(0.0039)	ND(0.0043)
m/p Xylene[2]	mg/m3	0.73	0.0043-0.018	0.028	ND(0.0043)	0.0071	0.081	0.10	ND(0.0043)	0.028	ND(0.0043)	ND(0.0039)	0.019
o-Xylene[2]	mg/m3	0.73	0.002-0.0093	0.0077	ND(0.0039)	ND(0.0043)	0.024	0.043	0.0046	0.0082	ND(0.0043)	ND(0.0039)	ND(0.0043)
MTBE[1]	mg/m3	0.094	NA	ND(0.0036)	ND(0.0033)	ND(0.0036)	ND(0.0036)	0.0089	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0033)	ND(0.0036)
Tert-butyl Alcohol[1]	mg/m3	NA	NA	ND(0.0030)	ND(0.0028)	ND(0.0030)	ND(0.0030)	ND(0.0028)	ND(0.0030)	ND(0.003)	ND(0.0030)	ND(0.0028)	ND(0.0030)
Cumene[2]	mg/m3	0.420	0-0.00084	ND(0.0049)	ND(0.0045)	ND(0.0049)	ND(0.0049)	ND(0.0045)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0045)	ND(0.0049)
1,2-Dibromomethane (EDB)[2]	mg/m3	0.00420	0-0	ND(0.0071)	ND(0.0065)	ND(0.0071)	ND(0.0071)	ND(0.0065)	ND(0.0071)	ND(0.0077)	ND(0.0071)	ND(0.0065)	ND(0.0071)
1,2-Dichloroethane (EDC)[1]	mg/m3	0.00094	0-0	**0.0047**	ND(0.0037)	ND(0.0040)	ND(0.0040)	ND(0.0037)	ND(0.0040)	ND(0.004)	ND(0.0040)	ND(0.0037)	ND(0.0040)
Detected VOCs													
1,2,4-Trimethylbenzene[2]	mg/m3	0.0073	0.0006-0.004	ND(0.0049)	ND(0.0045)	ND(0.0049)	**0.013**	**0.015**	0.0051	0.0073	ND(0.0049)	ND(0.0045)	ND(0.0049)
1,3,5-Trimethylbenzene[1]	mg/m3	NA	0-0.0054	ND(0.0049)	ND(0.0045)	ND(0.0049)	ND(0.0049)	0.0049	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0045)	ND(0.0049)
2,2,4-Trimethylpentane (Iso Octane)[1]	mg/m3	NA	NA	0.043	ND(0.0042)	0.0052	0.12	0.024	0.013	NA	ND(0.0047)	ND(0.0042)	ND(0.0047)
2-Butanone (MEK)[2]	mg/m3	5.2	0.012-0.042	0.0071	ND(0.0054)	ND(0.0059)	0.0074	ND(0.0054)	ND(0.0059)	ND(0.0059)	ND(0.0059)	ND(0.0054)	ND(0.0059)
Acetone[2]	mg/m3	32.0	0.011-0.027	0.032	0.024	0.039	0.031	0.024	0.028	0.025	0.012	0.0058	0.012
Carbon disulfide[2]	mg/m3	0.730	NA	ND(0.0031)	ND(0.0028)	0.0037	ND(0.0031)	ND(0.0028)	ND(0.0031)	ND(0.0031)	ND(0.0031)	ND(0.0028)	ND(0.0031)
Chlorodifluoromethane[2]	mg/m3	52.0	NA	ND(0.0035)	0.011	ND(0.0035)	ND(0.0035)	0.011	ND(0.0035)	ND(0.0035)	ND(0.0035)	0.013	ND(0.0035)
Dichloromethane (Methylene chloride)[1]	mg/m3	0.0520	NA	0.0097	0.0048	0.018	0.038	0.027	0.021	0.024	ND(0.0035)	ND(0.0032)	ND(0.0035)
Ethyl acetate[1]	mg/m3	NA	NA	0.0065	ND(0.0033)	0.012	ND(0.0036)	ND(0.0033)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0033)	ND(0.0036)
Hexane[2]	mg/m3	0.730	0-0.004	0.074	ND(0.0032)	0.0069	0.21	0.019	0.018	NA	ND(0.0035)	ND(0.0032)	ND(0.0035)
n-Heptane[1]	mg/m3	NA	0.0045-0.006	0.030	ND(0.0037)	ND(0.0041)	0.11	0.011	0.0059	NA	ND(0.0041)	ND(0.0037)	ND(0.0041)
Octane[1]	mg/m3	NA	NA	0.0061	ND(0.0042)	ND(0.0047)	0.013	0.0095	ND(0.0047)	NA	ND(0.0047)	ND(0.0042)	ND(0.0047)
Pentane[2]	mg/m3	1.00	0.0013-0.0053	0.029	ND(0.0027)	0.014	0.080	0.019	0.036	NA	ND(0.0030)	ND(0.0027)	ND(0.0030)
Propylene (Propene)[2]	mg/m3	3.10	NA	ND(0.0017)	0.003	ND(0.0017)	ND(0.0017)	0.012	ND(0.0017)	NA	ND(0.0017)	ND(0.0016)	ND(0.0017)
Styrene (Monomer)[2]	mg/m3	1.00	0-0.0028	ND(0.0043)	ND(0.0039)	ND(0.0043)	ND(0.0043)	0.0040	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0039)	ND(0.0043)

Notes:

mg/m3 - milligrams per cubic meter

VOCs- Volatile Organic Compunds

(A) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Appendix C, Table C-4, National Ambient Volatile Organic Compounds, EPA 1988 database for indoor and outdoor air (25th and 75th percentile)

NA - Not Available

ND(0.0032) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

Bold - Concentration is above the target indoor air concentration

1 Concentrations to satisfy the carcinogenic perscribed risk level of 1x10-5

2 Concentrations to staisfy the non-carcinogenic perscribed risk level of H=1

TABLE 7

10 Hillside Sub-Slab Analytical Data

Ron's Discount Energy Mart

2509 Philadelphia Pike

Claymont, DE

November 10, 2010

Analyte	Unit	11/10/2010	11/10/2010	11/10/2010
		Ambient (Collected from Basement Interior)	SS-1	SS-2
1,1,1,2-Tetrachloroethane	mg/m3	ND(0.0069)	ND(0.0069)	ND(0.01)
1,1,1-Trichloroethane	mg/m3	ND(0.0055)	ND(0.0055)	ND(0.0082)
1,1,2,2-Tetrachloroethane	mg/m3	ND(0.0069)	ND(0.0069)	ND(0.01)
1,1,2-Trichloroethane	mg/m3	ND(0.0055)	ND(0.0055)	ND(0.0082)
1,1-Dichloroethane	mg/m3	ND(0.004)	ND(0.004)	ND(0.0061)
1,1-Dichloroethylene (1,1-Dichloroethene)	mg/m3	ND(0.004)	ND(0.004)	ND(0.0059)
1,2,3-Trichloropropane	mg/m3	ND(0.006)	ND(0.006)	ND(0.009)
1,2,4-Trichlorobenzene	mg/m3	ND(0.015)	ND(0.015)	ND(0.022)
1,2,4-Trimethylbenzene	mg/m3	0.0073	0.0063	ND(0.0074)
1,2-Dichlorobenzene	mg/m3	ND(0.006)	ND(0.006)	ND(0.009)
1,2-Dichloroethane (EDC)	mg/m3	ND(0.004)	ND(0.004)	ND(0.0061)
1,2-Dichloropropane	mg/m3	ND(0.0046)	ND(0.0046)	ND(0.0069)
1,2-Dichlorotetrafluoroethane; Freon 114	mg/m3	ND(0.007)	ND(0.007)	ND(0.01)
1,3,5-Trimethylbenzene	mg/m3	ND(0.0049)	ND(0.0049)	ND(0.0074)
1,3-Butadiene	mg/m3	ND(0.0044)	ND(0.0044)	ND(0.0066)
1,3-Dichlorobenzene	mg/m3	ND(0.006)	ND(0.006)	ND(0.009)
1,4-Dichlorobenzene	mg/m3	ND(0.006)	ND(0.006)	ND(0.009)
1,4-Dioxane (Diethylene oxide)	mg/m3	ND(0.0036)	ND(0.0036)	ND(0.0054)
2-Butanone (MEK)	mg/m3	ND(0.0059)	ND(0.0059)	ND(0.0088)
2-Hexanone	mg/m3	ND(0.0082)	ND(0.0082)	ND(0.012)
4-Ethyltoluene	mg/m3	ND(0.0049)	ND(0.0049)	ND(0.0074)
4-Methyl-2-pentanone (MIBK)	mg/m3	ND(0.0082)	ND(0.0082)	ND(0.012)
Acetone	mg/m3	0.025	0.026	0.033
Acetonitrile	mg/m3	ND(0.0034)	ND(0.0034)	ND(0.005)
Acrolein	mg/m3	ND(0.0046)	ND(0.0046)	ND(0.0069)
Acrylonitrile	mg/m3	ND(0.0043)	ND(0.0043)	ND(0.0065)
Benzene	mg/m3	0.0072	ND(0.0032)	ND(0.0048)
Bromobenzene	mg/m3	ND(0.0064)	ND(0.0064)	ND(0.0096)
Bromodichloromethane	mg/m3	ND(0.0067)	ND(0.0067)	ND(0.01)
Bromoform	mg/m3	ND(0.01)	ND(0.01)	ND(0.016)
Bromomethane	mg/m3	ND(0.0039)	ND(0.0039)	ND(0.0058)
Carbon disulfide	mg/m3	ND(0.0031)	0.004	ND(0.0047)
Carbon Tetrachloride	mg/m3	ND(0.0063)	ND(0.0063)	ND(0.0094)
CFC-11 (Trichlorofluoromethane)	mg/m3	ND(0.0056)	ND(0.0056)	ND(0.0084)
CFC-12 (Dichlorodifluoromethane)	mg/m3	ND(0.0049)	ND(0.0049)	ND(0.0074)
Chlorinated fluorocarbon (Freon 113)	mg/m3	ND(0.015)	ND(0.015)	ND(0.023)
Chlorobenzene	mg/m3	ND(0.0046)	ND(0.0046)	ND(0.0069)
Chlorodibromomethane(Dibromochloromethane)	mg/m3	ND(0.0085)	ND(0.0085)	ND(0.013)
Chlorodifluoromethane	mg/m3	ND(0.0035)	ND(0.0035)	ND(0.0053)
Chloroethane	mg/m3	ND(0.0026)	ND(0.0026)	ND(0.004)
Chloroform	mg/m3	ND(0.0049)	0.0067	ND(0.0073)
Chloromethane	mg/m3	ND(0.0021)	ND(0.0021)	ND(0.0031)
cis-1,2-Dichloroethene	mg/m3	ND(0.004)	ND(0.004)	ND(0.0059)
cis-1,3-Dichloropropene	mg/m3	ND(0.0045)	ND(0.0045)	ND(0.0068)
Dibromomethane	mg/m3	ND(0.0071)	ND(0.0071)	ND(0.011)
Dichloromonofluoromethane (Dichlorofloromethane)	mg/m3	ND(0.0042)	ND(0.0042)	ND(0.0063)
Ethyl acetate	mg/m3	ND(0.0036)	ND(0.0036)	ND(0.0054)
Ethyl methacrylate	mg/m3	ND(0.0047)	ND(0.0047)	ND(0.007)
Ethylbenzene	mg/m3	0.0062	0.0086	0.011
Ethylene Dibromide(1,2-Dibromoethane)	mg/m3	ND(0.0077)	ND(0.0077)	ND(0.012)
Hexachloro-1,3-Butadiene (Hexachlorobutadiene)	mg/m3	ND(0.021)	ND(0.021)	ND(0.032)
Hexachloroethane	mg/m3	ND(0.0097)	ND(0.0097)	ND(0.015)
Iodomethane (Methyl Iodide)	mg/m3	ND(0.0058)	ND(0.0058)	ND(0.0087)
Isopropylbenzene (Cumene)	mg/m3	ND(0.0049)	0.14	0.18
Methyl acrylate	mg/m3	ND(0.0035)	ND(0.0035)	ND(0.0053)
Methyl methacrylate	mg/m3	ND(0.0041)	ND(0.0041)	ND(0.0061)
Methyl Tertiary Butyl Ether	mg/m3	ND(0.0036)	ND(0.0036)	ND(0.0054)
Methylene chloride	mg/m3	0.024	ND(0.0035)	ND(0.0052)
m/p-Xylene	mg/m3	0.028	0.025	0.031
o-Xylene	mg/m3	0.0082	0.0085	0.0094
Styrene (Monomer)	mg/m3	ND(0.0043)	0.0074	0.0083
Tert-butyl Alcohol	mg/m3	ND(0.003)	0.0041	ND(0.0045)
Tetrachloroethene (PCE)	mg/m3	ND(0.0068)	ND(0.0068)	ND(0.01)
Toluene	mg/m3	0.045	0.016	0.028
trans-1,2-Dichloroethene	mg/m3	ND(0.004)	ND(0.004)	ND(0.0059)
trans-1,3-Dichloropropene	mg/m3	ND(0.0045)	ND(0.0045)	ND(0.0068)
Trichloroethylene (TCE)	mg/m3	ND(0.0054)	ND(0.0054)	ND(0.0081)
Vinyl acetate	mg/m3	ND(0.0035)	ND(0.0035)	ND(0.0053)
Vinyl chloride	mg/m3	ND(0.0026)	ND(0.0026)	ND(0.0038)

Notes:

mg/m3 - milligrams per cubic meter

NA - Not analyzed

ND(5.0) - Not detected at or above the laboratory reporting limit, laborato

Table 8

12 Hillside Road Indoor Air Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

Analyte	Unit	Target Indoor Air Concentration to Satisfy both the Prescribed Risk Level (RL =10^{-5}) and the Target Hazard Index (HI =1)	EPA 1988 National Ambient VOCs Indoor (A)	EPA 1988 National Ambient VOCs Outdoor (A)	5/13/2009	6/29/2010	5/13/2009	6/29/2010	5/13/2009	6/29/2010
					12 Hillside 1st Floor	12 Hillside 1st Floor	12 Hillside Basement	12 Hillside Basement	12 Hillside Ambient	12 Hillside Ambient
Benzene[1]	mg/m3	0.0031	0.0033-0.021	0.002-0.011	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)
Toluene[2]	mg/m3	5.20	0-0	0.0006-0.02	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)
Ethylbenzene[1]	mg/m3	0.0097	0.002-0.0096	0.001-0.0054	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.0073
m/p Xylene[2]	mg/m3	0.73	0.0043-0.018	0.002-0.011	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.025
o-Xylene[2]	mg/m3	0.73	0.002-0.0093	0.001-0.0065	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.015
MTBE[1]	mg/m3	0.094	NA	NA	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)
Tert-butyl Alcohol[1]	mg/m3	NA	NA	NA	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)
Cumene[2]	mg/m3	0.42	0-0.00084	0-0	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)
1,2-Dibromomethane (EDB)[2]	mg/m3	0.0042	0-0	0-0.00008	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)
1,2-Dichloroethane (EDC)[1]	mg/m3	0.00094	0-0	0-0.00022	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
Detected VOC's										
Acetone[2]	mg/m3	32.0	0.011-0.027	0-0.0067	0.011	0.038	0.020	0.022	0.012	0.0079
Chloromethane[2]	mg/m3	0.094	NA	0.0013-0.0015	ND(0.0021)	0.0037	ND(0.0021)	ND(0.0021)	ND(0.0021)	ND(0.0021)
Dichloromethane (Methylene chloride)[1]	mg/m3	0.052	NA	0.0011-0.0063	ND(0.0035)	0.0096	ND(0.0035)	ND(0.0035)	ND(0.0035)	0.006
Hexane[2]	mg/m3	0.73	0-0.004	0.0029-0.01	ND(0.0035)	ND(0.0035)	ND(0.0035)	0.004	ND(0.0035)	ND(0.0035)
Pentane[2]	mg/m3	1.00	0.0013-0.0053	0.0058-0.018	0.0033	ND(0.0030)	0.0047	ND(0.0030)	ND(0.0030)	ND(0.0030)
Propylene (Propene)[2]	mg/m3	3.10	NA	NA	ND(0.0017)	ND(0.0017)	0.0062	ND(0.0017)	ND(0.0017)	ND(0.0017)

Notes:
mg/m3 - milligrams per cubic meter
VOCs- Volatile Organic Compunds
(A) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Appendix C, Table C-4, National Ambient Volatile Organic Compounds, EPA 1988 database for indoor and outdoor air (25th and 75th percentile)
NA - Not Available
ND(0.0032) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
Bold - Concentration is above the target indoor air concentration
1 Concentrations to satisfy the carcinogenic perscribed risk level of 1x10-5

Table 9

12 Hillside Road Indoor Air Analytical Data

Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont, Delaware

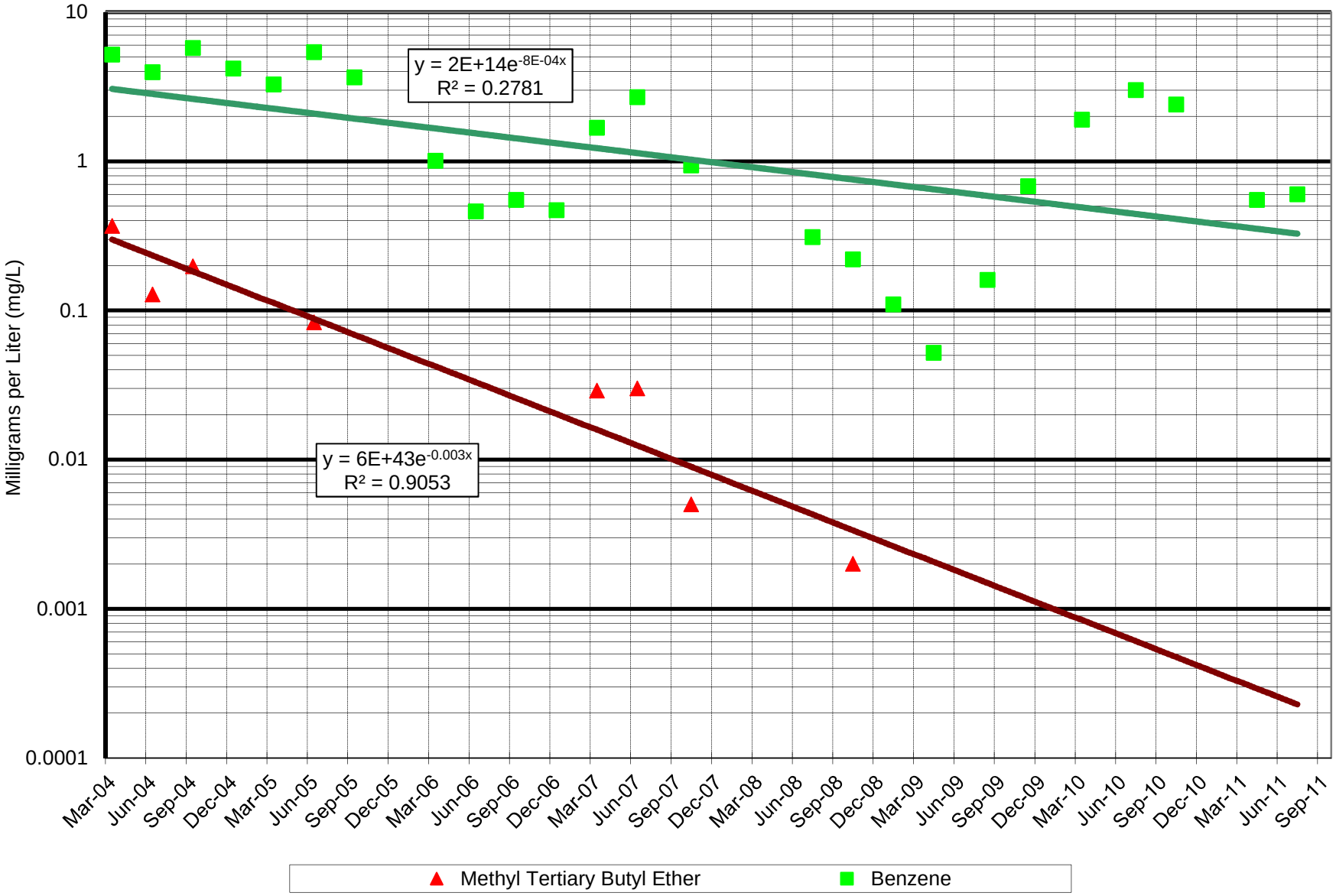
Analyte	Unit	Target Indoor Air Concentration to Satisfy both the Prescribed Risk Level (RL =10^{-5}) and the Target Hazard Index (HI =1)	EPA 1988 National Ambient VOCs Indoor (A)	EPA 1988 National Ambient VOCs Outdoor (A)	5/13/2009	6/29/2010	5/13/2009	6/29/2010	5/13/2009	6/29/2010
					12 Hillside 1st Floor	12 Hillside 1st Floor	12 Hillside Basement	12 Hillside Basement	12 Hillside Ambient	12 Hillside Ambient
Benzene[1]	mg/m3	0.0031	0.0033-0.021	0.002-0.011	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)	ND(0.0032)
Toluene[2]	mg/m3	5.20	0-0	0.0006-0.02	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)	ND(0.0038)
Ethylbenzene[1]	mg/m3	0.0097	0.002-0.0096	0.001-0.0054	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.0073
m/p Xylene[2]	mg/m3	0.73	0.0043-0.018	0.002-0.011	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.025
o-Xylene[2]	mg/m3	0.73	0.002-0.0093	0.001-0.0065	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	ND(0.0043)	0.015
MTBE[1]	mg/m3	0.094	NA	NA	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)	ND(0.0036)
Tert-butyl Alcohol[1]	mg/m3	NA	NA	NA	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)
Cumene[2]	mg/m3	0.42	0-0.00084	0-0	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)	ND(0.0049)
1,2-Dibromomethane (EDB)[2]	mg/m3	0.0042	0-0	0-0.00008	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)	ND(0.0071)
1,2-Dichloroethane (EDC)[1]	mg/m3	0.00094	0-0	0-0.00022	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
Detected VOC's	mg/m3									
Acetone[2]	mg/m3	32.0	0.011-0.027	0-0.0067	0.011	0.038	0.020	0.022	0.012	0.0079
Chloromethane[2]	mg/m3	0.094	NA	0.0013-0.0015	ND(0.0021)	0.0037	ND(0.0021)	ND(0.0021)	ND(0.0021)	ND(0.0021)
Dichloromethane (Methylene chloride)[1]	mg/m3	0.052	NA	0.0011-0.0063	ND(0.0035)	0.0096	ND(0.0035)	ND(0.0035)	ND(0.0035)	0.006
Hexane[2]	mg/m3	0.73	0-0.004	0.0029-0.01	ND(0.0035)	ND(0.0035)	ND(0.0035)	0.004	ND(0.0035)	ND(0.0035)
Pentane[2]	mg/m3	1.00	0.0013-0.0053	0.0058-0.018	0.0033	ND(0.0030)	0.0047	ND(0.0030)	ND(0.0030)	ND(0.0030)
Propylene (Propene)[2]	mg/m3	3.10	NA	NA	ND(0.0017)	ND(0.0017)	0.0062	ND(0.0017)	ND(0.0017)	ND(0.0017)

Notes:
mg/m3 - milligrams per cubic meter
VOCs- Volatile Organic Compunds
(A) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Appendix C, Table C-4, National Ambient Volatile Organic Compounds, EPA 1988 database for indoor and outdoor air (25th and 75th
NA - Not Available
ND(0.0032) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
Bold - Concentration is above the target indoor air concentration
1 Concentrations to satisfy the carcinogenic perscribed risk level of 1x10-5

Appendix A -

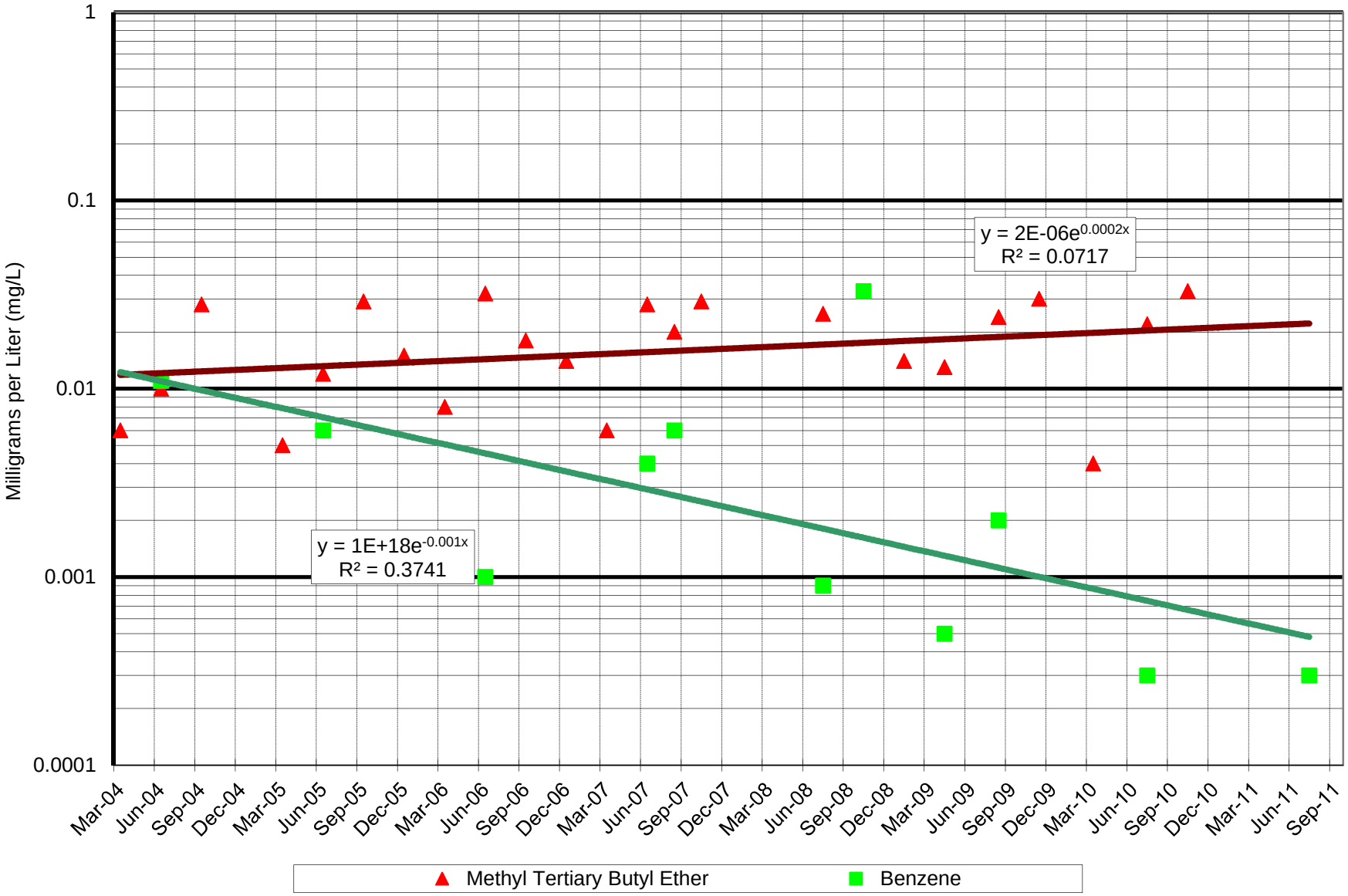
Groundwater Trend Analysis

HR-2
Trend Analysis of Benzene and MTBE Over Time
Ron's Discount Energy Mart



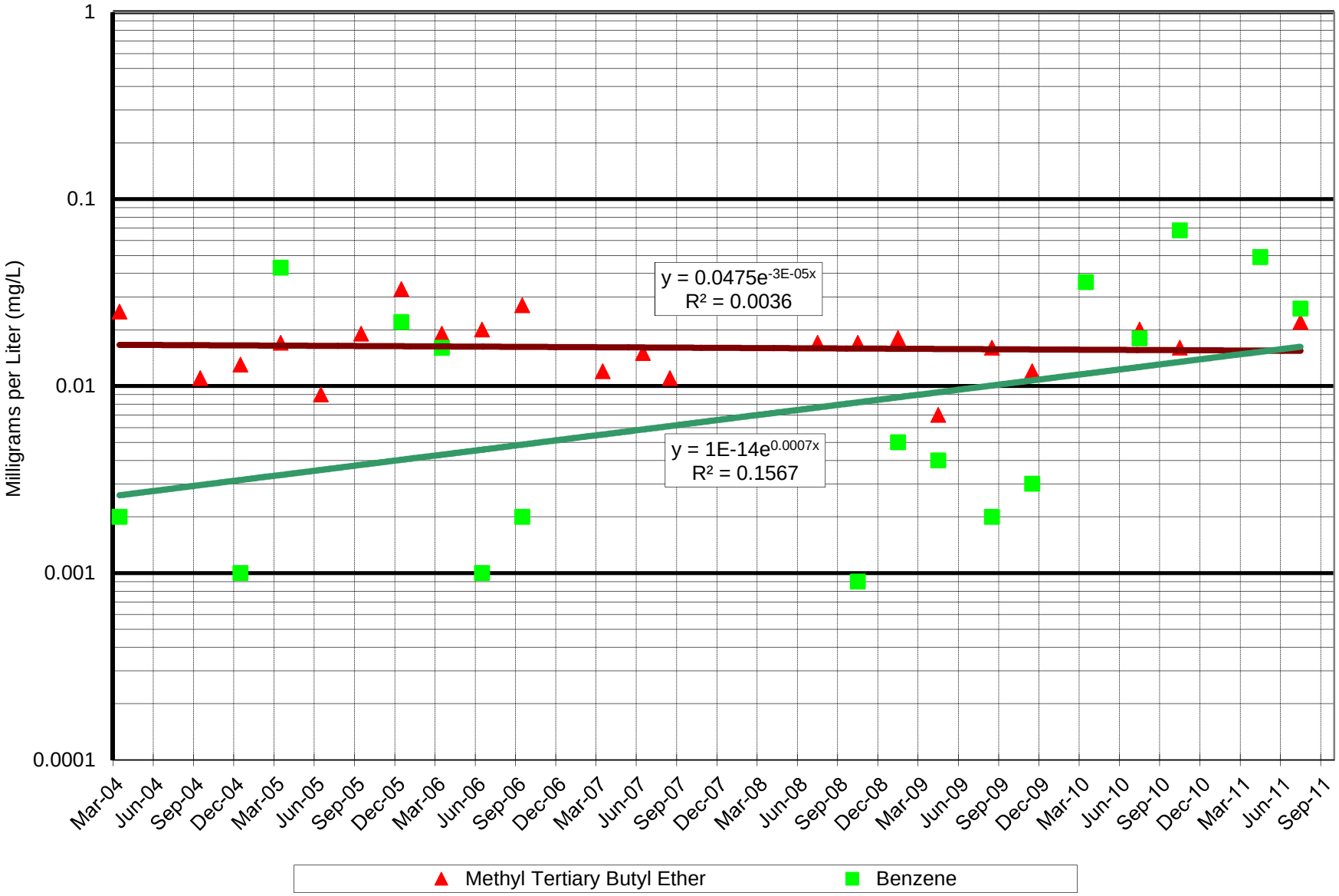
Ref# 0101602_Tbl_Charts 06-07.xls\Chart5

HR-5
Trend Analysis of Benzene and MTBE Over Time
Ron's Discount Energy Mart



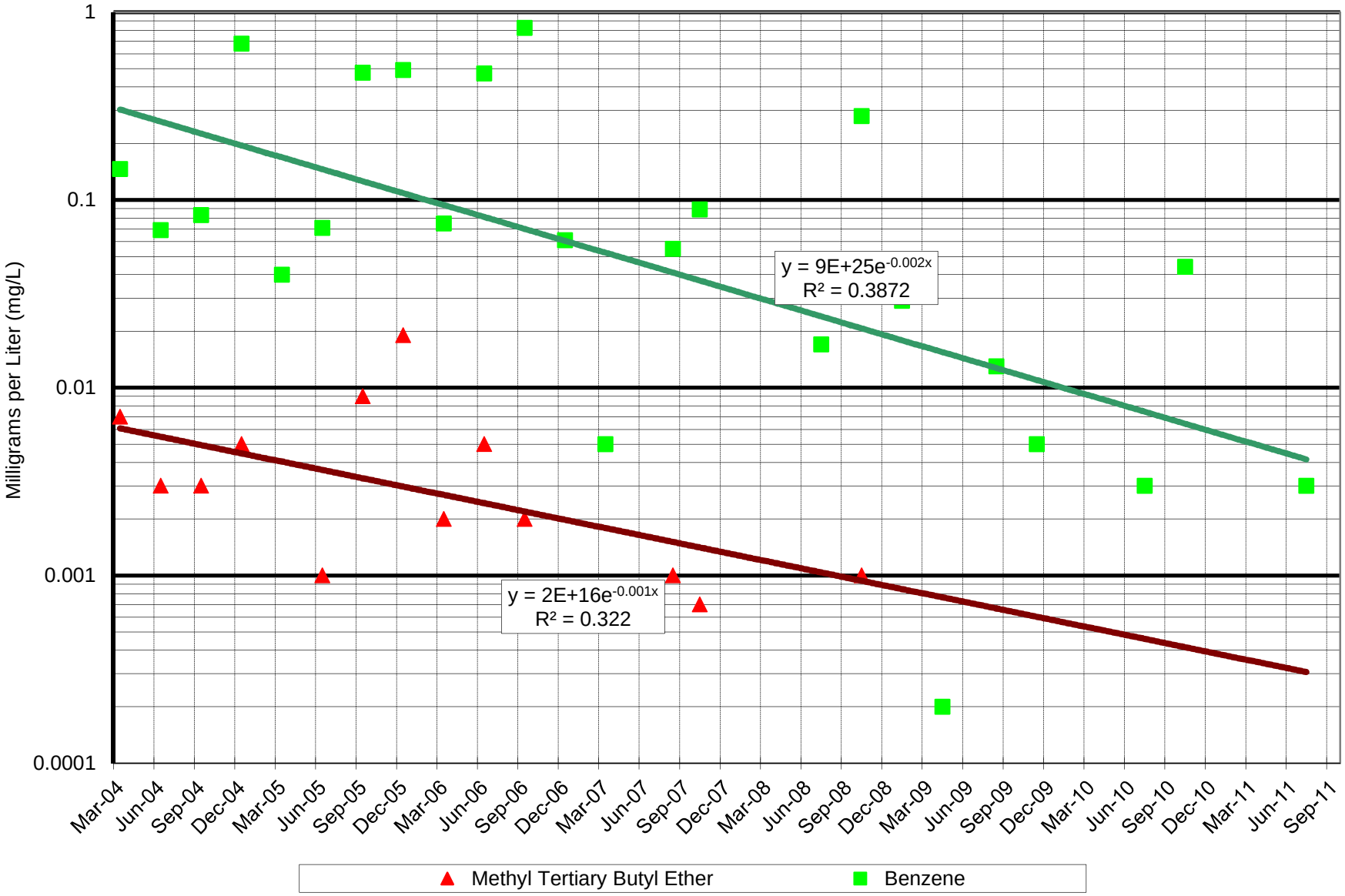
Ref# 0101602_Tbl_Charts 06-07.xls\Chart5

HR-6
Trend Analysis of Benzene and MTBE Over Time
Ron's Discount Energy Mart



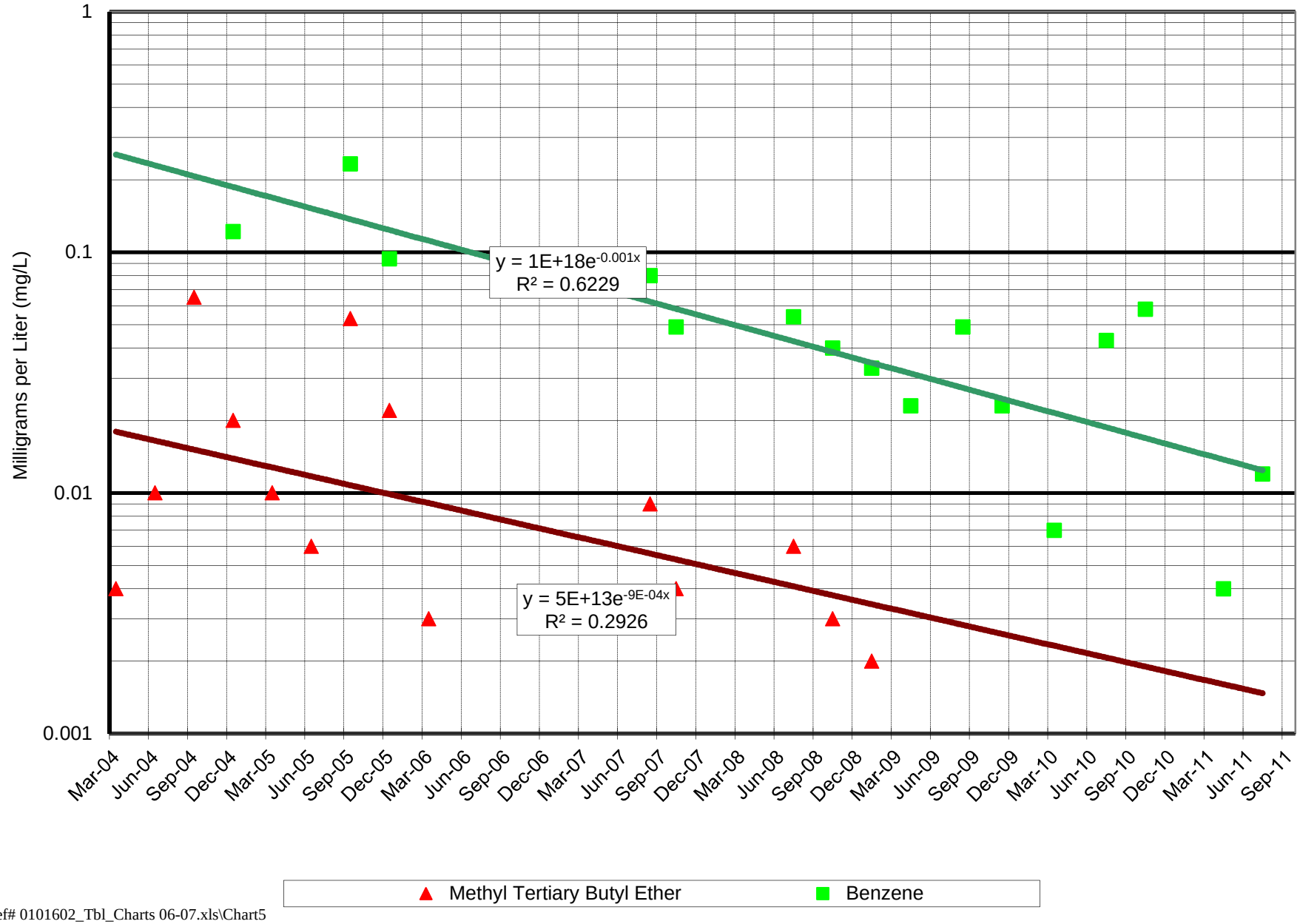
Ref# 0101602_Tbl_Charts 06-07.xls\Chart5

HR-7
Trend Analysis of Benzene and MTBE Over Time
Ron's Discount Energy Mart



Ref# 0101602_Tbl_Charts 06-07.xls\Chart5

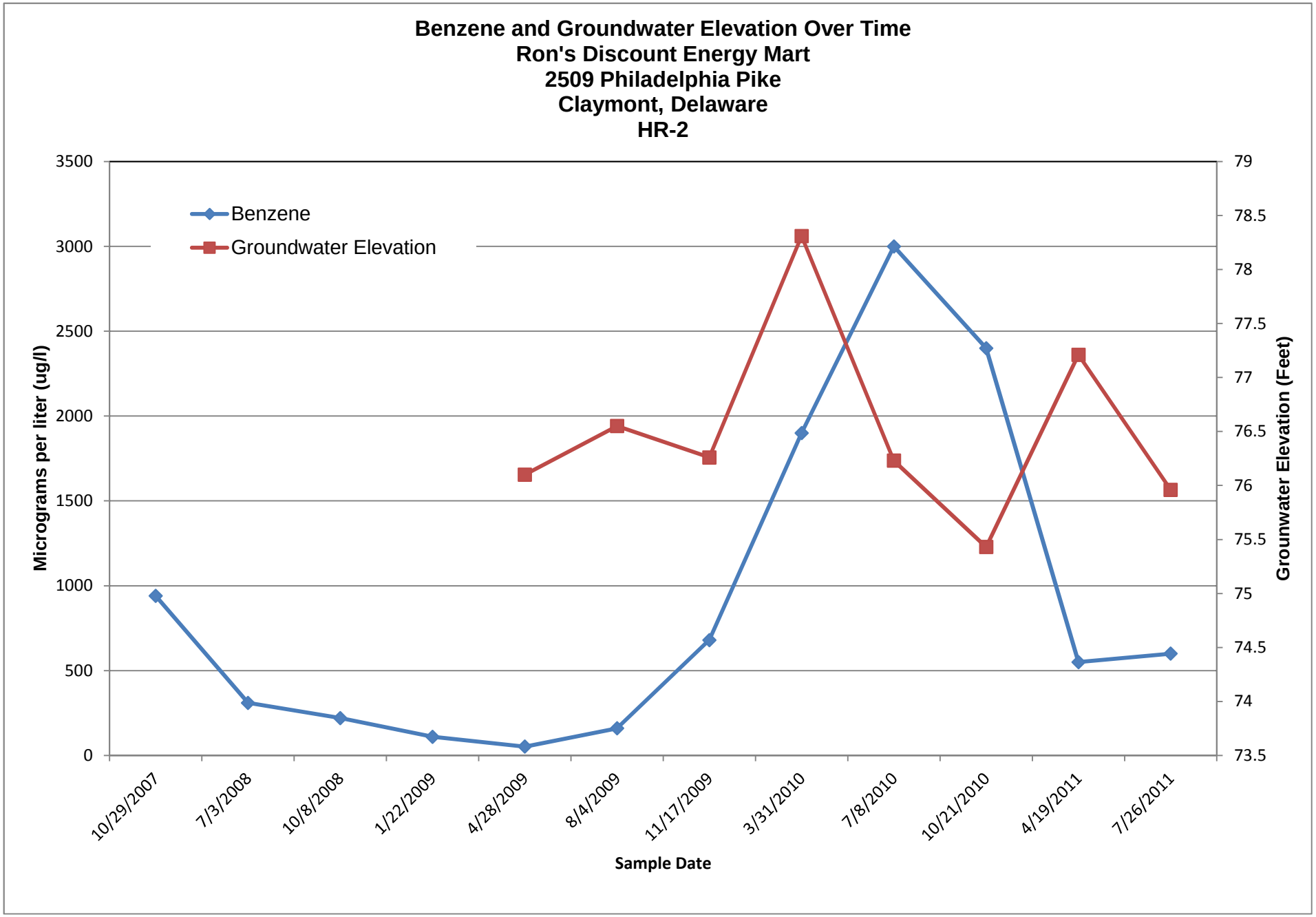
MW-2
Trend Analysis of Benzene and MTBE Over Time
Ron's Discount Energy Mart



Ref# 0101602_Tbl_Charts 06-07.xls\Chart5

Appendix B -

HR-2 Benzene Concentrations and Groundwater Elevations vs Time



Ref# _3-000712_Tbl_Charts 01-11.xls\Chart2

Appendix C -

Lancaster Laboratories Analysis Report-Soil Vapor Data

Lancaster Laboratories
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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Kleinfelder
30 Porter Road
Littleton MA 01460

May 27, 2010

Project: Ron's Discount Energy Mart - Claymont, DE

Submittal Date: 05/14/2010
Group Number: 1194651
PO Number: 08531-097766
State of Sample Origin: DE

Client Sample Description	Lancaster Labs (LLI) #
SVMP-1 Grab Air Summa Canister #162	5980639
SVMP-2 Grab Air Summa Canister #331	5980640
SVMP-3 Grab Air Summa Canister #300	5980641
SVMP-4 Grab Air Summa Canister #201	5980642
SVMP-5 Grab Air Summa Canister #055	5980643
SVMP-6 Grab Air Summa Canister #384	5980644
SVMP-7 Grab Air Summa Canister #081	5980645
SVMP-8 Grab Air Summa Canister #849	5980646
SVMP-10 Grab Air Summa Canister #403	5980647
SVMP-13 Grab Air Summa Canister #005	5980648
SVMP-14 Grab Air Summa Canister #538	5980649
SVMP-15 Grab Air Summa Canister #343	5980650
SVMP-16 Grab Air Summa Canister #858	5980651
Ambient Air-1 Grab Air Summa Canister #404	5980652

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Kleinfelder	Attn: Mark Steele
ELECTRONIC COPY TO	Kleinfelder	Attn: Angela Vogt
ELECTRONIC COPY TO	Kleinfelder	Attn: Brian Shedd

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jessica A Oknefski at (717) 656-2300 Ext. 1815

Respectfully Submitted,

Matthew E. Barton
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: SVMP-1 Grab Air Summa Canister #162
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980639
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 10:33 by BS
through 05/13/2010 11:16
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-1

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	**Methane**	74-82-8	**100**	6.6	**160**	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**1.3**	0.95	**0.54**	0.40	200
05298	Acetonitrile	75-05-8	< 0.67	0.67	< 0.40	0.40	200
05298	Acrolein	107-02-8	< 0.92	0.92	< 0.40	0.40	200
05298	Acrylonitrile	107-13-1	< 0.87	0.87	< 0.40	0.40	200
05298	Benzene	71-43-2	< 0.64	0.64	< 0.20	0.20	200
05298	Bromobenzene	108-86-1	< 1.3	1.3	< 0.20	0.20	200
05298	Bromodichloromethane	75-27-4	< 1.3	1.3	< 0.20	0.20	200
05298	Bromoform	75-25-2	< 2.1	2.1	< 0.20	0.20	200
05298	Bromomethane	74-83-9	< 0.78	0.78	< 0.20	0.20	200
05298	1,3-Butadiene	106-99-0	< 0.88	0.88	< 0.40	0.40	200
05298	2-Butanone	78-93-3	< 1.2	1.2	< 0.40	0.40	200
05298	tert-Butyl Alcohol	75-65-0	< 0.61	0.61	< 0.20	0.20	200
05298	Carbon Disulfide	75-15-0	< 0.62	0.62	< 0.20	0.20	200
05298	Carbon Tetrachloride	56-23-5	< 1.3	1.3	< 0.20	0.20	200
05298	Chlorobenzene	108-90-7	< 0.92	0.92	< 0.20	0.20	200
05298	Chlorodifluoromethane	75-45-6	< 0.71	0.71	< 0.20	0.20	200
05298	Chloroethane	75-00-3	< 0.53	0.53	< 0.20	0.20	200
05298	Chloroform	67-66-3	< 0.98	0.98	< 0.20	0.20	200
05298	Chloromethane	74-87-3	< 0.41	0.41	< 0.20	0.20	200
05298	3-Chloropropene	107-05-1	< 0.63	0.63	< 0.20	0.20	200
05298	Cumene	98-82-8	< 0.98	0.98	< 0.20	0.20	200
05298	Dibromochloromethane	124-48-1	< 1.7	1.7	< 0.20	0.20	200
05298	1,2-Dibromoethane	106-93-4	< 1.5	1.5	< 0.20	0.20	200
05298	Dibromomethane	74-95-3	< 1.4	1.4	< 0.20	0.20	200
05298	1,2-Dichlorobenzene	95-50-1	< 1.2	1.2	< 0.20	0.20	200
05298	1,3-Dichlorobenzene	541-73-1	< 1.2	1.2	< 0.20	0.20	200
05298	1,4-Dichlorobenzene	106-46-7	< 1.2	1.2	< 0.20	0.20	200
05298	Dichlorodifluoromethane	75-71-8	< 0.99	0.99	< 0.20	0.20	200
05298	1,1-Dichloroethane	75-34-3	< 0.81	0.81	< 0.20	0.20	200
05298	1,2-Dichloroethane	107-06-2	< 0.81	0.81	< 0.20	0.20	200
05298	1,1-Dichloroethene	75-35-4	< 0.79	0.79	< 0.20	0.20	200
05298	cis-1,2-Dichloroethene	156-59-2	< 0.79	0.79	< 0.20	0.20	200
05298	trans-1,2-Dichloroethene	156-60-5	< 0.79	0.79	< 0.20	0.20	200
05298	Dichlorofluoromethane	75-43-4	< 0.84	0.84	< 0.20	0.20	200
05298	1,2-Dichloropropane	78-87-5	< 0.92	0.92	< 0.20	0.20	200
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.91	0.91	< 0.20	0.20	200
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.91	0.91	< 0.20	0.20	200
05298	1,4-Dioxane	123-91-1	< 0.72	0.72	< 0.20	0.20	200
05298	Ethyl Acetate	141-78-6	< 0.72	0.72	< 0.20	0.20	200
05298	Ethyl Acrylate	140-88-5	< 0.82	0.82	< 0.20	0.20	200
05298	Ethyl Methacrylate	97-63-2	< 0.93	0.93	< 0.20	0.20	200
05298	Ethylbenzene	100-41-4	< 0.87	0.87	< 0.20	0.20	200
05298	4-Ethyltoluene	622-96-8	< 0.98	0.98	< 0.20	0.20	200
05298	Freon 113	76-13-1	< 3.1	3.1	< 0.40	0.40	200
05298	Freon 114	76-14-2	< 1.4	1.4	< 0.20	0.20	200
05298	Hexachlorobutadiene	87-68-3	< 4.3	4.3	< 0.40	0.40	200
05298	Hexachloroethane	67-72-1	< 1.9	1.9	< 0.20	0.20	200

Lancaster Laboratories

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Analysis Report

Sample Description: SVMP-1 Grab Air Summa Canister #162
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980639
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 10:33 by BS
through 05/13/2010 11:16
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-1

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 1.6	1.6	< 0.40	0.40	200
05298	Methyl Acrylate	96-33-3	< 0.70	0.70	< 0.20	0.20	200
05298	Methyl Iodide	74-88-4	< 1.2	1.2	< 0.20	0.20	200
05298	**Methyl Methacrylate**	80-62-6	**1.3**	0.82	**0.32**	0.20	200
05298	Alpha Methyl Styrene	98-83-9	< 0.97	0.97	< 0.20	0.20	200
05298	Methyl t-Butyl Ether	1634-04-4	< 0.72	0.72	< 0.20	0.20	200
05298	4-Methyl-2-Pentanone	108-10-1	< 1.6	1.6	< 0.40	0.40	200
05298	Methylene Chloride	75-09-2	< 0.69	0.69	< 0.20	0.20	200
05298	Styrene	100-42-5	< 0.85	0.85	< 0.20	0.20	200
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 1.4	1.4	< 0.20	0.20	200
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 1.4	1.4	< 0.20	0.20	200
05298	Tetrachloroethene	127-18-4	< 1.4	1.4	< 0.20	0.20	200
05298	Toluene	108-88-3	< 0.75	0.75	< 0.20	0.20	200
05298	1,2,4-Trichlorobenzene	120-82-1	< 3.0	3.0	< 0.40	0.40	200
05298	1,1,1-Trichloroethane	71-55-6	< 1.1	1.1	< 0.20	0.20	200
05298	1,1,2-Trichloroethane	79-00-5	< 1.1	1.1	< 0.20	0.20	200
05298	Trichloroethene	79-01-6	< 1.1	1.1	< 0.20	0.20	200
05298	Trichlorofluoromethane	75-69-4	< 1.1	1.1	< 0.20	0.20	200
05298	1,2,3-Trichloropropane	96-18-4	< 1.2	1.2	< 0.20	0.20	200
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.98	0.98	< 0.20	0.20	200
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.98	0.98	< 0.20	0.20	200
05298	Vinyl Acetate	108-05-4	< 0.70	0.70	< 0.20	0.20	200
05298	Vinyl Chloride	75-01-4	< 0.51	0.51	< 0.20	0.20	200
05298	m/p-Xylene	179601-23-1	< 0.87	0.87	< 0.20	0.20	200
05298	o-Xylene	95-47-6	< 0.87	0.87	< 0.20	0.20	200

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 12:41	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/21/2010 16:56	Matthew S Woods	200

Analysis Report

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Sample Description: SVMP-2 Grab Air Summa Canister #331
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980640
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:12 by BS
through 05/13/2010 12:48
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-2

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.020**	0.0048	**0.0085**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.019**	0.0049	**0.0039**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-2 Grab Air Summa Canister #331
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980640
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:12 by BS
through 05/13/2010 12:48
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-2

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 13:10	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/21/2010 18:24	Matthew S Woods	1

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Analysis Report

Sample Description: SVMP-3 Grab Air Summa Canister #300
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980641
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:29 by BS
through 05/13/2010 13:30
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-3

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		mg/m3	mg/m3	ppm(v)	ppm(v)	
07056	**Methane**	74-82-8	**4,500**	6.6	**6,800**	10	2
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**160**	95	**68**	40	20000
05298	Acetonitrile	75-05-8	< 67	67	< 40	40	20000
05298	Acrolein	107-02-8	< 92	92	< 40	40	20000
05298	Acrylonitrile	107-13-1	< 87	87	< 40	40	20000
05298	Benzene	71-43-2	< 64	64	< 20	20	20000
05298	Bromobenzene	108-86-1	< 130	130	< 20	20	20000
05298	Bromodichloromethane	75-27-4	< 130	130	< 20	20	20000
05298	Bromoform	75-25-2	< 210	210	< 20	20	20000
05298	Bromomethane	74-83-9	< 78	78	< 20	20	20000
05298	1,3-Butadiene	106-99-0	< 88	88	< 40	40	20000
05298	2-Butanone	78-93-3	< 120	120	< 40	40	20000
05298	tert-Butyl Alcohol	75-65-0	< 61	61	< 20	20	20000
05298	Carbon Disulfide	75-15-0	< 62	62	< 20	20	20000
05298	Carbon Tetrachloride	56-23-5	< 130	130	< 20	20	20000
05298	Chlorobenzene	108-90-7	< 92	92	< 20	20	20000
05298	Chlorodifluoromethane	75-45-6	< 71	71	< 20	20	20000
05298	Chloroethane	75-00-3	< 53	53	< 20	20	20000
05298	Chloroform	67-66-3	< 98	98	< 20	20	20000
05298	Chloromethane	74-87-3	< 41	41	< 20	20	20000
05298	3-Chloropropene	107-05-1	< 63	63	< 20	20	20000
05298	Cumene	98-82-8	< 98	98	< 20	20	20000
05298	Dibromochloromethane	124-48-1	< 170	170	< 20	20	20000
05298	1,2-Dibromoethane	106-93-4	< 150	150	< 20	20	20000
05298	Dibromomethane	74-95-3	< 140	140	< 20	20	20000
05298	1,2-Dichlorobenzene	95-50-1	< 120	120	< 20	20	20000
05298	1,3-Dichlorobenzene	541-73-1	< 120	120	< 20	20	20000
05298	1,4-Dichlorobenzene	106-46-7	< 120	120	< 20	20	20000
05298	Dichlorodifluoromethane	75-71-8	< 99	99	< 20	20	20000
05298	1,1-Dichloroethane	75-34-3	< 81	81	< 20	20	20000
05298	1,2-Dichloroethane	107-06-2	< 81	81	< 20	20	20000
05298	1,1-Dichloroethene	75-35-4	< 79	79	< 20	20	20000
05298	cis-1,2-Dichloroethene	156-59-2	< 79	79	< 20	20	20000
05298	trans-1,2-Dichloroethene	156-60-5	< 79	79	< 20	20	20000
05298	Dichlorofluoromethane	75-43-4	< 84	84	< 20	20	20000
05298	1,2-Dichloropropane	78-87-5	< 92	92	< 20	20	20000
05298	cis-1,3-Dichloropropene	10061-01-5	< 91	91	< 20	20	20000
05298	trans-1,3-Dichloropropene	10061-02-6	< 91	91	< 20	20	20000
05298	1,4-Dioxane	123-91-1	< 72	72	< 20	20	20000
05298	Ethyl Acetate	141-78-6	< 72	72	< 20	20	20000
05298	Ethyl Acrylate	140-88-5	< 82	82	< 20	20	20000
05298	Ethyl Methacrylate	97-63-2	< 93	93	< 20	20	20000
05298	Ethylbenzene	100-41-4	< 87	87	< 20	20	20000
05298	4-Ethyltoluene	622-96-8	< 98	98	< 20	20	20000
05298	Freon 113	76-13-1	< 310	310	< 40	40	20000
05298	Freon 114	76-14-2	< 140	140	< 20	20	20000
05298	Hexachlorobutadiene	87-68-3	< 430	430	< 40	40	20000
05298	Hexachloroethane	67-72-1	< 190	190	< 20	20	20000

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Analysis Report

Sample Description: SVMP-3 Grab Air Summa Canister #300
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980641
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:29 by BS
through 05/13/2010 13:30
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-3

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 160	160	< 40	40	20000
05298	Methyl Acrylate	96-33-3	< 70	70	< 20	20	20000
05298	Methyl Iodide	74-88-4	< 120	120	< 20	20	20000
05298	Methyl Methacrylate	80-62-6	< 82	82	< 20	20	20000
05298	Alpha Methyl Styrene	98-83-9	< 97	97	< 20	20	20000
05298	Methyl t-Butyl Ether	1634-04-4	< 72	72	< 20	20	20000
05298	4-Methyl-2-Pentanone	108-10-1	< 160	160	< 40	40	20000
05298	Methylene Chloride	75-09-2	< 69	69	< 20	20	20000
05298	Styrene	100-42-5	< 85	85	< 20	20	20000
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 140	140	< 20	20	20000
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 140	140	< 20	20	20000
05298	Tetrachloroethene	127-18-4	< 140	140	< 20	20	20000
05298	Toluene	108-88-3	< 75	75	< 20	20	20000
05298	1,2,4-Trichlorobenzene	120-82-1	< 300	300	< 40	40	20000
05298	1,1,1-Trichloroethane	71-55-6	< 110	110	< 20	20	20000
05298	1,1,2-Trichloroethane	79-00-5	< 110	110	< 20	20	20000
05298	Trichloroethene	79-01-6	< 110	110	< 20	20	20000
05298	Trichlorofluoromethane	75-69-4	< 110	110	< 20	20	20000
05298	1,2,3-Trichloropropane	96-18-4	< 120	120	< 20	20	20000
05298	1,2,4-Trimethylbenzene	95-63-6	< 98	98	< 20	20	20000
05298	1,3,5-Trimethylbenzene	108-67-8	< 98	98	< 20	20	20000
05298	Vinyl Acetate	108-05-4	< 70	70	< 20	20	20000
05298	Vinyl Chloride	75-01-4	< 51	51	< 20	20	20000
05298	m/p-Xylene	179601-23-1	< 87	87	< 20	20	20000
05298	o-Xylene	95-47-6	< 87	87	< 20	20	20000

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 14:49	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/21/2010 19:07	Matthew S Woods	20000

Analysis Report

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Sample Description: SVMP-4 Grab Air Summa Canister #201
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980642
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:37 by BS
through 05/13/2010 12:42
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-4

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	**Methane**	74-82-8	**4,400**	6.6	**6,700**	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	Acetone	67-64-1	< 95	95	< 40	40	20000
05298	Acetonitrile	75-05-8	< 6.7	6.7	< 4.0	4.0	2000
05298	Acrolein	107-02-8	< 9.2	9.2	< 4.0	4.0	2000
05298	Acrylonitrile	107-13-1	< 8.7	8.7	< 4.0	4.0	2000
05298	**Benzene**	71-43-2	**57**	6.4	**18**	2.0	2000
05298	Bromobenzene	108-86-1	< 13	13	< 2.0	2.0	2000
05298	Bromodichloromethane	75-27-4	< 13	13	< 2.0	2.0	2000
05298	Bromoform	75-25-2	< 21	21	< 2.0	2.0	2000
05298	Bromomethane	74-83-9	< 7.8	7.8	< 2.0	2.0	2000
05298	1,3-Butadiene	106-99-0	< 8.8	8.8	< 4.0	4.0	2000
05298	2-Butanone	78-93-3	< 12	12	< 4.0	4.0	2000
05298	tert-Butyl Alcohol	75-65-0	< 6.1	6.1	< 2.0	2.0	2000
05298	Carbon Disulfide	75-15-0	< 6.2	6.2	< 2.0	2.0	2000
05298	Carbon Tetrachloride	56-23-5	< 13	13	< 2.0	2.0	2000
05298	Chlorobenzene	108-90-7	< 9.2	9.2	< 2.0	2.0	2000
05298	Chlorodifluoromethane	75-45-6	< 7.1	7.1	< 2.0	2.0	2000
05298	Chloroethane	75-00-3	< 5.3	5.3	< 2.0	2.0	2000
05298	Chloroform	67-66-3	< 9.8	9.8	< 2.0	2.0	2000
05298	Chloromethane	74-87-3	< 4.1	4.1	< 2.0	2.0	2000
05298	3-Chloropropene	107-05-1	< 6.3	6.3	< 2.0	2.0	2000
05298	Cumene	98-82-8	< 9.8	9.8	< 2.0	2.0	2000
05298	Dibromochloromethane	124-48-1	< 17	17	< 2.0	2.0	2000
05298	1,2-Dibromoethane	106-93-4	< 15	15	< 2.0	2.0	2000
05298	Dibromomethane	74-95-3	< 14	14	< 2.0	2.0	2000
05298	1,2-Dichlorobenzene	95-50-1	< 12	12	< 2.0	2.0	2000
05298	1,3-Dichlorobenzene	541-73-1	< 12	12	< 2.0	2.0	2000
05298	1,4-Dichlorobenzene	106-46-7	< 12	12	< 2.0	2.0	2000
05298	Dichlorodifluoromethane	75-71-8	< 9.9	9.9	< 2.0	2.0	2000
05298	1,1-Dichloroethane	75-34-3	< 8.1	8.1	< 2.0	2.0	2000
05298	1,2-Dichloroethane	107-06-2	< 8.1	8.1	< 2.0	2.0	2000
05298	1,1-Dichloroethene	75-35-4	< 7.9	7.9	< 2.0	2.0	2000
05298	cis-1,2-Dichloroethene	156-59-2	< 7.9	7.9	< 2.0	2.0	2000
05298	trans-1,2-Dichloroethene	156-60-5	< 7.9	7.9	< 2.0	2.0	2000
05298	Dichlorofluoromethane	75-43-4	< 8.4	8.4	< 2.0	2.0	2000
05298	1,2-Dichloropropane	78-87-5	< 9.2	9.2	< 2.0	2.0	2000
05298	cis-1,3-Dichloropropene	10061-01-5	< 9.1	9.1	< 2.0	2.0	2000
05298	trans-1,3-Dichloropropene	10061-02-6	< 9.1	9.1	< 2.0	2.0	2000
05298	1,4-Dioxane	123-91-1	< 7.2	7.2	< 2.0	2.0	2000
05298	Ethyl Acetate	141-78-6	< 7.2	7.2	< 2.0	2.0	2000
05298	Ethyl Acrylate	140-88-5	< 8.2	8.2	< 2.0	2.0	2000
05298	Ethyl Methacrylate	97-63-2	< 9.3	9.3	< 2.0	2.0	2000
05298	**Ethylbenzene**	100-41-4	**23**	8.7	**5.3**	2.0	2000
05298	4-Ethyltoluene	622-96-8	< 9.8	9.8	< 2.0	2.0	2000
05298	Freon 113	76-13-1	< 31	31	< 4.0	4.0	2000
05298	Freon 114	76-14-2	< 14	14	< 2.0	2.0	2000
05298	Hexachlorobutadiene	87-68-3	< 43	43	< 4.0	4.0	2000
05298	Hexachloroethane	67-72-1	< 19	19	< 2.0	2.0	2000

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Analysis Report

Sample Description: SVMP-4 Grab Air Summa Canister #201
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980642
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 11:37 by BS
through 05/13/2010 12:42
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-4

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 16	16	< 4.0	4.0	2000
05298	Methyl Acrylate	96-33-3	< 7.0	7.0	< 2.0	2.0	2000
05298	Methyl Iodide	74-88-4	< 12	12	< 2.0	2.0	2000
05298	Methyl Methacrylate	80-62-6	< 8.2	8.2	< 2.0	2.0	2000
05298	Alpha Methyl Styrene	98-83-9	< 9.7	9.7	< 2.0	2.0	2000
05298	Methyl t-Butyl Ether	1634-04-4	< 7.2	7.2	< 2.0	2.0	2000
05298	4-Methyl-2-Pentanone	108-10-1	< 16	16	< 4.0	4.0	2000
05298	Methylene Chloride	75-09-2	< 6.9	6.9	< 2.0	2.0	2000
05298	Styrene	100-42-5	< 8.5	8.5	< 2.0	2.0	2000
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 14	14	< 2.0	2.0	2000
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 14	14	< 2.0	2.0	2000
05298	Tetrachloroethene	127-18-4	< 14	14	< 2.0	2.0	2000
05298	Toluene	108-88-3	< 7.5	7.5	< 2.0	2.0	2000
05298	1,2,4-Trichlorobenzene	120-82-1	< 30	30	< 4.0	4.0	2000
05298	1,1,1-Trichloroethane	71-55-6	< 11	11	< 2.0	2.0	2000
05298	1,1,2-Trichloroethane	79-00-5	< 11	11	< 2.0	2.0	2000
05298	Trichloroethene	79-01-6	< 11	11	< 2.0	2.0	2000
05298	Trichlorofluoromethane	75-69-4	< 11	11	< 2.0	2.0	2000
05298	1,2,3-Trichloropropane	96-18-4	< 12	12	< 2.0	2.0	2000
05298	1,2,4-Trimethylbenzene	95-63-6	< 9.8	9.8	< 2.0	2.0	2000
05298	1,3,5-Trimethylbenzene	108-67-8	< 9.8	9.8	< 2.0	2.0	2000
05298	Vinyl Acetate	108-05-4	< 7.0	7.0	< 2.0	2.0	2000
05298	Vinyl Chloride	75-01-4	< 5.1	5.1	< 2.0	2.0	2000
05298	m/p-Xylene	179601-23-1	< 8.7	8.7	< 2.0	2.0	2000
05298	o-Xylene	95-47-6	< 8.7	8.7	< 2.0	2.0	2000

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 15:19	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 02:58	Michael A Ziegler	2000
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 09:01	Michael A Ziegler	20000

Analysis Report

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Sample Description: SVMP-5 Grab Air Summa Canister #055
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980643
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:27 by BS
through 05/13/2010 13:11
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-5

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.012**	0.0048	**0.0052**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.028**	0.0049	**0.0057**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**Dichlorodifluoromethane**	75-71-8	**0.015**	0.0049	**0.0030**	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-5 Grab Air Summa Canister #055
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980643
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:27 by BS
through 05/13/2010 13:11
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-5

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	**Styrene**	100-42-5	**0.0048**	0.0043	**0.0011**	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	**Tetrachloroethene**	127-18-4	**0.013**	0.0068	**0.0019**	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 15:48	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 10:28	Michael A Ziegler	1

Analysis Report

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Sample Description: SVMP-6 Grab Air Summa Canister #384
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980644
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:42 by BS
through 05/13/2010 14:44
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-6

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.0083**	0.0048	**0.0035**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.029**	0.0049	**0.0060**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-6 Grab Air Summa Canister #384
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980644
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:42 by BS
through 05/13/2010 14:44
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-6

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 16:18	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/21/2010 23:27	Matthew S Woods	1

Analysis Report

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Sample Description: SVMP-7 Grab Air Summa Canister #081
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980645
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:09 by BS
through 05/13/2010 14:01
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-7

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.33**	0.095	**0.14**	0.040	20
05298	Acetonitrile	75-05-8	< 0.067	0.067	< 0.040	0.040	20
05298	Acrolein	107-02-8	< 0.092	0.092	< 0.040	0.040	20
05298	Acrylonitrile	107-13-1	< 0.087	0.087	< 0.040	0.040	20
05298	Benzene	71-43-2	< 0.064	0.064	< 0.020	0.020	20
05298	Bromobenzene	108-86-1	< 0.13	0.13	< 0.020	0.020	20
05298	Bromodichloromethane	75-27-4	< 0.13	0.13	< 0.020	0.020	20
05298	Bromoform	75-25-2	< 0.21	0.21	< 0.020	0.020	20
05298	Bromomethane	74-83-9	< 0.078	0.078	< 0.020	0.020	20
05298	1,3-Butadiene	106-99-0	< 0.088	0.088	< 0.040	0.040	20
05298	2-Butanone	78-93-3	< 0.12	0.12	< 0.040	0.040	20
05298	tert-Butyl Alcohol	75-65-0	< 0.061	0.061	< 0.020	0.020	20
05298	**Carbon Disulfide**	75-15-0	**0.11**	0.062	**0.034**	0.020	20
05298	Carbon Tetrachloride	56-23-5	< 0.13	0.13	< 0.020	0.020	20
05298	Chlorobenzene	108-90-7	< 0.092	0.092	< 0.020	0.020	20
05298	Chlorodifluoromethane	75-45-6	< 0.071	0.071	< 0.020	0.020	20
05298	Chloroethane	75-00-3	< 0.053	0.053	< 0.020	0.020	20
05298	Chloroform	67-66-3	< 0.098	0.098	< 0.020	0.020	20
05298	Chloromethane	74-87-3	< 0.041	0.041	< 0.020	0.020	20
05298	3-Chloropropene	107-05-1	< 0.063	0.063	< 0.020	0.020	20
05298	Cumene	98-82-8	< 0.098	0.098	< 0.020	0.020	20
05298	Dibromochloromethane	124-48-1	< 0.17	0.17	< 0.020	0.020	20
05298	1,2-Dibromoethane	106-93-4	< 0.15	0.15	< 0.020	0.020	20
05298	Dibromomethane	74-95-3	< 0.14	0.14	< 0.020	0.020	20
05298	1,2-Dichlorobenzene	95-50-1	< 0.12	0.12	< 0.020	0.020	20
05298	1,3-Dichlorobenzene	541-73-1	< 0.12	0.12	< 0.020	0.020	20
05298	1,4-Dichlorobenzene	106-46-7	< 0.12	0.12	< 0.020	0.020	20
05298	Dichlorodifluoromethane	75-71-8	< 0.099	0.099	< 0.020	0.020	20
05298	1,1-Dichloroethane	75-34-3	< 0.081	0.081	< 0.020	0.020	20
05298	1,2-Dichloroethane	107-06-2	< 0.081	0.081	< 0.020	0.020	20
05298	1,1-Dichloroethene	75-35-4	< 0.079	0.079	< 0.020	0.020	20
05298	cis-1,2-Dichloroethene	156-59-2	< 0.079	0.079	< 0.020	0.020	20
05298	trans-1,2-Dichloroethene	156-60-5	< 0.079	0.079	< 0.020	0.020	20
05298	Dichlorofluoromethane	75-43-4	< 0.084	0.084	< 0.020	0.020	20
05298	1,2-Dichloropropane	78-87-5	< 0.092	0.092	< 0.020	0.020	20
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.091	0.091	< 0.020	0.020	20
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.091	0.091	< 0.020	0.020	20
05298	1,4-Dioxane	123-91-1	< 0.072	0.072	< 0.020	0.020	20
05298	Ethyl Acetate	141-78-6	< 0.072	0.072	< 0.020	0.020	20
05298	Ethyl Acrylate	140-88-5	< 0.082	0.082	< 0.020	0.020	20
05298	Ethyl Methacrylate	97-63-2	< 0.093	0.093	< 0.020	0.020	20
05298	Ethylbenzene	100-41-4	< 0.087	0.087	< 0.020	0.020	20
05298	4-Ethyltoluene	622-96-8	< 0.098	0.098	< 0.020	0.020	20
05298	Freon 113	76-13-1	< 0.31	0.31	< 0.040	0.040	20
05298	Freon 114	76-14-2	< 0.14	0.14	< 0.020	0.020	20
05298	Hexachlorobutadiene	87-68-3	< 0.43	0.43	< 0.040	0.040	20
05298	Hexachloroethane	67-72-1	< 0.19	0.19	< 0.020	0.020	20

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Analysis Report

Sample Description: SVMP-7 Grab Air Summa Canister #081
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980645
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:09 by BS
through 05/13/2010 14:01
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-7

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.16	0.16	< 0.040	0.040	20
05298	Methyl Acrylate	96-33-3	< 0.070	0.070	< 0.020	0.020	20
05298	Methyl Iodide	74-88-4	< 0.12	0.12	< 0.020	0.020	20
05298	Methyl Methacrylate	80-62-6	< 0.082	0.082	< 0.020	0.020	20
05298	Alpha Methyl Styrene	98-83-9	< 0.097	0.097	< 0.020	0.020	20
05298	Methyl t-Butyl Ether	1634-04-4	< 0.072	0.072	< 0.020	0.020	20
05298	4-Methyl-2-Pentanone	108-10-1	< 0.16	0.16	< 0.040	0.040	20
05298	Methylene Chloride	75-09-2	< 0.069	0.069	< 0.020	0.020	20
05298	Styrene	100-42-5	< 0.085	0.085	< 0.020	0.020	20
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.14	0.14	< 0.020	0.020	20
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.14	0.14	< 0.020	0.020	20
05298	Tetrachloroethene	127-18-4	< 0.14	0.14	< 0.020	0.020	20
05298	Toluene	108-88-3	< 0.075	0.075	< 0.020	0.020	20
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.30	0.30	< 0.040	0.040	20
05298	1,1,1-Trichloroethane	71-55-6	< 0.11	0.11	< 0.020	0.020	20
05298	1,1,2-Trichloroethane	79-00-5	< 0.11	0.11	< 0.020	0.020	20
05298	Trichloroethene	79-01-6	< 0.11	0.11	< 0.020	0.020	20
05298	Trichlorofluoromethane	75-69-4	< 0.11	0.11	< 0.020	0.020	20
05298	1,2,3-Trichloropropane	96-18-4	< 0.12	0.12	< 0.020	0.020	20
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.098	0.098	< 0.020	0.020	20
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.098	0.098	< 0.020	0.020	20
05298	Vinyl Acetate	108-05-4	< 0.070	0.070	< 0.020	0.020	20
05298	Vinyl Chloride	75-01-4	< 0.051	0.051	< 0.020	0.020	20
05298	m/p-Xylene	179601-23-1	< 0.087	0.087	< 0.020	0.020	20
05298	o-Xylene	95-47-6	< 0.087	0.087	< 0.020	0.020	20

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 16:47	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/22/2010 00:10	Matthew S Woods	20

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Analysis Report

Sample Description: SVMP-8 Grab Air Summa Canister #849
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980646
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:15 by BS
through 05/13/2010 14:47
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-8

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.051**	0.0048	**0.022**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	**2-Butanone**	78-93-3	**0.012**	0.0059	**0.0041**	0.0020	1
05298	**tert-Butyl Alcohol**	75-65-0	**0.0066**	0.0030	**0.0022**	0.0010	1
05298	**Carbon Disulfide**	75-15-0	**0.0088**	0.0031	**0.0028**	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.064**	0.0049	**0.013**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-8 Grab Air Summa Canister #849
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980646
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:15 by BS
through 05/13/2010 14:47
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP-8

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	**Styrene**	100-42-5	**0.012**	0.0043	**0.0028**	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.010**	0.0043	**0.0024**	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 17:17	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AB	05/22/2010 01:36	Matthew S Woods	1

Analysis Report

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Sample Description: SVMP-10 Grab Air Summa Canister #403
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980647
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 14:57 by BS
through 05/13/2010 16:25
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP10

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.025**	0.0095	**0.011**	0.0040	2
05298	Acetonitrile	75-05-8	< 0.0067	0.0067	< 0.0040	0.0040	2
05298	Acrolein	107-02-8	< 0.0092	0.0092	< 0.0040	0.0040	2
05298	Acrylonitrile	107-13-1	< 0.0087	0.0087	< 0.0040	0.0040	2
05298	**Benzene**	71-43-2	**0.049**	0.0064	**0.015**	0.0020	2
05298	Bromobenzene	108-86-1	< 0.013	0.013	< 0.0020	0.0020	2
05298	Bromodichloromethane	75-27-4	< 0.013	0.013	< 0.0020	0.0020	2
05298	Bromoform	75-25-2	< 0.021	0.021	< 0.0020	0.0020	2
05298	Bromomethane	74-83-9	< 0.0078	0.0078	< 0.0020	0.0020	2
05298	1,3-Butadiene	106-99-0	< 0.0088	0.0088	< 0.0040	0.0040	2
05298	2-Butanone	78-93-3	< 0.012	0.012	< 0.0040	0.0040	2
05298	tert-Butyl Alcohol	75-65-0	< 0.0061	0.0061	< 0.0020	0.0020	2
05298	Carbon Disulfide	75-15-0	< 0.0062	0.0062	< 0.0020	0.0020	2
05298	Carbon Tetrachloride	56-23-5	< 0.013	0.013	< 0.0020	0.0020	2
05298	Chlorobenzene	108-90-7	< 0.0092	0.0092	< 0.0020	0.0020	2
05298	Chlorodifluoromethane	75-45-6	< 0.0071	0.0071	< 0.0020	0.0020	2
05298	Chloroethane	75-00-3	< 0.0053	0.0053	< 0.0020	0.0020	2
05298	Chloroform	67-66-3	< 0.0098	0.0098	< 0.0020	0.0020	2
05298	Chloromethane	74-87-3	< 0.0041	0.0041	< 0.0020	0.0020	2
05298	3-Chloropropene	107-05-1	< 0.0063	0.0063	< 0.0020	0.0020	2
05298	**Cumene**	98-82-8	**0.046**	0.0098	**0.0093**	0.0020	2
05298	Dibromochloromethane	124-48-1	< 0.017	0.017	< 0.0020	0.0020	2
05298	1,2-Dibromoethane	106-93-4	< 0.015	0.015	< 0.0020	0.0020	2
05298	Dibromomethane	74-95-3	< 0.014	0.014	< 0.0020	0.0020	2
05298	1,2-Dichlorobenzene	95-50-1	< 0.012	0.012	< 0.0020	0.0020	2
05298	1,3-Dichlorobenzene	541-73-1	< 0.012	0.012	< 0.0020	0.0020	2
05298	1,4-Dichlorobenzene	106-46-7	< 0.012	0.012	< 0.0020	0.0020	2
05298	Dichlorodifluoromethane	75-71-8	< 0.0099	0.0099	< 0.0020	0.0020	2
05298	1,1-Dichloroethane	75-34-3	< 0.0081	0.0081	< 0.0020	0.0020	2
05298	1,2-Dichloroethane	107-06-2	< 0.0081	0.0081	< 0.0020	0.0020	2
05298	1,1-Dichloroethene	75-35-4	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	Dichlorofluoromethane	75-43-4	< 0.0084	0.0084	< 0.0020	0.0020	2
05298	1,2-Dichloropropane	78-87-5	< 0.0092	0.0092	< 0.0020	0.0020	2
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0091	0.0091	< 0.0020	0.0020	2
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0091	0.0091	< 0.0020	0.0020	2
05298	1,4-Dioxane	123-91-1	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	Ethyl Acetate	141-78-6	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	Ethyl Acrylate	140-88-5	< 0.0082	0.0082	< 0.0020	0.0020	2
05298	Ethyl Methacrylate	97-63-2	< 0.0093	0.0093	< 0.0020	0.0020	2
05298	**Ethylbenzene**	100-41-4	**0.048**	0.0087	**0.011**	0.0020	2
05298	4-Ethyltoluene	622-96-8	< 0.0098	0.0098	< 0.0020	0.0020	2
05298	Freon 113	76-13-1	< 0.031	0.031	< 0.0040	0.0040	2
05298	Freon 114	76-14-2	< 0.014	0.014	< 0.0020	0.0020	2
05298	Hexachlorobutadiene	87-68-3	< 0.043	0.043	< 0.0040	0.0040	2
05298	Hexachloroethane	67-72-1	< 0.019	0.019	< 0.0020	0.0020	2

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Analysis Report

Sample Description: SVMP-10 Grab Air Summa Canister #403
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980647
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 14:57 by BS
through 05/13/2010 16:25
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP10

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.016	0.016	< 0.0040	0.0040	2
05298	Methyl Acrylate	96-33-3	< 0.0070	0.0070	< 0.0020	0.0020	2
05298	Methyl Iodide	74-88-4	< 0.012	0.012	< 0.0020	0.0020	2
05298	Methyl Methacrylate	80-62-6	< 0.0082	0.0082	< 0.0020	0.0020	2
05298	Alpha Methyl Styrene	98-83-9	< 0.0097	0.0097	< 0.0020	0.0020	2
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	4-Methyl-2-Pentanone	108-10-1	< 0.016	0.016	< 0.0040	0.0040	2
05298	Methylene Chloride	75-09-2	< 0.0069	0.0069	< 0.0020	0.0020	2
05298	Styrene	100-42-5	< 0.0085	0.0085	< 0.0020	0.0020	2
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.014	0.014	< 0.0020	0.0020	2
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.014	0.014	< 0.0020	0.0020	2
05298	Tetrachloroethene	127-18-4	< 0.014	0.014	< 0.0020	0.0020	2
05298	Toluene	108-88-3	< 0.0075	0.0075	< 0.0020	0.0020	2
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.030	0.030	< 0.0040	0.0040	2
05298	1,1,1-Trichloroethane	71-55-6	< 0.011	0.011	< 0.0020	0.0020	2
05298	1,1,2-Trichloroethane	79-00-5	< 0.011	0.011	< 0.0020	0.0020	2
05298	Trichloroethene	79-01-6	< 0.011	0.011	< 0.0020	0.0020	2
05298	Trichlorofluoromethane	75-69-4	< 0.011	0.011	< 0.0020	0.0020	2
05298	1,2,3-Trichloropropane	96-18-4	< 0.012	0.012	< 0.0020	0.0020	2
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0098	0.0098	< 0.0020	0.0020	2
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0098	0.0098	< 0.0020	0.0020	2
05298	Vinyl Acetate	108-05-4	< 0.0070	0.0070	< 0.0020	0.0020	2
05298	Vinyl Chloride	75-01-4	< 0.0051	0.0051	< 0.0020	0.0020	2
05298	m/p-Xylene	179601-23-1	< 0.0087	0.0087	< 0.0020	0.0020	2
05298	o-Xylene	95-47-6	< 0.0087	0.0087	< 0.0020	0.0020	2

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 17:46	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 03:41	Michael A Ziegler	2

Analysis Report

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Sample Description: SVMP-13 Grab Air Summa Canister #005
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980648
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:50 by BS
through 05/13/2010 14:50
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP13

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.023**	0.0095	**0.0095**	0.0040	2
05298	Acetonitrile	75-05-8	< 0.0067	0.0067	< 0.0040	0.0040	2
05298	Acrolein	107-02-8	< 0.0092	0.0092	< 0.0040	0.0040	2
05298	Acrylonitrile	107-13-1	< 0.0087	0.0087	< 0.0040	0.0040	2
05298	**Benzene**	71-43-2	**0.11**	0.0064	**0.035**	0.0020	2
05298	Bromobenzene	108-86-1	< 0.013	0.013	< 0.0020	0.0020	2
05298	Bromodichloromethane	75-27-4	< 0.013	0.013	< 0.0020	0.0020	2
05298	Bromoform	75-25-2	< 0.021	0.021	< 0.0020	0.0020	2
05298	Bromomethane	74-83-9	< 0.0078	0.0078	< 0.0020	0.0020	2
05298	1,3-Butadiene	106-99-0	< 0.0088	0.0088	< 0.0040	0.0040	2
05298	2-Butanone	78-93-3	< 0.012	0.012	< 0.0040	0.0040	2
05298	**tert-Butyl Alcohol**	75-65-0	**0.0063**	0.0061	**0.0021**	0.0020	2
05298	**Carbon Disulfide**	75-15-0	**0.0063**	0.0062	**0.0020**	0.0020	2
05298	Carbon Tetrachloride	56-23-5	< 0.013	0.013	< 0.0020	0.0020	2
05298	Chlorobenzene	108-90-7	< 0.0092	0.0092	< 0.0020	0.0020	2
05298	Chlorodifluoromethane	75-45-6	< 0.0071	0.0071	< 0.0020	0.0020	2
05298	Chloroethane	75-00-3	< 0.0053	0.0053	< 0.0020	0.0020	2
05298	**Chloroform**	67-66-3	**0.011**	0.0098	**0.0023**	0.0020	2
05298	Chloromethane	74-87-3	< 0.0041	0.0041	< 0.0020	0.0020	2
05298	3-Chloropropene	107-05-1	< 0.0063	0.0063	< 0.0020	0.0020	2
05298	**Cumene**	98-82-8	**0.053**	0.0098	**0.011**	0.0020	2
05298	Dibromochloromethane	124-48-1	< 0.017	0.017	< 0.0020	0.0020	2
05298	1,2-Dibromoethane	106-93-4	< 0.015	0.015	< 0.0020	0.0020	2
05298	Dibromomethane	74-95-3	< 0.014	0.014	< 0.0020	0.0020	2
05298	1,2-Dichlorobenzene	95-50-1	< 0.012	0.012	< 0.0020	0.0020	2
05298	1,3-Dichlorobenzene	541-73-1	< 0.012	0.012	< 0.0020	0.0020	2
05298	1,4-Dichlorobenzene	106-46-7	< 0.012	0.012	< 0.0020	0.0020	2
05298	Dichlorodifluoromethane	75-71-8	< 0.0099	0.0099	< 0.0020	0.0020	2
05298	1,1-Dichloroethane	75-34-3	< 0.0081	0.0081	< 0.0020	0.0020	2
05298	1,2-Dichloroethane	107-06-2	< 0.0081	0.0081	< 0.0020	0.0020	2
05298	1,1-Dichloroethene	75-35-4	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0079	0.0079	< 0.0020	0.0020	2
05298	Dichlorofluoromethane	75-43-4	< 0.0084	0.0084	< 0.0020	0.0020	2
05298	1,2-Dichloropropane	78-87-5	< 0.0092	0.0092	< 0.0020	0.0020	2
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0091	0.0091	< 0.0020	0.0020	2
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0091	0.0091	< 0.0020	0.0020	2
05298	1,4-Dioxane	123-91-1	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	Ethyl Acetate	141-78-6	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	Ethyl Acrylate	140-88-5	< 0.0082	0.0082	< 0.0020	0.0020	2
05298	Ethyl Methacrylate	97-63-2	< 0.0093	0.0093	< 0.0020	0.0020	2
05298	**Ethylbenzene**	100-41-4	**0.14**	0.0087	**0.031**	0.0020	2
05298	**4-Ethyltoluene**	622-96-8	**0.032**	0.0098	**0.0064**	0.0020	2
05298	Freon 113	76-13-1	< 0.031	0.031	< 0.0040	0.0040	2
05298	Freon 114	76-14-2	< 0.014	0.014	< 0.0020	0.0020	2
05298	Hexachlorobutadiene	87-68-3	< 0.043	0.043	< 0.0040	0.0040	2

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Analysis Report

Sample Description: SVMP-13 Grab Air Summa Canister #005
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980648
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 13:50 by BS
through 05/13/2010 14:50
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP13

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Hexachloroethane	67-72-1	< 0.019	0.019	< 0.0020	0.0020	2
05298	2-Hexanone	591-78-6	< 0.016	0.016	< 0.0040	0.0040	2
05298	Methyl Acrylate	96-33-3	< 0.0070	0.0070	< 0.0020	0.0020	2
05298	Methyl Iodide	74-88-4	< 0.012	0.012	< 0.0020	0.0020	2
05298	Methyl Methacrylate	80-62-6	< 0.0082	0.0082	< 0.0020	0.0020	2
05298	Alpha Methyl Styrene	98-83-9	< 0.0097	0.0097	< 0.0020	0.0020	2
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0072	0.0072	< 0.0020	0.0020	2
05298	4-Methyl-2-Pentanone	108-10-1	< 0.016	0.016	< 0.0040	0.0040	2
05298	Methylene Chloride	75-09-2	< 0.0069	0.0069	< 0.0020	0.0020	2
05298	Styrene	100-42-5	< 0.0085	0.0085	< 0.0020	0.0020	2
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.014	0.014	< 0.0020	0.0020	2
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.014	0.014	< 0.0020	0.0020	2
05298	Tetrachloroethene	127-18-4	< 0.014	0.014	< 0.0020	0.0020	2
05298	**Toluene**	108-88-3	**0.031**	0.0075	**0.0083**	0.0020	2
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.030	0.030	< 0.0040	0.0040	2
05298	1,1,1-Trichloroethane	71-55-6	< 0.011	0.011	< 0.0020	0.0020	2
05298	1,1,2-Trichloroethane	79-00-5	< 0.011	0.011	< 0.0020	0.0020	2
05298	Trichloroethene	79-01-6	< 0.011	0.011	< 0.0020	0.0020	2
05298	Trichlorofluoromethane	75-69-4	< 0.011	0.011	< 0.0020	0.0020	2
05298	1,2,3-Trichloropropane	96-18-4	< 0.012	0.012	< 0.0020	0.0020	2
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.073**	0.0098	**0.015**	0.0020	2
05298	**1,3,5-Trimethylbenzene**	108-67-8	**0.044**	0.0098	**0.0090**	0.0020	2
05298	Vinyl Acetate	108-05-4	< 0.0070	0.0070	< 0.0020	0.0020	2
05298	Vinyl Chloride	75-01-4	< 0.0051	0.0051	< 0.0020	0.0020	2
05298	**m/p-Xylene**	179601-23-1	**0.21**	0.0087	**0.048**	0.0020	2
05298	o-Xylene	95-47-6	< 0.0087	0.0087	< 0.0020	0.0020	2

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 18:16	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 04:23	Michael A Ziegler	2

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Analysis Report

Sample Description: SVMP-14 Grab Air Summa Canister #538
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980649
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 14:15 by BS
through 05/13/2010 15:00
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP14

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.017**	0.0048	**0.0072**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	**tert-Butyl Alcohol**	75-65-0	**0.0065**	0.0030	**0.0021**	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.025**	0.0049	**0.0051**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-14 Grab Air Summa Canister #538
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980649
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 14:15 by BS
through 05/13/2010 15:00
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP14

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	**Styrene**	100-42-5	**0.0048**	0.0043	**0.0011**	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 18:45	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AC	05/22/2010 20:41	Jeffrey B Smith	1

Analysis Report

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Sample Description: SVMP-15 Grab Air Summa Canister #343
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980650
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 15:08 by BS
through 05/13/2010 16:33
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP15

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	Acetone	67-64-1	< 0.095	0.095	< 0.040	0.040	20
05298	Acetonitrile	75-05-8	< 0.067	0.067	< 0.040	0.040	20
05298	Acrolein	107-02-8	< 0.092	0.092	< 0.040	0.040	20
05298	Acrylonitrile	107-13-1	< 0.087	0.087	< 0.040	0.040	20
05298	**Benzene**	71-43-2	**0.13**	0.064	**0.041**	0.020	20
05298	Bromobenzene	108-86-1	< 0.13	0.13	< 0.020	0.020	20
05298	Bromodichloromethane	75-27-4	< 0.13	0.13	< 0.020	0.020	20
05298	Bromoform	75-25-2	< 0.21	0.21	< 0.020	0.020	20
05298	Bromomethane	74-83-9	< 0.078	0.078	< 0.020	0.020	20
05298	1,3-Butadiene	106-99-0	< 0.088	0.088	< 0.040	0.040	20
05298	2-Butanone	78-93-3	< 0.12	0.12	< 0.040	0.040	20
05298	tert-Butyl Alcohol	75-65-0	< 0.061	0.061	< 0.020	0.020	20
05298	Carbon Disulfide	75-15-0	< 0.062	0.062	< 0.020	0.020	20
05298	Carbon Tetrachloride	56-23-5	< 0.13	0.13	< 0.020	0.020	20
05298	Chlorobenzene	108-90-7	< 0.092	0.092	< 0.020	0.020	20
05298	Chlorodifluoromethane	75-45-6	< 0.071	0.071	< 0.020	0.020	20
05298	Chloroethane	75-00-3	< 0.053	0.053	< 0.020	0.020	20
05298	Chloroform	67-66-3	< 0.098	0.098	< 0.020	0.020	20
05298	Chloromethane	74-87-3	< 0.041	0.041	< 0.020	0.020	20
05298	3-Chloropropene	107-05-1	< 0.063	0.063	< 0.020	0.020	20
05298	Cumene	98-82-8	< 0.098	0.098	< 0.020	0.020	20
05298	Dibromochloromethane	124-48-1	< 0.17	0.17	< 0.020	0.020	20
05298	1,2-Dibromoethane	106-93-4	< 0.15	0.15	< 0.020	0.020	20
05298	Dibromomethane	74-95-3	< 0.14	0.14	< 0.020	0.020	20
05298	1,2-Dichlorobenzene	95-50-1	< 0.12	0.12	< 0.020	0.020	20
05298	1,3-Dichlorobenzene	541-73-1	< 0.12	0.12	< 0.020	0.020	20
05298	1,4-Dichlorobenzene	106-46-7	< 0.12	0.12	< 0.020	0.020	20
05298	Dichlorodifluoromethane	75-71-8	< 0.099	0.099	< 0.020	0.020	20
05298	1,1-Dichloroethane	75-34-3	< 0.081	0.081	< 0.020	0.020	20
05298	1,2-Dichloroethane	107-06-2	< 0.081	0.081	< 0.020	0.020	20
05298	1,1-Dichloroethene	75-35-4	< 0.079	0.079	< 0.020	0.020	20
05298	cis-1,2-Dichloroethene	156-59-2	< 0.079	0.079	< 0.020	0.020	20
05298	trans-1,2-Dichloroethene	156-60-5	< 0.079	0.079	< 0.020	0.020	20
05298	Dichlorofluoromethane	75-43-4	< 0.084	0.084	< 0.020	0.020	20
05298	1,2-Dichloropropane	78-87-5	< 0.092	0.092	< 0.020	0.020	20
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.091	0.091	< 0.020	0.020	20
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.091	0.091	< 0.020	0.020	20
05298	1,4-Dioxane	123-91-1	< 0.072	0.072	< 0.020	0.020	20
05298	Ethyl Acetate	141-78-6	< 0.072	0.072	< 0.020	0.020	20
05298	Ethyl Acrylate	140-88-5	< 0.082	0.082	< 0.020	0.020	20
05298	Ethyl Methacrylate	97-63-2	< 0.093	0.093	< 0.020	0.020	20
05298	Ethylbenzene	100-41-4	< 0.087	0.087	< 0.020	0.020	20
05298	4-Ethyltoluene	622-96-8	< 0.098	0.098	< 0.020	0.020	20
05298	Freon 113	76-13-1	< 0.31	0.31	< 0.040	0.040	20
05298	Freon 114	76-14-2	< 0.14	0.14	< 0.020	0.020	20
05298	Hexachlorobutadiene	87-68-3	< 0.43	0.43	< 0.040	0.040	20
05298	Hexachloroethane	67-72-1	< 0.19	0.19	< 0.020	0.020	20
05298	2-Hexanone	591-78-6	< 0.16	0.16	< 0.040	0.040	20

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Analysis Report

Sample Description: SVMP-15 Grab Air Summa Canister #343
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980650
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 15:08 by BS
through 05/13/2010 16:33
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP15

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Methyl Acrylate	96-33-3	< 0.070	0.070	< 0.020	0.020	20
05298	Methyl Iodide	74-88-4	< 0.12	0.12	< 0.020	0.020	20
05298	Methyl Methacrylate	80-62-6	< 0.082	0.082	< 0.020	0.020	20
05298	Alpha Methyl Styrene	98-83-9	< 0.097	0.097	< 0.020	0.020	20
05298	Methyl t-Butyl Ether	1634-04-4	< 0.072	0.072	< 0.020	0.020	20
05298	4-Methyl-2-Pentanone	108-10-1	< 0.16	0.16	< 0.040	0.040	20
05298	Methylene Chloride	75-09-2	< 0.069	0.069	< 0.020	0.020	20
05298	Styrene	100-42-5	< 0.085	0.085	< 0.020	0.020	20
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.14	0.14	< 0.020	0.020	20
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.14	0.14	< 0.020	0.020	20
05298	Tetrachloroethene	127-18-4	< 0.14	0.14	< 0.020	0.020	20
05298	Toluene	108-88-3	< 0.075	0.075	< 0.020	0.020	20
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.30	0.30	< 0.040	0.040	20
05298	1,1,1-Trichloroethane	71-55-6	< 0.11	0.11	< 0.020	0.020	20
05298	1,1,2-Trichloroethane	79-00-5	< 0.11	0.11	< 0.020	0.020	20
05298	Trichloroethene	79-01-6	< 0.11	0.11	< 0.020	0.020	20
05298	Trichlorofluoromethane	75-69-4	< 0.11	0.11	< 0.020	0.020	20
05298	1,2,3-Trichloropropane	96-18-4	< 0.12	0.12	< 0.020	0.020	20
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.098	0.098	< 0.020	0.020	20
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.098	0.098	< 0.020	0.020	20
05298	Vinyl Acetate	108-05-4	< 0.070	0.070	< 0.020	0.020	20
05298	Vinyl Chloride	75-01-4	< 0.051	0.051	< 0.020	0.020	20
05298	**m/p-Xylene**	179601-23-1	**0.11**	0.087	**0.025**	0.020	20
05298	o-Xylene	95-47-6	< 0.087	0.087	< 0.020	0.020	20

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 19:15	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/23/2010 21:56	Michael A Ziegler	20

Analysis Report

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Sample Description: SVMP-16 Grab Air Summa Canister #858
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980651
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 15:23 by BS
through 05/13/2010 16:38
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP16

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.023**	0.0048	**0.0096**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	**tert-Butyl Alcohol**	75-65-0	**0.0035**	0.0030	**0.0012**	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.040**	0.0049	**0.0081**	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SVMP-16 Grab Air Summa Canister #858
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980651
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 15:23 by BS
through 05/13/2010 16:38
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMP16

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.0039**	0.0038	**0.0010**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 19:45	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/23/2010 22:40	Michael A Ziegler	1

Analysis Report

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Sample Description: Ambient Air-1 Grab Air Summa Canister #404
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980652
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:32 by BS
through 05/13/2010 13:40
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMPAA

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA 18 modified**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07056	Methane	74-82-8	< 6.6	6.6	< 10	10	2
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05298	**Acetone**	67-64-1	**0.013**	0.0048	**0.0053**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1

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Analysis Report

Sample Description: Ambient Air-1 Grab Air Summa Canister #404
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 5980652
LLI Group # 1194651
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 05/13/2010 12:32 by BS
through 05/13/2010 13:40
Submitted: 05/14/2010 14:05
Reported: 05/27/2010 18:45
Discard: 06/27/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

SMPAA

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07056	Methane	EPA 18 modified	1	M101391ZA	05/18/2010 20:14	David I Ressler	2
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1014130AD	05/24/2010 00:07	Michael A Ziegler	1

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Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1194651
Reported: 05/27/10 at 06:45 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C1014130AB	Sample number(s): 5980639-5980641,5980644-5980646							
Acetone	< 0.0048	0.0048	mg/m3	81	85	49-155	4	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3					
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	85	88	70-130	4	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	97	100	60-131	4	25
Bromoform	< 0.010	0.010	mg/m3	85	88	45-132	3	25
Bromomethane	< 0.0039	0.0039	mg/m3	108	114	70-130	6	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	100	106	74-144	5	25
2-Butanone	< 0.0059	0.0059	mg/m3	75	78	64-129	4	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	91	97	47-116	6	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	93	98	70-130	5	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	80	82	70-130	3	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	100	106	63-137	6	25
Chloroform	< 0.0049	0.0049	mg/m3	84	88	70-130	4	25
Chloromethane	< 0.0021	0.0021	mg/m3	105	110	60-144	5	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					
Dibromochloromethane	< 0.0085	0.0085	mg/m3	89	92	58-126	3	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	81	83	59-135	2	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	81	83	38-141	2	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	43-138	3	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	41-131	3	25
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	114	120	62-145	5	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	81	84	62-131	4	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	94	97	70-130	3	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	92	99	64-129	7	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	78	81	63-131	4	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	81	85	56-130	5	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	83	86	70-130	3	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	79	82	54-140	4	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	78	81	56-137	4	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	198	210*	16-200	6	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	87	92	45-149	6	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	81	83	70-130	3	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	77	79	55-125	3	25
Freon 113	< 0.015	0.015	mg/m3	81	85	64-132	5	25
Freon 114	< 0.0070	0.0070	mg/m3	102	108	64-148	6	25
Hexachlorobutadiene	< 0.021	0.021	mg/m3	90	87	17-144	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Kleinfelder Group Number: 1194651
Reported: 05/27/10 at 06:45 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	< 0.0097	0.0097	mg/m3					
2-Hexanone	< 0.0082	0.0082	mg/m3	70	73	44-167	4	25
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	84	88	70-130	5	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	74	78	59-132	5	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	79	82	60-152	4	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	73	76	70-130	4	25
Styrene	< 0.0043	0.0043	mg/m3	77	79	58-143	3	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	61	63	45-143	3	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	82	85	70-130	3	25
Toluene	< 0.0038	0.0038	mg/m3	81	84	70-130	3	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	97	98	10-152	1	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	87	91	70-130	4	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	78	80	54-136	1	25
Trichloroethene	< 0.0054	0.0054	mg/m3	103	107	70-130	4	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	109	115	70-130	6	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	77	79	49-138	3	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	79	81	55-135	3	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	34	36	26-136	6	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	104	111	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	82	85	70-130	3	25
o-Xylene	< 0.0043	0.0043	mg/m3	80	83	70-130	3	25
Batch number: C1014130AC	Sample number(s): 5980649							
Acetone	< 0.0048	0.0048	mg/m3	81	85	49-155	4	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3					
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	85	88	70-130	4	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	97	100	60-131	4	25
Bromoform	< 0.010	0.010	mg/m3	85	88	45-132	3	25
Bromomethane	< 0.0039	0.0039	mg/m3	108	114	70-130	6	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	100	106	74-144	5	25
2-Butanone	< 0.0059	0.0059	mg/m3	75	78	64-129	4	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	91	97	47-116	6	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	93	98	70-130	5	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	80	82	70-130	3	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	100	106	63-137	6	25
Chloroform	< 0.0049	0.0049	mg/m3	84	88	70-130	4	25
Chloromethane	< 0.0021	0.0021	mg/m3	105	110	60-144	5	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					
Dibromochloromethane	< 0.0085	0.0085	mg/m3	89	92	58-126	3	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	81	83	59-135	2	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	81	83	38-141	2	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	43-138	3	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	41-131	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Kleinfelder Group Number: 1194651
Reported: 05/27/10 at 06:45 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	114	120	62-145	5	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	81	84	62-131	4	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	94	97	70-130	3	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	92	99	64-129	7	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	78	81	63-131	4	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	81	85	56-130	5	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	83	86	70-130	3	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	79	82	54-140	4	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	78	81	56-137	4	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	198	210*	16-200	6	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	87	92	45-149	6	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	81	83	70-130	3	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	77	79	55-125	3	25
Freon 113	< 0.015	0.015	mg/m3	81	85	64-132	5	25
Freon 114	< 0.0070	0.0070	mg/m3	102	108	64-148	6	25
Hexachlorobutadiene	< 0.021	0.021	mg/m3	90	87	17-144	3	25
Hexachloroethane	< 0.0097	0.0097	mg/m3					
2-Hexanone	< 0.0082	0.0082	mg/m3	70	73	44-167	4	25
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	84	88	70-130	5	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	74	78	59-132	5	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	79	82	60-152	4	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	73	76	70-130	4	25
Styrene	< 0.0043	0.0043	mg/m3	77	79	58-143	3	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	61	63	45-143	3	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	82	85	70-130	3	25
Toluene	< 0.0038	0.0038	mg/m3	81	84	70-130	3	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	97	98	10-152	1	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	87	91	70-130	4	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	78	80	54-136	1	25
Trichloroethene	< 0.0054	0.0054	mg/m3	103	107	70-130	4	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	109	115	70-130	6	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	77	79	49-138	3	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	79	81	55-135	3	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	34	36	26-136	6	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	104	111	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	82	85	70-130	3	25
o-Xylene	< 0.0043	0.0043	mg/m3	80	83	70-130	3	25
Batch number: C1014130AD	Sample number(s): 5980642-5980643,5980647-5980648,5980650-5980652							
Acetone	< 0.0048	0.0048	mg/m3	81	85	49-155	4	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3					
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	85	88	70-130	4	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	97	100	60-131	4	25
Bromoform	< 0.010	0.010	mg/m3	85	88	45-132	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Kleinfelder Group Number: 1194651
Reported: 05/27/10 at 06:45 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromomethane	< 0.0039	0.0039	mg/m3	108	114	70-130	6	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	100	106	74-144	5	25
2-Butanone	< 0.0059	0.0059	mg/m3	75	78	64-129	4	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	91	97	47-116	6	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	93	98	70-130	5	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	80	82	70-130	3	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	100	106	63-137	6	25
Chloroform	< 0.0049	0.0049	mg/m3	84	88	70-130	4	25
Chloromethane	< 0.0021	0.0021	mg/m3	105	110	60-144	5	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					
Dibromochloromethane	< 0.0085	0.0085	mg/m3	89	92	58-126	3	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	81	83	59-135	2	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	81	83	38-141	2	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	43-138	3	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	80	82	41-131	3	25
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	114	120	62-145	5	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	81	84	62-131	4	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	94	97	70-130	3	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	92	99	64-129	7	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	78	81	63-131	4	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	81	85	56-130	5	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	83	86	70-130	3	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	79	82	54-140	4	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	78	81	56-137	4	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	198	210*	16-200	6	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	87	92	45-149	6	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	81	83	70-130	3	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	77	79	55-125	3	25
Freon 113	< 0.015	0.015	mg/m3	81	85	64-132	5	25
Freon 114	< 0.0070	0.0070	mg/m3	102	108	64-148	6	25
Hexachlorobutadiene	< 0.021	0.021	mg/m3	90	87	17-144	3	25
Hexachloroethane	< 0.0097	0.0097	mg/m3					
2-Hexanone	< 0.0082	0.0082	mg/m3	70	73	44-167	4	25
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	84	88	70-130	5	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	74	78	59-132	5	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	79	82	60-152	4	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	73	76	70-130	4	25
Styrene	< 0.0043	0.0043	mg/m3	77	79	58-143	3	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	61	63	45-143	3	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	82	85	70-130	3	25
Toluene	< 0.0038	0.0038	mg/m3	81	84	70-130	3	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	97	98	10-152	1	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	87	91	70-130	4	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	78	80	54-136	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1194651
Reported: 05/27/10 at 06:45 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichloroethene	< 0.0054	0.0054	mg/m3	103	107	70-130	4	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	109	115	70-130	6	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	77	79	49-138	3	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	79	81	55-135	3	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	34	36	26-136	6	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	104	111	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	82	85	70-130	3	25
o-Xylene	< 0.0043	0.0043	mg/m3	80	83	70-130	3	25

Batch number: M101391ZA Sample number(s): 5980639-5980652

Methane	< 3.3	3.3	mg/m3

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. # 12152 Group# 1194651 Sample # 5980639-52

COC # 234197

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: DNREC-TMB Acct. #:
Project Name/#: Ron's Discount Energy PWSID #:
Project Manager: Mark Steele P.O.#: 08531-0977660
Sampler: Brian Shedd Quote #:
Name of state where samples were collected: DE

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Compound list per A.f. 5/18/10

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES)	Other	Total # of Containers	VOCs, EPA TO-15	Methane EPA TO-3							Remarks	Temperature of samples upon receipt (if requested)
SUMP-1 (162)	5/13/10	1033/1116	X				X	1	X	X							FC ID = 338034	
SUMP-2 (331)	5/13/10	1112/1248	X				X	1	X	X							FC ID = 329355	
SUMP-3 (300)	5/13/10	1129/1330	X				X	1	X	X							FC ID = 336068	
SUMP-4 (201)	5/13/10	1137/1242	X				X	1	X	X							FC ID = 304036	
SUMP-5 (055)	5/13/10	1227/1311	X				X	1	X	X							FC ID = 336737	
SUMP-6 (384)	5/13/10	1242/1444	X				X	1	X	X							FC ID = 336795	
SUMP-7 (081)	5/13/10	1309/1401	X				X	1	X	X							FC ID = 339238	
SUMP-8 (849)	5/13/10	1315/1447	X				X	1	X	X							FC ID = 420...	
SUMP-10 (403)	5/13/10	1457/1625	X				X	1	X	X							FC ID = 234834	

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
			Sample Room		
[signature]	5/13/10	1830	Sample Room		
Sample room [signature]	5/14/10	0:00	[signature]	5/14/10	10:00
[signature]	5/14/10	14:05			
			[signature]	5-14-10	1405

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12152 Group# 1194651 Sample # 5980639-52 **COC #** 234196

Please print. Instructions on reverse side correspond with circled numbers.

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(1)
Client: DNREC-TMB Acct. #:
Project Name/#: Ron's Discount Energy PWSID #:
Project Manager: Mark Steele P.O.#: 08531-097766
Sampler: Brian Shedd Quote #:
Name of state where samples were collected: DE

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (☐ Potable ☐ NPDES)	Other	Total # of Containers	NOC_3 EPA TO-15	Methane EPA TO-3	Remarks
SVMP-13 (005)	5/13/10	1350/1450	X				X		X	X	FC ID = 204636
SVMP-14 (538)	5/13/10	1415/1500	X				X		X	X	FC ID = 338049
SVMP-15 (343)	5/13/10	1508/1633	X				X		X	X	FC ID = 316958
SVMP-16 (858)	5/13/10	1523/1630	X				X		X	X	FC ID = 301068
Ambient Air-1 (404)	5/13/10	1232/1340	X				X		X	X	FC ID = 185515

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
			Sample Room		
[signature]	5/13/10	1830	Sample Room		
[signature] Schyle Noon	5/14/10	10:05	[signature]	5/14/10	10:05
[signature]	5/14/10	14:05			
			[signature]	5/14/10	1405

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Appendix D -

SIRB *Vapor Intrusion Policy* Attachment IV Forms
(9, 10, and 12 Hillside Road)

DNREC SIRB Vapor Intrusion Policy

Field Sampling Form

Project #: 9 Hillside Rd. Sample #: See page 25 (Attach Sample Map)

Project Name: Ron's Discount Energy

Sampled By: Brian Scott

Date Sampled: 6/29 - 6/30/10 Time: See page 25

General Site Conditions:

Atmospheric Data:

weatherunderground.com	Source of Data
0 inches	Precipitation during sampling
1.83 inches	Amount of Precipitation (month to date)
29.8 inches	Barometric Pressure
81 °F	Temperature (Ave)
10 mph	Wind Speed
WNW	Wind Direction

Sampling System (check one)

( ) Whole-Air active approach

( ) Whole-Air passive approach

( ) Sorbed contaminants-active approach

( ) Sorbed contaminants-passive approach

( ) Headspace or extraction approach

( ) soil pore liquid headspace approach

Spiked _____ with _____ cc

Potential reaction products due to spiking: _____

Sample Type

(X) Direct Field Sample

( ) Field Blank

( ) Travel Blank

( ) Sample Container Blank

( ) Sample Probe Blank

( ) Sample Replicate of _____

System Purge Volume: NA Volumes Purged: _____ Sample Volume: _____

Sorbent Device: Installed: _____ Date/time

Recovered _____ Date/time

Sample Container Type: SUMMA Sample Container #: 824502:145 basement 1st floor outdoor

Analytical Method: TO-15 (Chain of Custody Attached)

Integral _____ Detector: ppbRAE (attach equipment calibration, detections (See map for basement screening results)

9 Hillside

Analyzer: _____ _____ to this form)

Analyzer Result: _____

Surface cover: _____

Sample Depth: _____ Sampling rate _____

Sample Horizon data visual estimates:

Vadose Zone Make-up: NA Native soil+rock _____ fill _____ rock

Soil Composition:

Clay	_____	%
Soil Organic matter	_____	%
Fine Granular Material	_____	%
Coarse Granular Material	_____	%

Moisture Content: N A

Other characteristics:

_____	free water present	_____	indurated
_____	Free product	_____	soil discoloration probable connnection to surface macropores
_____	contaminant odors		
_____	poor perm. To vapor		
_____	near slope or vent		

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Brian Shold - Klein-Felder Date: 6/22/10

Site Name: Ron's Discount Energy - 9 Hillside Rd
DE#: _____

Part I - Occupants

Building Address: 9 Hillside Road, Claymont, DE

Property Contact: George Lewis Owner/Renter/Other: owner

Contact's Phone: home ( ) _____ work (302) 798-4814
cell ( ) _____

Contact's Email: _____

Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults 2

Special Health Conditions (respiratory, cardiovascular; partially able or homebound?)
None mentioned

Allergies _____ Other _____ (describe)

Part II – Building Characteristics

9 Hillside

Building type: (single-family residential) / trailer or mobile / multi-family residential (duplex, row, apartment?) / office / strip mall / commercial / industrial

Describe building:
1) age Built in 1937
2) construction frame / masonry / steel / other; wood siding
3) type of insulation; plaster walls
4) type of roof Gable, asphalt
5) general condition and air tightness
6) fireplace or chimney (serviced recently?)
fireplace, did not appear to be currently in use

Number of floors - below grade: 1 (full basement / crawl space / slab) at or above grade: 2
basement is unfinished

Number of rooms 1 room in basement 6 rooms total Do windows open? yes

Basement size: ~1000 ft² Basement floor: (concrete) / dirt / floating / other (specify): ____

Foundation type: (poured concrete) / cinder blocks (hollow?) / stone / other (specify):

Type of ground cover around outside of building: (grass) / concrete / asphalt / other (specify):

If vegetation, does it appear stressed? No French drain? ____
Flooding experienced? ____

Floor drains present? yes If yes, trap present? yes Water in trap?
Unable to observe, sealed plate over sump system w/ pump

Connected to a: a) (sanitary sewer) b) storm sewer c) septic system

9 Hillside

d) surface discharge e) unknown

Basement sump present? (Yes) / No Sump pump? (Yes) / No

Type of heating system (circle all that apply):

hot air circulation hot air radiation wood steam radiation
hot water radiation
kerosene heater electric baseboard heat pump
other (specify): oil heat
solar/air solar/glycol or other heat transfer fluid
solar/water

If air, when were filters changed last? N A

Type of ventilation system (circle all that apply):
central air conditioning mechanical fans
bathroom ventilation fans individual air conditioning units kitchen
range hood fan other (specify): _____

Type of fuel utilized (circle all that apply):

Natural gas / electric / (fuel oil) / wood-wood pellets / coal / solar / kerosene / waste oil/ outside (fresh) air intake

Septic system? *Yes / Yes (but not used)* / (No) Irrigation/private well? *Yes / Yes (but not used)* / (No)

Public or private well *Yes* / (No) If public, name of company

_____

Existing subsurface depressurization (radon) system in place? *Yes* / (No)
and running? *Yes* / (No)

Part III - Outside Contaminant Sources

DNREC DEN/Marplot/Brownfields lists (1000-ft. radius):

Previous land use in area:
residential, Former Ron's Discount Energy located

Other stationary sources nearby:

Former Gas stations Emission stacks Refineries/chemical plants

9 Hillside

Waste disposal facilities (LFS & WWTPs) Hot-mix plants Fuel oil tanks
Dry cleaners Beauty shops Auto repair/body shops Road or roof repair w/hot tar

Wetlands nearby? (distance and direction)

No, NWI web mapper checked, closest is .0025 miles to the southeast along river boundary

Heavy vehicular traffic nearby (or other mobile sources):

I-495 and I-95 located .20 miles SE and 1 mile N/NW respectively

Known groundwater or soil contamination within 1000 feet

yes, ongoing investigation @ Rons Discount energy

Physical parameters of unsaturated zone (summarize or attach)

primarily silty clay and clayey silt

Sinkholes or Debris Pits

None observed

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	**Location(s)**	**Removed Prior to Sampling? (Yes / No / NA)**
Gasoline storage cans	None observed	NA
Gas-powered equipment	None observed	NA

9 Hillside

Kerosene storage cans	None observed	NA
Paints / thinners / strippers / glues / caulks	See attached listing	yes
Cleaning solvents	See attached listing	yes
Oven cleaners	None observed	NA
Carpet / upholstery cleaners	None observed	NA
Other house cleaning products/laundry products	See attached listing	no
Moth balls	None observed	NA
Polishes / waxes	None observed	NA
Insecticides	None observed	NA
Furniture / floor polish	See attached listing	yes
Nail polish / polish remover	None observed	NA
Hairspray	None observed	NA
Cologne / perfume / after-shave, etc.		
Air fresheners		
Fuel tank (inside building) (outside)	See attached listing (inside)	NA
Wood stove or fireplace	yes, 1st floor	NA
New furniture / upholstery	None observed	NA
New carpeting / flooring /paneling	None observed	NA
Recent painting in building? Roof repair?	None observed	NA
Hobbies - glues, paints, etc.	See attached listing	yes
Toilet or septic additives	See attached listing	no
Dry drain traps, plugged drains, toilets won't flush	None observed	NA
Garbage/spoiled food	None observed	NA
Standing water/tire piles/recent flooding	None observed	NA
Sewage/septage	None observed	NA
Dead animals (including unusual numbers of insects)?	None observed	NA
Mold/mildew	None observed	NA
Wet sheetrock/paneling/flooring	None observed	NA
Neighbors making drugs/Explosives	None observed	NA
Mercury-containing switches or instruments	None observed	NA
Alcohol/bleach/disinfectants	See attached listing	no
Recent concrete/masonry work	None observed	NA
Flowers	yes, kitchen and dining room table	no
Pets (specify); scented kitty litter	Dogs (2)	no
Compost/manure	None observed	NA

Part V – Miscellaneous Items

9 Hillside

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Any chronic health problems? *Yes* / (No)

Has anyone smoked within the building within the last 48 hours? *Yes* / (No)

Does the building have an attached garage? *Yes* / (No)
If yes, does garage have heat/ventilation?

Connected to house or separate? separate Windows? (Yes) / *No*

If so, is a car usually parked in the garage? *Yes* / (No)

Do the occupants of the building have their clothes dry-cleaned? *Yes* / *No*
If yes, name of dry cleaner
unknown

When were dry-cleaned clothes last brought into the building?

unknown

Have the occupants ever noticed any unusual odors in the building? (Yes) / *No*

Describe (with location); Date worst during rainy rain events Amount

Any known spills of a chemical, fuel or sewage immediately outside or inside the building?
Yes / (No) Fires? *Yes* / (No)

Describe (with location):

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? *Yes* / No unknown

Have any pesticides been applied regionally, e.g. by Mosquito Control or DSWC? *Yes* / (No)

9 Hillside

If so, when and which chemicals?

Are odors more noticeable under certain weather conditions? Describe (wind direction/ speed/precipitation/temperature/humidity):
yes, during rain events

Part VI – Sampling Information

Sample Technician: Brian Shedd Phone number: (410) 850-0404

Sampler Type: Tedlar / Sorbent / Canister
Analytical Method: TO-15 / TO-17 / other:

Laboratory: Lancaster Laboratories NJ Certified Lab? Yes / No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
1	Basement	—	824	226412	6/29 / 1509	6/30 / 1446
2	1st floor	Dining	502	337860	6/29 / 1505	6/30 / 1444
3	Outdoor	—	145	71461	6/29 / 1522	6/30 / 1504

9 Hot side

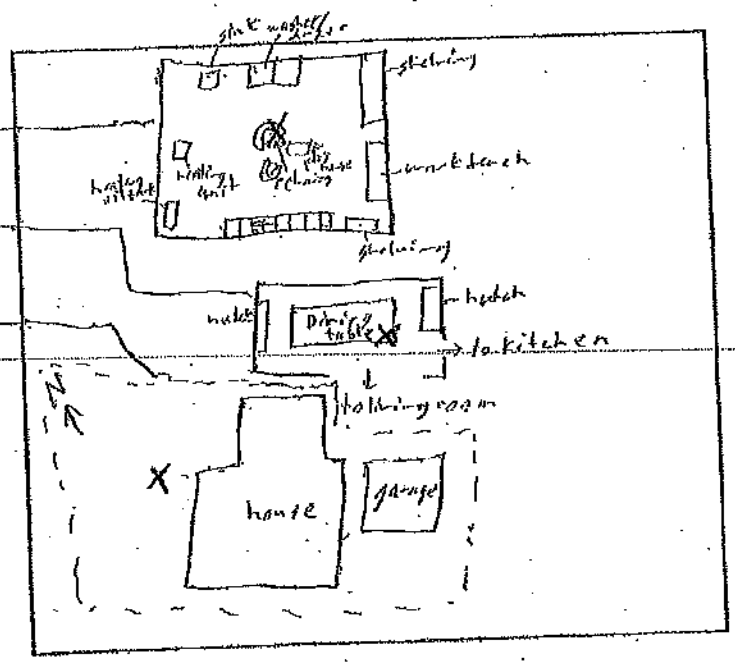
Sample location(s):
Location(s) in Building

Sample # 1 - X = sample location basement

Sample # 2 - 1st floor

Sample # 3 - Outdoor

Provide Drawing of Sample



Did the occupants **not** follow any of the "Instructions for Residents" directions? *Yes / No*

If so, describe modifications: _____

Part VII - Weather Conditions

Outside temperature at time of sampling: 81 °F

Expected high temperature: 91 °F Expected low temperature: 70 °F

Humidity: 62% Barometric pressure: 29.8 inches Ozone: Red/Orange alert?

Was there significant precipitation within 12 hours of (or during) the sampling event? *Yes / No*

PHillock

Wind direction and speed
10 mph WNW

Describe the general weather conditions:
Warm and humid with moderate winds.

Fill out and attach DNREC SIRB Vapor Intrusion Guidance Document Field Sampling Form 1 to this form.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.
See attached map and product inventory sheet; product screening results located on map

9 Hillside Road Product Inventory Sheet

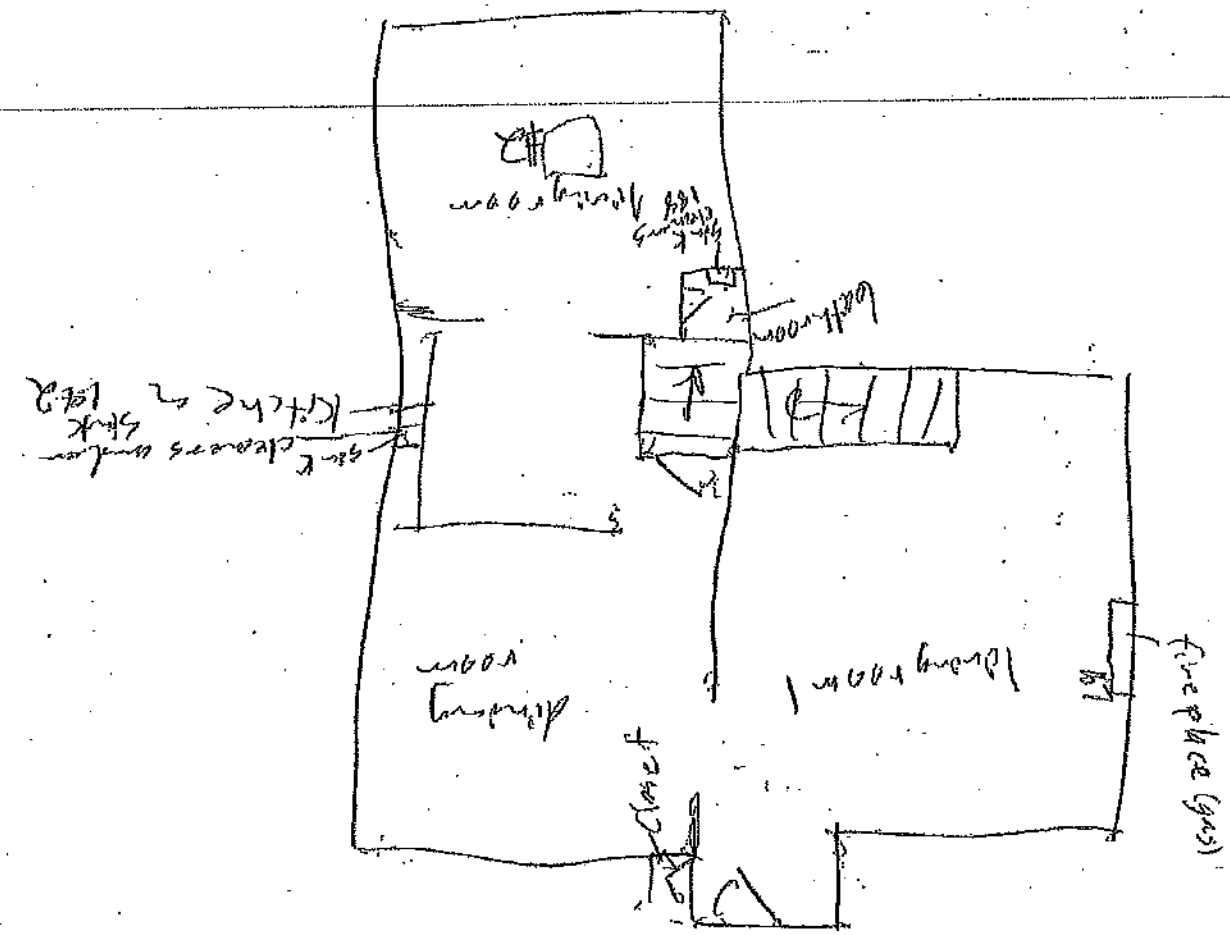
Basement –

- Pledge (1) - furniture cleaner/polish
- Zout (1) – Laundry stain remover
- Tide (1) – Laundry detergent
- Shout (3)– Laundry stain remover
- Sun and Earth (2) – Hand sanitizer
- Fantastik (2) – All purpose cleaner
- Purex (3) – Ultra concentrate laundry detergent
- Bleach (2) – Off brand regular scent and Clorox scented
- Paints
  - Glidden(1) – Interior ceiling paint {Latex}
  - Moorcraft (1) – Super Spec {Latex}
  - Dulux (5) – Interior Wall and Trim Enamel {Acrylic}
  - Ultra Hide (1) – Semi-gloss {Latex}
  - Krylon (1)– Interior/Exterior spray paint
  - American Accent (2) – Satin spray paint
- Olympic (1) – Interior varnish
- Quickrete (1) – Concrete surface seal
- Oil (2) - Miscellaneous Lube in original container
- Gear Oil (1)
- Heating Oil Tank (1)

1st Floor –

- Windex (2) – Glass cleaner
- Clorox (2) – Disinfecting wipes, bleach free
- Lysol (1) – Disinfecting wipes, bleach free
- Lysol (1) – Disinfecting spray
- Palmolive (2) – Dish detergent
- Endust (1) – furniture cleaner/polish
- Bob's Affordable (1) – Carpet cleaner
- Electrosol (1) – Dish detergent
- Simple Solution (1) – Hardfloor stain and odor remover
- Apple Barrel Colors (1)– Craft Paint
- Wegmens Lens wipes (1)
- Listerine (1)
- Lysol (1) – Toilet bowl cleaner w/ Bleach

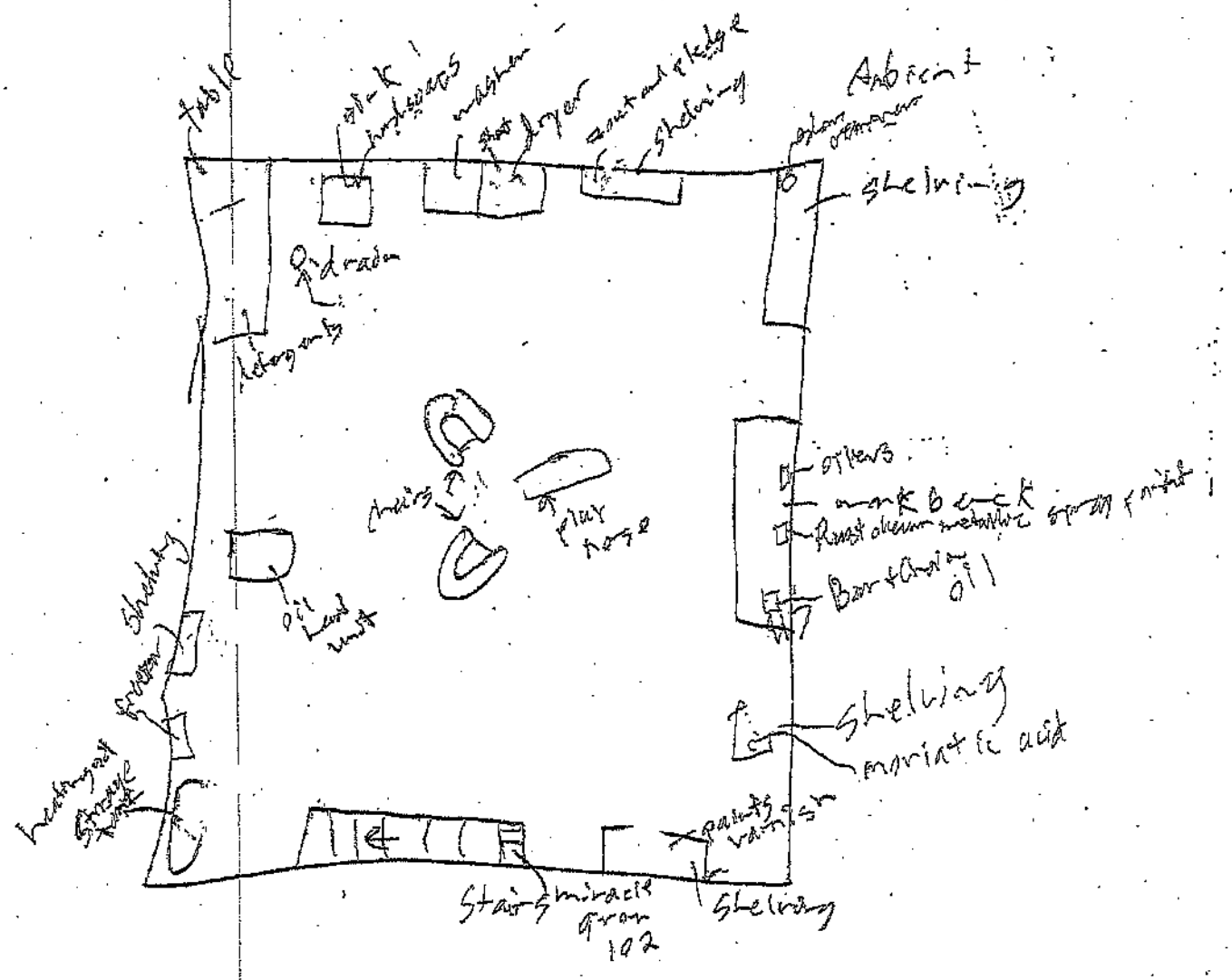
9 Hillside Rd. 1st floor



Hillside rd

16th-Lane at 9 Hillside

9 Hillside Rd Basement



DNREC SIRB Vapor Intrusion Policy

Field Sampling Form

Project #: 10 Hillside Rd. Sample #: See page 25 (Attach Sample Map)

Project Name: Ron's Discount Energy

Sampled By: Brian Sheld

Date Sampled: 6/29-6/30/10 Time: See page 25

General Site Conditions:

Atmospheric Data:

weatherundergroundcom	Source of Data
0 inches	Precipitation during sampling
1.83 inches	Amount of Precipitation
29.8 inches	Barometric Pressure
81 °F	Temperature (Ave)
10 mph	Wind Speed
WNW	Wind Direction

Sampling System (check one)

( ) Whole-Air active approach

( ) Whole-Air passive approach

( ) Sorbed contaminants-active approach

( ) Sorbed contaminants-passive approach

( ) Headspace or extraction approach

( ) soil pore liquid headspace approach

Spiked _____ with _____ cc

Potential reaction products due to spiking: _____

Sample Type

(X) Direct Field Sample Field

( ) Blank Travel

( ) Blank Sample Container

( ) Blank

( ) Sample Probe Blank

( ) Sample Replicate of _____

System Purge Volume: NA Volumes Purged: _____ Sample Volume: _____

Sorbent Device: Installed: _____ Date/time

Recovered _____ Date/time

Sample Container Type: SUMMA Sample Container #: 116,154,101

Analytical Method: TO-15 (Chain of Custody Attached)

Integral _____ Detector: ppbRAE (attach equipment calibration, detections (see map for basement and 1st floor screening results)

10 Hillside

Analyzer: _____ _____ **to this form)**

Analyzer Result: _____

Surface cover: _____

Sample Depth: _____ Sampling rate _____

Sample Horizon data visual estimates:

Vadose Zone Make-up: NA Native soil+rock _____ fill _____ rock

Soil Composition: Clay _____ %

Soil Organic matter _____ %

Fine Granular Material _____ %

Coarse Granular Material _____ %

Moisture Content: NA

Other characteristics:

_____ free water present

_____ Free product

_____ contaminant odors

_____ poor perm. To vapor

_____ near slope or vent

_____ indurated

_____ soil discoloration probable connection to surface macropores

10 Hillside

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Brian Shedd – Kleinfelder Date: 8/22/10

Site Name: Ron's Discount Energy – 10 Hillside Rd
DE#: _____

Part I - Occupants

Building Address:
10 Hillside Rd, Claymont, DE

Property Contact: Toby Conrad
Owner/Renter/Other: Owner

Contact's Phone: home ( ) _____ work ( ) _____
cell ( ) _____

Contact's Email: _____

Building occupants: Children under age 13 2 Children age 13-18 0 Adults 3

Special Health Conditions (respiratory, cardiovascular; partially able or homebound?)
None mentioned

Allergies _____ Other (describe)

Part II – Building Characteristics

10 Hillside

Building type: single-family residential / trailer or mobile / multi-family residential (duplex, row, apartment?) / office / strip mall / commercial / industrial

Describe building:
1) age Built in 1938
2) construction frame / masonry / steel / other; vinyl siding
3) type of insulation; Plaster walls
4) type of roof Gable, asphalt
5) general condition and air tightness
6) fireplace or chimney (serviced recently?)

Number of floors - below grade: 1 (full basement / crawl space / slab) at or above grade:
unfinished basement

Number of rooms _____ Do windows open?

Basement size: 1077 ft² Basement floor: (concrete) / dirt / floating / other (specify): ____

Foundation type: (poured concrete) / cinder blocks (hollow?) / stone / other (specify):

Type of ground cover around outside of building: (grass) / concrete / asphalt / other (specify):

If vegetation, does it appear stressed? No French drain?_____
Flooding experienced?_____

Floor drains present? yes If yes, trap present? no Water in trap?
water absorbed into drain

Connected to a: a) sanitary sewer b) storm sewer c) septic system
unknown

10 Hillside

d) surface discharge e) unknown

Basement sump present? *Yes* / *No* Sump pump? *Yes* / *No*

Type of heating system (circle all that apply):

hot air circulation hot air radiation wood steam radiation
hot water radiation
kerosene heater electric baseboard heat pump
other (specify): natural gas
solar/air solar/glycol or other heat transfer fluid
solar/water

If air, when were filters changed last?

Type of ventilation system (circle all that apply):
central air conditioning mechanical fans
bathroom ventilation fans individual air conditioning units kitchen
range hood fan other (specify):

Type of fuel utilized (circle all that apply):

Natural gas / electric / fuel oil / wood-wood pellets / coal / solar / kerosene / waste oil/ outside (fresh) air intake

Septic system? *Yes* / *Yes (but not used)* / *No* Irrigation/private well? *Yes* / *Yes (but not used)* / *No* Old system possibly still in place but not in use

Public or private well *Yes* / *No* If public, name of company

Existing subsurface depressurization (radon) system in place? *Yes* / *No*
and running? *Yes* / *No*

Part III - Outside Contaminant Sources

DNREC DEN/Marplot/Brownfields lists (1000-ft. radius):

Previous land use in area: Residential, former Rons Discount Energy Service Station
300' away

Other stationary sources nearby:

Gas stations Emission stacks Refineries/chemical plants

10 Hillside

Waste disposal facilities (LFS & WWTPs) Hot-mix plants Fuel oil tanks
Dry cleaners Beauty shops Auto repair/body shops Road or roof repair w/hot tar

Wetlands nearby? (distance and direction)

No, NWI web mapper checked, closest is 0.25 miles SE along river boundary

Heavy vehicular traffic nearby (or other mobile sources):

I-495 and I-95 located 0.20 mi SE and 1 mi N/NW, respectively

Known groundwater or soil contamination within 1000 feet
yes, on going investigation @ Ron's Discount Energy

Physical parameters of unsaturated zone (summarize or attach)
Primarily silty clay and clayey silt

Sinkholes or Debris Pits
None Observed

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	None Observed	NA.
Gas-powered equipment	None Observed	NA

16 Hillside

Kerosene storage cans	None Observed	NA
Paints / thinners / strippers / glues / caulks	See attached listing	yes
Cleaning solvents	See attached listing	yes
Oven cleaners	None Observed	NA
Carpet / upholstery cleaners		
Other house cleaning products/laundry products	See attached listing	no
Moth balls	None Observed	NA
Polishes / waxes	See attached listing	yes
Insecticides	See attached listing	yes
Furniture / floor polish	See attached listing	yes
Nail polish / polish remover	See attached listing	yes
Hairspray	None observed	NA
Cologne / perfume / after-shave, etc.	None observed	NA
Air fresheners	Yes, unbranded scent sticks	no
Fuel tank (inside building) (outside)	None observed	NA
Wood stove or fireplace	Yes, fireplace observed	NA
New furniture / upholstery	None observed	NA
New carpeting / flooring /paneling	Yes, new carpeting installed 4 yrs ago on 1st floor	NA
Recent painting in building? Roof repair?	Yes, painted backroom on 1st floor on day of inspection, coated the roof approx. 2 yrs ago	NA
Hobbies - glues, paints, etc.	See attached listing	yes
Toilet or septic additives	See attached listing	no
Dry drain traps, plugged drains, toilets won't flush	No	NA
Garbage/spoiled food	No	NA
Standing water/tire piles/recent flooding	No	NA
Sewage/septage	No	NA
Dead animals (including unusual numbers of insects)?	No	NA
Mold/mildew	No	NA
Wet sheetrock/paneling/flooring	No	NA
Neighbors making drugs/Explosives	No	NA
Mercury-containing switches or instruments	Possibly, 1 old thermometer located on 2nd floor	no
Alcohol/bleach/disinfectants	See attached listing	no
Recent concrete/masonry work	Supports for deck (exterior of home)	no
Flowers	In kitchen on 1st floor and outside	no
Pets (specify); scented kitty litter	2 cats, scented kitty litter obs.	no
Compost/manure	No	NA

Part V – Miscellaneous Items

10 Hillside

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Any chronic health problems? *Yes* / (*No*)

Has anyone smoked within the building within the last 48 hours? *Yes* / (*No*)

Does the building have an attached garage? (*Yes*) / *No*
If yes, does garage have heat/ventilation?
No
Connected to house or separate? connected Windows? (*Yes*) / *No*

If so, is a car usually parked in the garage? *Yes* / (*No*)

Do the occupants of the building have their clothes dry-cleaned? *Yes* / (*No*)
If yes, name of dry cleaner

When were dry-cleaned clothes last brought into the building?

Unknown

Have the occupants ever noticed any unusual odors in the building? (*Yes*) / *No*

Describe (with location): Date last observed a few months ago Amount Petroleum type odors noted by resident which are more noticable after rain events

Any known spills of a chemical, fuel or sewage immediately outside or inside the building?
Yes / (*No*) Fires? *Yes* / (*No*)

Describe (with location):

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? (*Yes*) / No Pesticides professionally applied approx. every 3 months

Have any pesticides been applied regionally, e.g. by Mosquito Control or DSWC? *Yes* / (*No*)

10 Hillside

If so, when and which chemicals?
unknown

Are odors more noticeable under certain weather conditions? Describe (wind direction/ speed/precipitation/temperature/humidity):
yes, during precipitation (Rain) events

Part VI – Sampling Information

Sample Technician: Brian Shedd Phone number: (410) 850 - 0404

Sampler Type: Tedlar / Sorbent / Canister
Analytical Method: TO-15 / TO-17 / other:

Laboratory: Lancaster Laboratories NJ Certified Lab? Yes / No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
1	Basement	NA	116	338068	6/29 - 1434	6/30 - 1438
2	1st floor	Living room	154	301034	6/29 - 1433	6/30 - 1444
3	Outdoor	NA	101	301042	6/29 - 1502	6/30 - 1501

18 Hillside

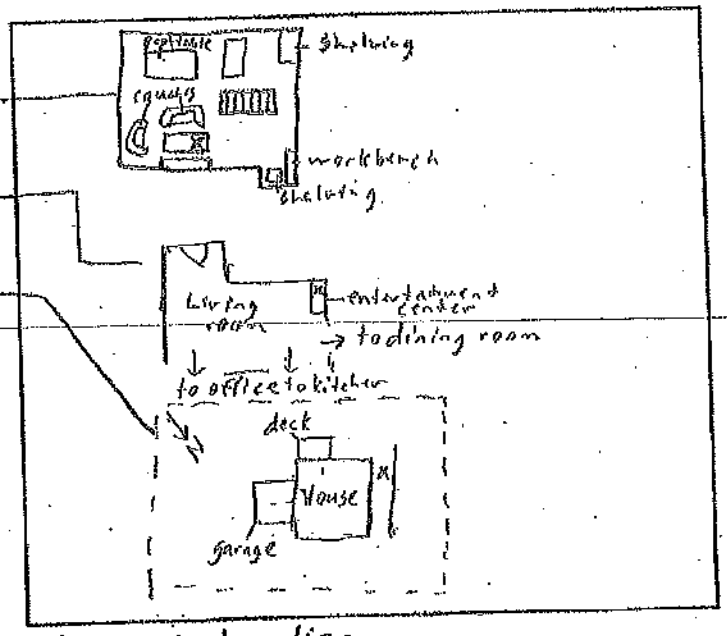
Sample location(s):
Location(s) in Building

Provide Drawing of Sample

Sample # 1 - Basement

Sample # 2 - 1st floor

Sample # 3 - Outdoor



X = sample location

Did the occupants **not** follow any of the "Instructions for Residents" directions? *Yes / No*

If so, describe modifications: _____

Part VII - Weather Conditions

Outside temperature at time of sampling: 81 °F

Expected high temperature: 91 °F Expected low temperature: 70 °F

Humidity: 62% Barometric pressure: 29.4 inches Ozone: Red/Orange alert?

Was there significant precipitation within 12 hours of (or during) the sampling event? *Yes / No*

10 Hillside

Wind direction and speed
10 mph WNW

Describe the general weather conditions:
Warm and humid with moderate winds

Fill out and attach DNREC SIRB Vapor Intrusion Guidance Document Field Sampling Form 1 to this form.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.
See attached map and product inventory sheet; product screening results depicted on map in parts per billion (ppb)

10 Hillside Road Product Inventory Sheet

Basement –

- Shout (4) – Laundry Stain Remover
- Hot Shot (2) – Pesticide Fogger
- OxyClean (1) – Stain Remover spray
- Febreeze (1) – Deodorizer
- Good Off (1) – Paint Remover
- MinWax (1) - Sanding Sealer
- MinWax (2) – Wood Sealant and Stain
- MinWax (1) – Polyurethane
- ~~American Traditions and Behr (17) – Interior Latex Paint~~
- Sheetrock (3) – Joint Compound Paste
- Spackling (2) - Paste
- Simple Green (1) - Cleaner
- Liquid Plumber (1) – Unclogging Gel
- All (2) – Laundry Detergent
- Miracle-Gro (1) – Plant Food
- Downy (2) – Laundry Detergent
- Shout (1) – Laundry Detergent
- Bleach (1) – Clorox
- Caulk (6) – Adhesive sealant
- Rustoleum (1) – Primer
- WD-40 (1) – Spray lubricant
- STP (1) – Gas treatment
- Pipe Joint Compound (1) – White
- Liquid Sandpaper (1) – Paint Remover
- Parks (1) – Turpentine
- Gunk (1) – Silicone Spray lubricant
- Paper cement (1) – Best Test White Rubber cement
- Elmers (2) – Interior Wood Filler
- DAP (1) – Wood Glazing
- Refined Linseed Oil – Winsor and Newton
- Rustoleum (1) – Writable chalk board latex paint
- RADC (1) - Windshield and lock de-icing spray
- Valspar (1) – Metal and Patina Glaze
- DATY (1) – PVC cement
- OxyClean (1) – Stain remover powder
- ZEP (1) – Heavy duty Hand Cleaner
- Resolve (1) – Stain Remover Spray
- Spray 'n Wash (1) – Stain Remover Spray
- Dawn (1) – Special Care Stain Treatment
- Ortho (3) – Bug B Gon pesticide

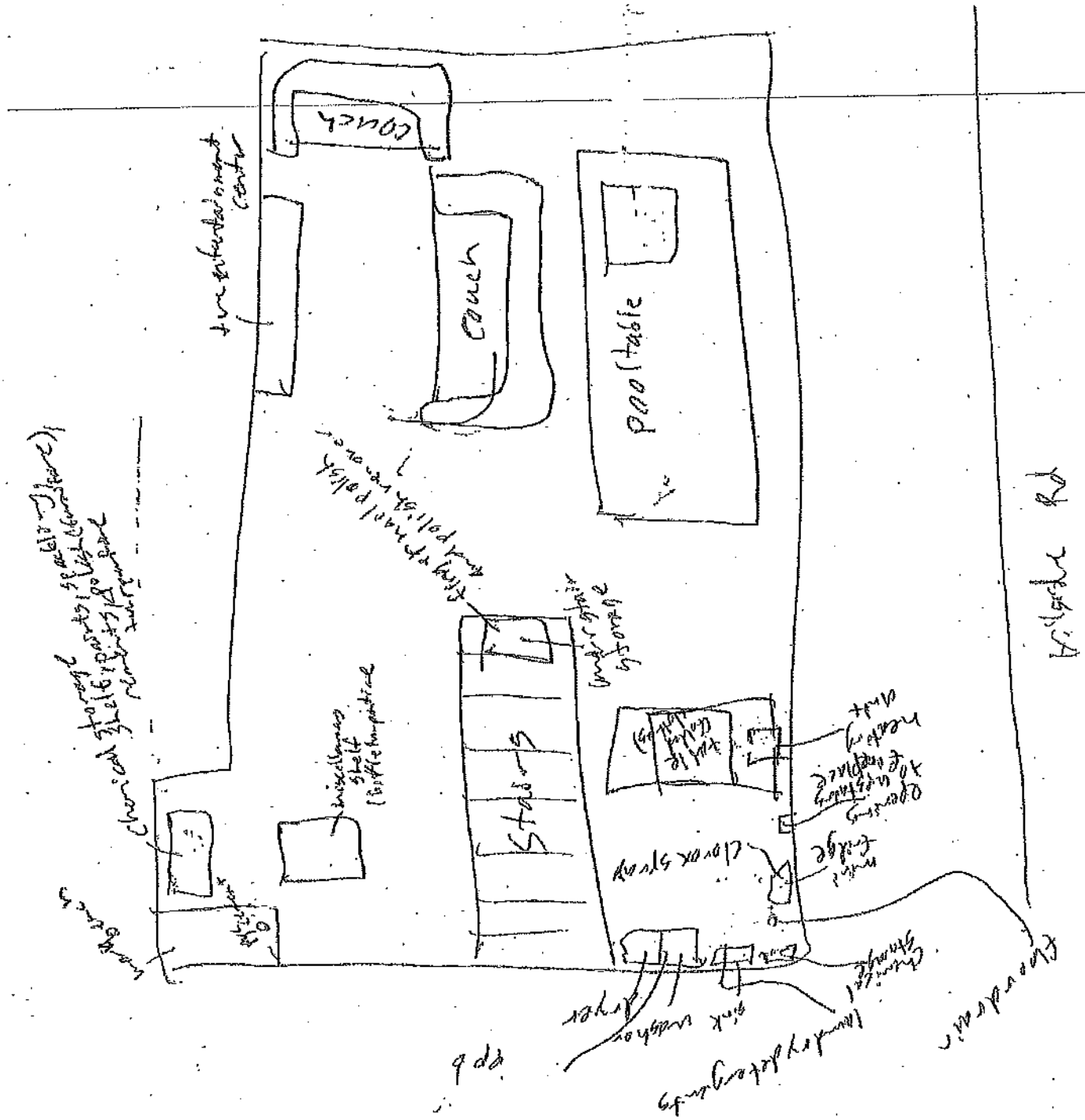
10 Hillside

- Calgon (1) – Water Softener liquid
- Niagra (2) – Spray Starch
- Clorox (1) – Spray cleaner w/ bleach
- Liquitex (11) – Oil Based Paint
- Raid (3) – Insecticide Spray

1st Floor –

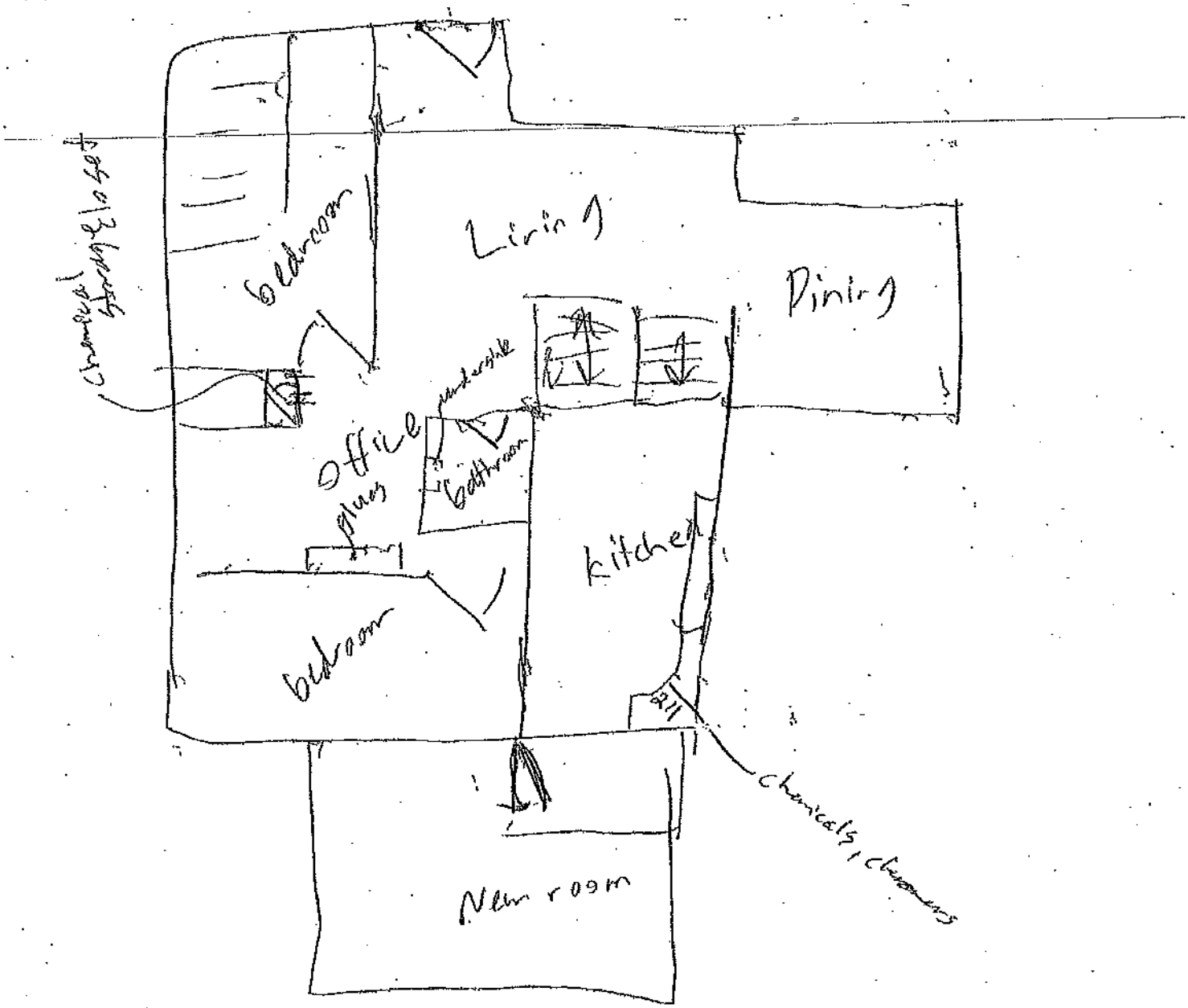
- Windex (1) – Glass cleaner
- Clorox (2) – Spray Cleaner w/ Bleach
- Dish Soap (1) – Palmolive antibacterial
- ~~Dish Detergent (1) – Palmolive Lemon~~
- Spot Shot (1) – Carpet Stain Remover
- Lysol (1) – Antibacterial Spray
- Swifter Wetjet (1) – Floor Cleaner
- Fantastik (1) – Spray Cleaner
- Body Wash (2) – Target
- Coppertone (3) - Sunscreen

10 Hillside Basement



10 Hillside 1st Floor

1st floor - ambient



DNREC SIRB Vapor Intrusion Policy

Field Sampling Form

Project #: 12 Hillside Rd Sample #: See page 25 (Attach Sample Map)

Project Name: Ron's Discount Energy

Sampled By: Brian Shedd

Date Sampled: 6/29-6/30/10 Time: See page 25

General Site Conditions:

Atmospheric Data:

weather underground	Source of Data
0 inches	Precipitation during sampling
1.83 inches	Amount of Precipitation
29.8 inches	Barometric Pressure
81°F	Temperature
10 mph	Wind Speed
WNW	Wind Direction

Sampling System (check one)

( ) Whole-Air active approach

( ) Whole-Air passive approach

( ) Sorbed contaminants-active approach

( ) Sorbed contaminants-passive approach

( ) Headspace or extraction approach

( ) soil pore liquid headspace approach

Sample Type

(X) Direct Field Sample

( ) Field Blank

( ) Travel Blank

( ) Sample Container Blank

( ) Sample Probe Blank

( ) Sample Replicate of _____

Spiked _____ with _____ cc

Potential reaction products due to spiking: _____

System Purge Volume: NA Volumes Purged: _____ Sample Volume: _____

Sorbent Device: Installed: _____ Date/time

Recovered _____ Date/time

Sample Container Type: SUMMA Sample Container #: _____

Analytical Method: _____ (Chain of Custody Attached)

Integral _____ Detector: ppbRAE (attach equipment calibration, detections

12 Halide

Analyzer: _____ _____ to this form)

Analyzer Result: _____

Surface cover: _____

Sample Depth: _____ Sampling rate _____

Sample Horizon data visual estimates:

Vadose Zone Make-up: NA Native soil+rock _____ fill _____ rock

Soil Composition: Clay _____ %

Soil Organic matter _____ %

Fine Granular Material _____ %

Coarse Granular Material _____ %

Moisture Content: NA

Other characteristics: _____ free water present _____ indurated

_____ Free product _____ soil discoloration probable connection to surface macropores

_____ contaminant odors

_____ poor perm. To vapor

_____ near slope or vent

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Brian Shedd-Kleinfelder Date: 6/22/10

Site Name: Ron's Discount Energy - 12 Hillside Rd
DE#: _____

Part I - Occupants

Building Address:
12 Hillside Rd, Claymont, DE

Property Contact: Dennis McCole
Owner/Renter/Other: owner

Contact's Phone: home ( ) _____ work ( ) _____
cell ( ) _____

Contact's Email: _____

Building occupants: Children under age 13 1 Children age 13-18 _____ Adults 2

Special Health Conditions (respiratory, cardiovascular; partially able or homebound?)
wife has occasional asthma

Allergies _____ Other _____ (describe)

Part II – Building Characteristics

12 Hotside

Building type: single-family residential / trailer or mobile / multi-family residential (duplex, row, apartment?) / office / strip mall / commercial / industrial

Describe building:
1) age Built in 1934
2) construction frame / masonry / steel / other; Aluminum siding
3) type of insulation; plaster walls
4) type of roof Asphalt, gable
5) general condition and air tightness ok
6) fireplace or chimney (serviced recently?)

Number of floors - below grade: 1 (full basement / crawl space / slab) at or above grade:

Number of rooms 3 in basement Do windows open? yes, 1 door to exterior

Basement size: ~1000 ft² Basement floor: concrete / dirt / floating / other (specify):

Foundation type: poured concrete / cinder blocks (hollow?) / stone / other (specify):

Type of ground cover around outside of building: grass / concrete / asphalt / other (specify):

If vegetation, does it appear stressed? No French drain? Flooding experienced?

Floor drains present? yes If yes, trap present? yes Water in trap? unknown, covered, unable to inspect

Connected to a: a) sanitary sewer b) storm sewer c) septic system

12 Hillside

d) surface discharge e) unknown

Basement sump present? (Yes) / No Sump pump? (Yes) / No

Type of heating system (circle all that apply):

hot air circulation hot air radiation wood steam radiation
hot water radiation
kerosene heater electric baseboard heat pump
other (specify): _____
solar/air solar/glycol or other heat transfer fluid
solar/water

If air, when were filters changed last?

Type of ventilation system (circle all that apply):
central air conditioning mechanical fans
bathroom ventilation fans (individual air conditioning units) kitchen
range hood fan other (specify): _____

Type of fuel utilized (circle all that apply):

(Natural gas) / electric / fuel oil / wood-wood pellets / coal / solar / kerosene / waste oil/ outside (fresh) air intake

Septic system? *Yes / Yes (but not used) / (No)* Irrigation/private well? *Yes / Yes (but not used) / (No)*

Public or private well *Yes / (No)* If public, name of company

_____

Existing subsurface depressurization (radon) system in place? *Yes / (No)*
and running? *Yes / (No)*

Part III - Outside Contaminant Sources

DNREC DEN/Marplot/Brownfields lists (1000-ft. radius):

Previous land use in area:
Great Lake Discount Energy Mart 3003

Other stationary sources nearby:

For (Gas stations) Emission stacks Refineries/chemical plants

Waste disposal facilities (LFS & WWTPs) Hot-mix plants Fuel oil tanks
Dry cleaners Beauty shops Auto repair/body shops Road or roof repair w/hot tar

Wetlands nearby? (distance and direction)

No, NWI web mapper checked, closest is .025 miles to the southeast along river boundary

Heavy vehicular traffic nearby (or other mobile sources):

I-495 and I-95 located .20 miles SE and 1 mile N/NW respectively

Known groundwater or soil contamination within 1000 feet

yes, ongoing investigation @ Rams Discount energy

Physical parameters of unsaturated zone (summarize or attach)

primarily silty clay and clayey silt

Sinkholes or Debris Pits

None observed

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	**Location(s)**	**Removed Prior to Sampling? (Yes / No / NA)**
Gasoline storage cans	None observed	NA
Gas-powered equipment	None observed	NA

Kerosene storage cans	None Observed	NA
Paints / thinners / strippers / glues / caulks	See Attached Listing	no
Cleaning solvents	None Observed	NA
Oven cleaners	None observed	NA
Carpet / upholstery cleaners	See Attached Listing	no
Other house cleaning products/laundry products	See Attached Listing	no
Moth balls	None Observed	NA
Polishes / waxes	See Attached Listing	no
Insecticides	See Attached Listing	no
Furniture / floor polish	See Attached Listing	no
Nail polish / polish remover	None observed	NA
Hairspray	Stored on 2nd floor, not inspected	NA
Cologne / perfume / after-shave, etc.	None observed	no
Air fresheners	In bathroom on 1st floor, spray type	no
Fuel tank (inside building) (outside)	None observed	NA
Wood stove or fireplace	yes, not currently in use	NA
New furniture / upholstery	None observed	NA
New carpeting / flooring /paneling	New mattress, 2nd floor, Feb. 09	NA
Recent painting in building? Roof repair?	None observed	NA
Hobbies - glues, paints, etc.	None observed	NA
Toilet or septic additives	None observed	NA
Dry drain traps, plugged drains, toilets won't flush	None observed	NA
Garbage/spoiled food	None observed	NA
Standing water/tire piles/recent flooding	None observed	NA
Sewage/septage	None observed	NA
Dead animals (including unusual numbers of insects)?	None observed	NA
Mold/mildew	None observed	NA
Wet sheetrock/paneling/flooring	None observed	NA
Neighbors making drugs/Explosives	None observed	NA
Mercury-containing switches or instruments	None observed	NA
Alcohol/bleach/disinfectants	See Attached Listing	no
Recent concrete/masonry work	None observed	NA
Flowers	None observed	NA
Pets (specify); scented kitty litter	Cats, scented kitty litter	no
Compost/manure	None observed	NA

Part V – Miscellaneous Items

Do any occupants of the building smoke? (Yes) / No How often? Everyday

Any chronic health problems? Yes / No Unknown

Has anyone smoked within the building within the last 48 hours? (Yes) / No

Does the building have an attached garage? (Yes) / No
If yes, does garage have heat/ventilation? No

Connected to house or separate? separate Windows? (Yes) / No

If so, is a car usually parked in the garage? Yes / (No)

Do the occupants of the building have their clothes dry-cleaned? (Yes) / No
If yes, name of dry cleaner Occasionally

When were dry-cleaned clothes last brought into the building?

several months ago

Have the occupants ever noticed any unusual odors in the building? Yes / (No)

Describe (with location): Date _____ Amount Occasionally residents have noted petroleum type odors in the driveway, however has been a long time since last smelled.

Any known spills of a chemical, fuel or sewage immediately outside or inside the building?
Yes / (No) Fires? Yes / (No)

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes / (No) Occasionally used for ants

Have any pesticides been applied regionally, e.g. by Mosquito Control or DSWC? Yes / (No)

If so, when and which chemicals?
unknown

Are odors more noticeable under certain weather conditions? Describe (wind direction/ speed/precipitation/temperature/humidity):
NA

Part VI – Sampling Information

Sample Technician: Brian Shedd Phone number: (410) 850 0494

Sampler Type: Tedlar / Sorbent / Canister
Analytical Method: TO-15 / TO-17 / other:

Laboratory: Lancaster Laboratories NJ Certified Lab? Yes / No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
1	Basement	Main area	810	338028	6/29 - 1444	6/30 - 1425
2	1st floor	living room	201	336682	6/29 - 1442	6/30 - 1423
3	Outdoor	NA	160	252153	6/29 - 1453	6/30 - 1459

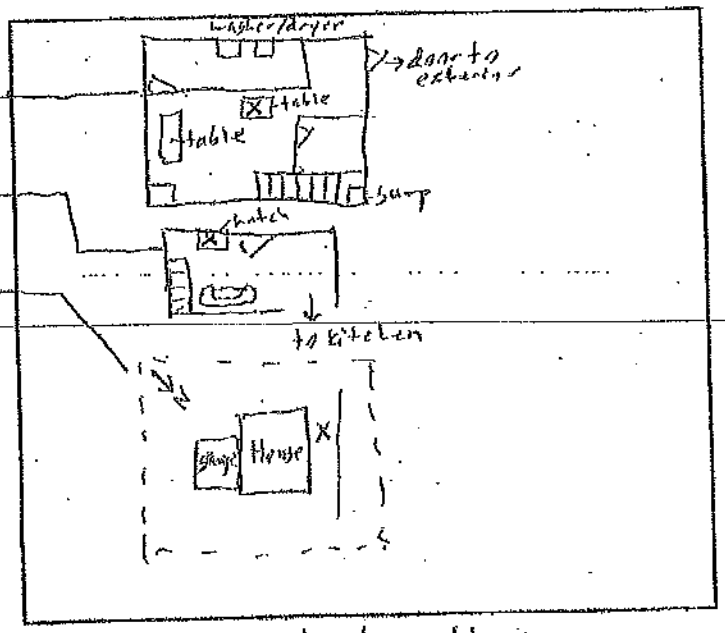
Sample location(s):
Location(s) in Building

Provide Drawing of Sample

Sample # 1 - Basement

Sample # 2 - 1st floor

Sample # 3 - Outdoor



X = sample location

Did the occupants not follow any of the "Instructions for Residents" directions? *Yes / No*

If so, describe modifications: No doc. containing items removed

Part VII - Weather Conditions

Outside temperature at time of sampling: 91 °F

Expected high temperature: 91 °F Expected low temperature: 70 °F

Humidity: 62% Barometric pressure: 29.8 inches Ozone: Red/Orange alert?

Was there significant precipitation within 12 hours of (or during) the sampling event? *Yes / No*

Wind direction and speed
10 mph / WNW

Describe the general weather conditions:

Fill out and attach DNREC SIRB Vapor Intrusion Guidance Document Field Sampling Form 1 to this form.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.
See attached map and product inventory sheet; product screening results located on map

12 Hillside Road Product Inventory Sheet

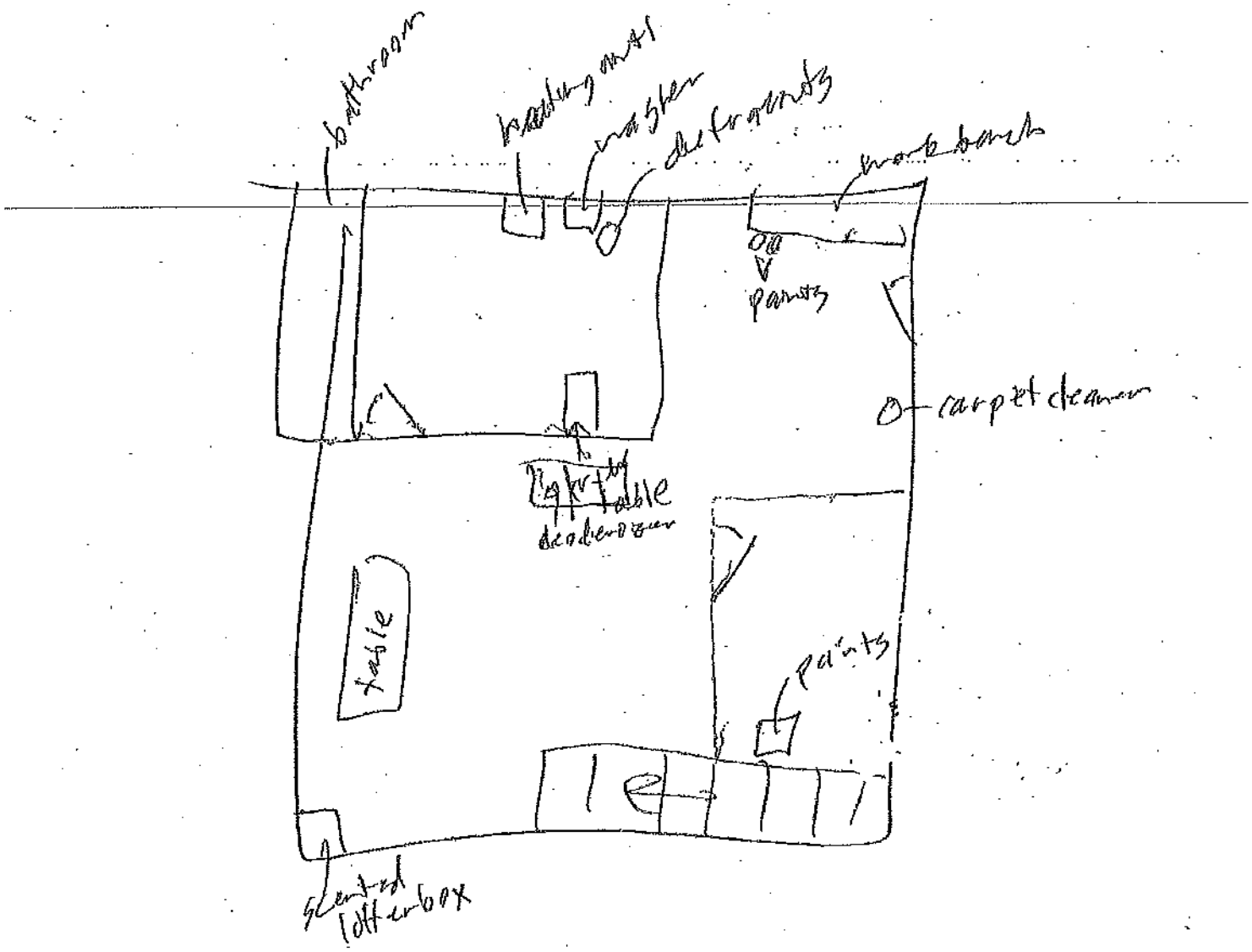
Basement –

- Tide (1) – Laundry Detergent w/ Bleach
- Tide (1) – Stain Treatment
- UGL (1) – Tidelok Waterproofer
- Behr (1) – Basement and Masonary Waterproofing
- MAB (1) – Wal-Shield Wall Finish Acrylic Latex

1st Floor –

- Pledge (2) – Floor Cleaner
- Windex (1) – Glass cleaner
- Dish Detergent (1)
- Floor Deoderizer (1)
- Raid (1) – Insecticide spray
- Raid (1) – Insecticide Box

12 Hillside Rd Basement



Appendix E -

Photo-documentation

Photo 1: Pre-retrofit SUMP and dehumidifier discharge to metal pipe in basement of 9 Hillside Road.

Photo 2: Alternate view of pre-retrofit SUMP discharge to metal pipe in basement of 9 Hillside road with rag and dehumidifier removed.

Photo 3: Photo of post-retrofit connection from SUMP to metal pipe including sealed dehumidifier line. Seal completed using a 4" x 1.25" sanitary seal, valves and a coupling to allow for SUMP access without disturbing the sanitary seal. A secondary seal of silicone was applied to the drain connections.

Photo 4: Photo of sanitary seal connection of SUMP and dehumidifier to metal drain pipe located in basement of 9 Hillside Road.

Photo 5: Photo of concrete patch as a result of French drain installation in 12 Hillside Road basement.

Photo 6: Photo of new SUMP installed in the downgradient wall of 12 Hillside Road basement which is tied into the French drain system.

Photo 7: Photo of temporarily sealed cracks in base of basement wall at 10 Hillside Road where resident noted water intrusion during peak rain events.

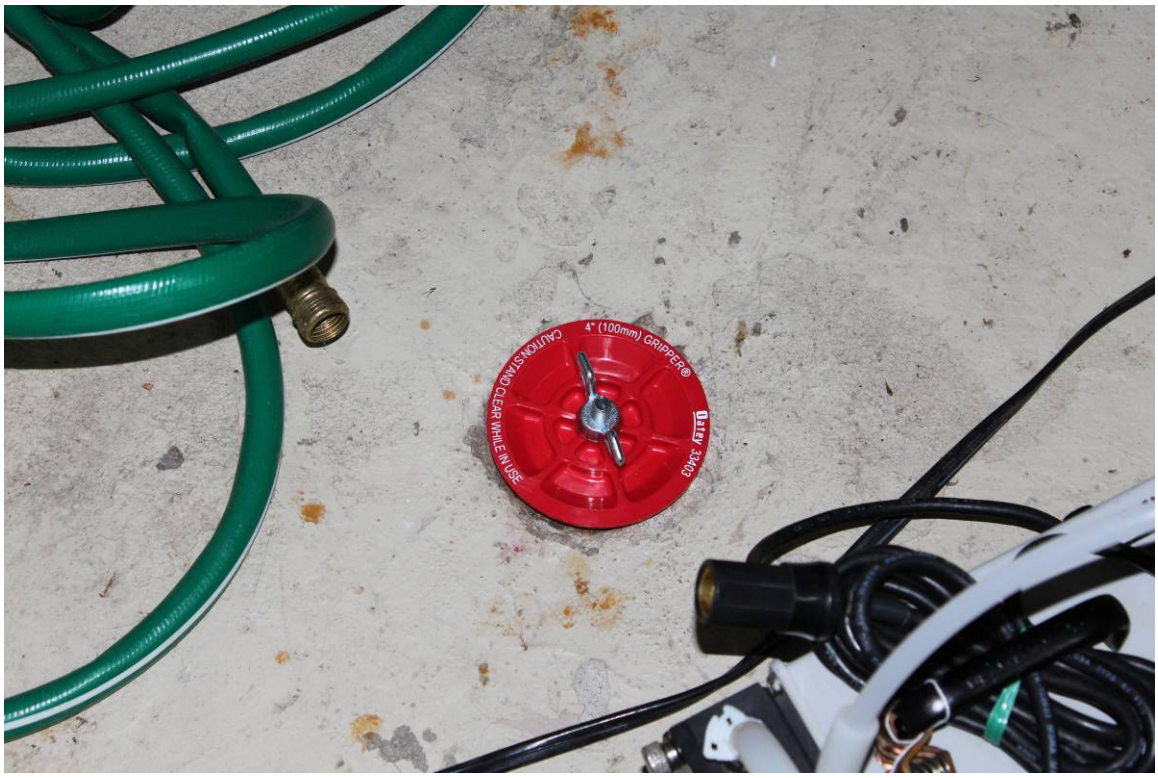


Photo 8: Photo of temporarily plugged floor drain in eastern corner of basement at 10 Hillside Road.

Appendix F -

Lancaster Laboratories Analysis Report- Indoor Air Data
(June 29 and 30, 2010)

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:	Prepared for:
Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425	Kleinfelder 30 Porter Road Littleton MA 01460

July 13, 2010

Project: Ron's Discount Energy Mart - Claymont, DE

Submittal Date: 07/02/2010
Group Number: 1201547
PO Number: 08531-77728
State of Sample Origin: DE

Client Sample Description	Lancaster Labs (LLI) #
9 Hillside Rd (Basement) Air Sample	6023724
9 Hillside Rd (1st Floor) Air Sample	6023725
9 Hillside Rd (Ambient) Air Sample	6023726
10 Hillside Rd (Basement) Air Sample	6023727
10 Hillside Rd (1st Floor) Air Sample	6023728
10 Hillside Rd (Ambient) Air Sample	6023729
12 Hillside Rd (Basement) Air Sample	6023730
12 Hillside Rd (1st Floor) Air Sample	6023731
12 Hillside Rd (Ambient) Air Sample	6023732

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Kleinfelder	Attn: Mark Steele
ELECTRONIC COPY TO	Kleinfelder	Attn: Angela Vogt
ELECTRONIC COPY TO	Kleinfelder	Attn: Brian Shedd

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jessica A Oknefski at (717) 656-2300 Ext. 1815

Respectfully Submitted,

Barbara F. Reedy
Senior Specialist

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: 9 Hillside Rd (Basement) Air Sample
Summa Canister #824
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023724
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:09 by BS
through 06/30/2010 14:46
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.026**	0.0048	**0.011**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	**2-Butanone**	78-93-3	**0.0084**	0.0059	**0.0028**	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Ethylbenzene**	100-41-4	**0.0048**	0.0043	**0.0011**	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: 9 Hillside Rd (Basement) Air Sample
Summa Canister #824
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023724
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:09 by BS
through 06/30/2010 14:46
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Pentane**	109-66-0	**0.0048**	0.0030	**0.0016**	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.0062**	0.0038	**0.0016**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.0063**	0.0049	**0.0013**	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.015**	0.0043	**0.0034**	0.0010	1
05298	**o-Xylene**	95-47-6	**0.0095**	0.0043	**0.0022**	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018030AC	07/08/2010 19:49	Michael A Ziegler	1

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: 9 Hillside Rd (1st Floor) Air Sample
Summa Canister #502
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023725
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:05 by BS
through 06/30/2010 14:44
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.037**	0.0048	**0.016**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	**Chloromethane**	74-87-3	**0.0025**	0.0021	**0.0012**	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	**1,2-Dichloroethane**	107-06-2	**0.0043**	0.0040	**0.0011**	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	**Ethyl Acetate**	141-78-6	**0.0044**	0.0036	**0.0012**	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1

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Analysis Report

Sample Description: 9 Hillside Rd (1st Floor) Air Sample
Summa Canister #502
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023725
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:05 by BS
through 06/30/2010 14:44
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.0094**	0.0038	**0.0025**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.011**	0.0049	**0.0023**	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018030AC	07/08/2010 20:34	Michael A Ziegler	1

Analysis Report

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Sample Description: 9 Hillside Rd (Ambient) Air Sample
Summa Canister #145
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023726
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:22 by BS
through 06/30/2010 15:04
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.012**	0.0048	**0.0049**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1

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Analysis Report

Sample Description: 9 Hillside Rd (Ambient) Air Sample
Summa Canister #145
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023726
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:22 by BS
through 06/30/2010 15:04
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018030AC	07/08/2010 21:18	Michael A Ziegler	1

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: 10 Hillside Rd (Basement) Air Sample
Summa Canister #116
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023727
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:34 by BS
through 06/30/2010 14:36
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.028**	0.0048	**0.012**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	**Benzene**	71-43-2	**0.0072**	0.0032	**0.0023**	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	**Heptane**	142-82-5	**0.0059**	0.0041	**0.0014**	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	**Hexane**	110-54-3	**0.018**	0.0035	**0.0051**	0.0010	1

Analysis Report

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Sample Description: 10 Hillside Rd (Basement) Air Sample
Summa Canister #116
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023727
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:34 by BS
through 06/30/2010 14:36
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Isooctane**	540-84-1	**0.013**	0.0047	**0.0027**	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Methylene Chloride**	75-09-2	**0.021**	0.0035	**0.0061**	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Pentane**	109-66-0	**0.036**	0.0030	**0.012**	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.029**	0.0038	**0.0076**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.0051**	0.0049	**0.0010**	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.019**	0.0043	**0.0044**	0.0010	1
05298	**o-Xylene**	95-47-6	**0.0046**	0.0043	**0.0011**	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018030AC	07/08/2010 22:01	Michael A Ziegler	1

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: 10 Hillside Rd (1st Floor) Air Sample
Summa Canister #154
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023728
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:33 by BS
through 06/30/2010 14:34
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.039**	0.0048	**0.016**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	**Carbon Disulfide**	75-15-0	**0.0037**	0.0031	**0.0012**	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	**Ethyl Acetate**	141-78-6	**0.012**	0.0036	**0.0032**	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	**Hexane**	110-54-3	**0.0069**	0.0035	**0.0020**	0.0010	1

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Analysis Report

Sample Description: 10 Hillside Rd (1st Floor) Air Sample
Summa Canister #154
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023728
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:33 by BS
through 06/30/2010 14:34
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Isooctane**	540-84-1	**0.0052**	0.0047	**0.0011**	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Methylene Chloride**	75-09-2	**0.018**	0.0035	**0.0053**	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Pentane**	109-66-0	**0.014**	0.0030	**0.0047**	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.015**	0.0038	**0.0040**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.0071**	0.0043	**0.0016**	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018930AA	07/09/2010 09:40	Jeffrey B Smith	1

Analysis Report

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Sample Description: 10 Hillside Rd (Ambient) Air Sample
Summa Canister #101
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023729
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:02 by BS
through 06/30/2010 15:01
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.012**	0.0048	**0.0052**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1

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Analysis Report

Sample Description: 10 Hillside Rd (Ambient) Air Sample
Summa Canister #101
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023729
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 15:02 by BS
through 06/30/2010 15:01
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018930AA	07/09/2010 10:24	Jeffrey B Smith	1

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Analysis Report

Sample Description: 12 Hillside Rd (Basement) Air Sample
Summa Canister #810
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023730
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:44 by BS
through 06/30/2010 14:25
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.022**	0.0048	**0.0093**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	**Hexane**	110-54-3	**0.0040**	0.0035	**0.0011**	0.0010	1

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Analysis Report

Sample Description: 12 Hillside Rd (Basement) Air Sample
Summa Canister #810
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023730
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:44 by BS
through 06/30/2010 14:25
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018930AA	07/09/2010 11:08	Jeffrey B Smith	1

Analysis Report

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Sample Description: 12 Hillside Rd (1st Floor) Air Sample
Summa Canister #201
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023731
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:42 by BS
through 06/30/2010 14:23
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.038**	0.0048	**0.016**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	**Chloromethane**	74-87-3	**0.0037**	0.0021	**0.0018**	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1

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Analysis Report

Sample Description: 12 Hillside Rd (1st Floor) Air Sample
Summa Canister #201
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023731
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:42 by BS
through 06/30/2010 14:23
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Methylene Chloride**	75-09-2	**0.0096**	0.0035	**0.0028**	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	m/p-Xylene	179601-23-1	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	o-Xylene	95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018930AA	07/09/2010 11:52	Jeffrey B Smith	1

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: 12 Hillside Rd (Ambient) Air Sample
Summa Canister #160
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023732
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:53 by BS
through 06/30/2010 14:59
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.0079**	0.0048	**0.0033**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Ethylbenzene**	100-41-4	**0.0073**	0.0043	**0.0017**	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Heptane	142-82-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	Hexane	110-54-3	< 0.0035	0.0035	< 0.0010	0.0010	1

Analysis Report

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Sample Description: 12 Hillside Rd (Ambient) Air Sample
Summa Canister #160
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6023732
LLI Group # 1201547
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 06/29/2010 14:53 by BS
through 06/30/2010 14:59
Submitted: 07/02/2010 14:45
Reported: 07/13/2010 10:47
Discard: 08/13/2010

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Isooctane	540-84-1	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Methylene Chloride**	75-09-2	**0.0060**	0.0035	**0.0017**	0.0010	1
05298	Octane	111-65-9	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	Pentane	109-66-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Propene	115-07-1	< 0.0017	0.0017	< 0.0010	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	Toluene	108-88-3	< 0.0038	0.0038	< 0.0010	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.025**	0.0043	**0.0058**	0.0010	1
05298	**o-Xylene**	95-47-6	**0.015**	0.0043	**0.0035**	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1018930AA	07/09/2010 12:36	Jeffrey B Smith	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1201547
Reported: 07/13/10 at 10:47 AM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C1018030AC	Sample number(s): 6023724-6023727							
Acetone	< 0.0048	0.0048	mg/m3	94	94	49-155	1	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3					
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	95	91	70-130	4	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	95	95	60-131	0	25
Bromoform	< 0.010	0.010	mg/m3	96	90	45-132	7	25
Bromomethane	< 0.0039	0.0039	mg/m3	104	111	70-130	6	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	102	110	74-144	7	25
2-Butanone	< 0.0059	0.0059	mg/m3	98	97	64-129	1	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	84	88	47-116	5	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	99	97	70-130	2	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	86	82	70-130	5	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	105	110	63-137	4	25
Chloroform	< 0.0049	0.0049	mg/m3	92	89	70-130	3	25
Chloromethane	< 0.0021	0.0021	mg/m3	98	104	60-144	5	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					
Dibromochloromethane	< 0.0085	0.0085	mg/m3	91	86	58-126	6	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	93	87	59-135	7	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	93	89	38-141	4	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	89	85	43-138	4	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	87	83	41-131	4	25
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	105	110	62-145	5	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	92	87	62-131	6	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	96	93	70-130	3	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	88	92	64-129	4	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	91	88	63-131	4	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	90	91	56-130	1	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	83	82	70-130	1	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	94	93	54-140	1	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	90	84	56-137	7	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	144	135	16-200	6	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	93	90	45-149	3	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	93	87	70-130	7	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	88	83	55-125	6	25
Freon 113	< 0.015	0.015	mg/m3	91	93	64-132	2	25
Freon 114	< 0.0070	0.0070	mg/m3	95	101	64-148	6	25
Heptane	< 0.0041	0.0041	mg/m3	92	91	67-132	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Kleinfelder Group Number: 1201547
Reported: 07/13/10 at 10:47 AM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachlorobutadiene	< 0.021	0.021	mg/m3	82	91	17-144	10	25
Hexachloroethane	< 0.0097	0.0097	mg/m3					
Hexane	< 0.0035	0.0035	mg/m3	92	90	66-129	2	25
2-Hexanone	< 0.0082	0.0082	mg/m3	94	90	44-167	5	25
Isooctane	< 0.0047	0.0047	mg/m3					
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	99	97	70-130	2	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	90	91	59-132	1	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	95	96	60-152	1	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	88	89	70-130	0	25
Octane	< 0.0047	0.0047	mg/m3					
Pentane	< 0.0030	0.0030	mg/m3					
Propene	< 0.0017	0.0017	mg/m3	85	92	55-115	7	25
Styrene	< 0.0043	0.0043	mg/m3	93	88	58-143	6	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	88	80	45-143	9	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	88	83	70-130	5	25
Toluene	< 0.0038	0.0038	mg/m3	93	86	70-130	7	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	91	99	10-152	9	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	96	93	70-130	4	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	89	82	54-136	8	25
Trichloroethene	< 0.0054	0.0054	mg/m3	94	96	70-130	2	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	101	106	70-130	4	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	89	84	49-138	6	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	93	89	55-135	5	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	104	96	26-136	8	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	104	111	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	100	93	70-130	7	25
o-Xylene	< 0.0043	0.0043	mg/m3	98	91	70-130	7	25
Batch number: C1018930AA	Sample number(s): 6023728-6023732							
Acetone	< 0.0048	0.0048	mg/m3	89	97	49-155	8	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3					
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	93	100	70-130	7	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	97	101	60-131	5	25
Bromoform	< 0.010	0.010	mg/m3	97	99	45-132	1	25
Bromomethane	< 0.0039	0.0039	mg/m3	101	111	70-130	9	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	101	108	74-144	7	25
2-Butanone	< 0.0059	0.0059	mg/m3	93	97	64-129	5	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	79	87	47-116	9	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	94	98	70-130	5	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	90	90	70-130	0	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	100	109	63-137	9	25
Chloroform	< 0.0049	0.0049	mg/m3	92	95	70-130	4	25
Chloromethane	< 0.0021	0.0021	mg/m3	91	99	60-144	9	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Kleinfelder Group Number: 1201547
Reported: 07/13/10 at 10:47 AM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dibromochloromethane	< 0.0085	0.0085	mg/m3	93	94	58-126	1	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	95	96	59-135	1	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	95	97	38-141	2	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	91	92	43-138	1	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	90	91	41-131	1	25
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	101	108	62-145	7	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	87	92	62-131	6	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	97	101	70-130	4	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	81	89	64-129	10	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	83	89	63-131	7	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	82	90	56-130	9	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	82	87	70-130	5	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	88	94	54-140	6	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	86	88	56-137	2	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	145	152	16-200	5	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	85	90	45-149	6	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	93	93	70-130	0	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	88	88	55-125	0	25
Freon 113	< 0.015	0.015	mg/m3	90	96	64-132	7	25
Freon 114	< 0.0070	0.0070	mg/m3	91	98	64-148	7	25
Heptane	< 0.0041	0.0041	mg/m3	94	100	67-132	6	25
Hexachlorobutadiene	< 0.021	0.021	mg/m3	85	84	17-144	1	25
Hexachloroethane	< 0.0097	0.0097	mg/m3					
Hexane	< 0.0035	0.0035	mg/m3	86	93	66-129	8	25
2-Hexanone	< 0.0082	0.0082	mg/m3	95	96	44-167	2	25
Isooctane	< 0.0047	0.0047	mg/m3					
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	98	104	70-130	6	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	78	85	59-132	8	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	94	99	60-152	5	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	81	89	70-130	9	25
Octane	< 0.0047	0.0047	mg/m3					
Pentane	< 0.0030	0.0030	mg/m3					
Propene	< 0.0017	0.0017	mg/m3	78	87	55-115	10	25
Styrene	< 0.0043	0.0043	mg/m3	96	96	58-143	0	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	90	89	45-143	2	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	90	92	70-130	2	25
Toluene	< 0.0038	0.0038	mg/m3	93	94	70-130	1	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	94	94	10-152	0	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	92	96	70-130	4	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	89	91	54-136	1	25
Trichloroethene	< 0.0054	0.0054	mg/m3	93	102	70-130	9	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	95	103	70-130	7	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	88	89	49-138	1	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	95	95	55-135	0	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	93	96	26-136	3	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	96	107	70-130	11	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1201547
Reported: 07/13/10 at 10:47 AM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
m/p-Xylene	< 0.0043	0.0043	mg/m3	102	102	70-130	0	25
o-Xylene	< 0.0043	0.0043	mg/m3	98	99	70-130	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12152 Group# 1201547 Sample # 6023724-32

COC # 240448

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: DNREC-TMB Acct. #:
Project Name/#: Former Ron's Discount Energy PWSID #:
Project Manager: Mark C. Steele P.O.#:
Sampler: Brian Shedd Quote #:
Name of state where samples were collected: DE

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification | Date Collected | Time Collected | (3) Grab | Composite | Matrix (4): Soil | Water (☐ Potable ☐ NPDES Check if Applicable) | Other | Total # of Containers | (5) Analyses Requested / Preservation Codes: VOCs TO-15 | Remarks | (6) Temperature of samples upon receipt (if requested)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs TO-15	Remarks	Temperature
9 Hillside Rd (Basement) [824]	6/29/10 - 6/30/10	1509-1446					X	1		FC# 226812	30"/1"
9 Hillside Rd (1st Floor) [502]	6/29/10 - 6/30/10	1505-1444					X	1		FC# 337860	30"/6"
9 Hillside Rd (Ambient) [145]	6/29/10 - 6/30/10	1522-1509					X	1		FC# 11861	30+"/6"
10 Hillside Rd (Basement) [116]	6/29/10 - 6/30/10	1434-1436					X	1		FC# 338068	30+"/7"
10 Hillside Rd (1st Floor) [154]	6/29/10 - 6/30/10	1433-1434					X	1		FC# 301034	30+"/8"
10 Hillside Rd (Ambient) [101]	6/29/10 - 6/30/10	1502-1501					X	1		FC# 301042	30+"/5"
12 Hillside Rd (Basement) [810]	6/29/10 - 6/30/10	1444-1435					X	1		FC# 338028	30+"/1"
12 Hillside Rd (1st Floor) [201]	6/29/10 - 6/30/10	1442-1423					X	1		FC# 336682	30+"/5"
12 Hillside Rd (Ambient) [160]	6/29/10 - 6/30/10	1453-1459					X	1		FC# 252153	30+"/7"

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
B. Shedd	7/1/10	10	[illegible]	7/1/10	10
[illegible]	7/1/10	1608	R. Kundig	7-2-10	1003
R. Kundig	7-2-10	1445			
			Katie Hartline	7/2/10	14:45

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Appendix G –

9 Hillside Road – Nuisance Odor & Vapor Mitigation Report (July 25, 2011)

FEDEX: 797337705134

July 25, 2011

Mr. Chris Brown, P.G.
State of Delaware, Department of
Natural Resources & Environmental Control
Tank Management Branch
391 Lukens Drive
New Castle, Delaware 19720

Subject: 9 Hillside Road – Nuisance Odor & Vapor Mitigation Report
Ron's Discount Energy Mart
2509 Philadelphia Pike
Claymont New Castle County, Delaware
Project ID #N8811068

Dear Mr. Brown:

Kleinfelder East, Inc. (Kleinfelder) was retained by the State of Delaware, Department of Natural Resources and Environmental Control (DNREC) Tank Management Branch (TMB) to complete nuisance odor investigation and mitigation activities at the 9 Hillside Road property in association with the Ron's Discount Energy Mart project in Claymont, Delaware. This report has been prepared to document our assessment and mitigation of the property owner complaints of nuisance odors in the basement of the residence at 9 Hillside Road owned by Mr. George and Carolyn Lewis. A Site Plan is presented on **Figure 1**.

NUISANCE ODOR RESPONSE AND INVESTIGATION

The residents of 9 Hillside Road complained of petroleum odors in their basement in March and April 2011. The depth to groundwater near the residence ranges from approximately four to six feet below grade and may be seasonally in contact with the basement slab or walls, particularly after heavy rainfall events. The residents also indicated that groundwater intrudes the basement during power outages when the basement sump pump does not operate.

Following a rain event and complaints of odors by the resident, Kleinfelder completed an inspection of the basement on March 17, 2011, Air screening using a photoionization detector (PID) capable of achieving volatile organic carbon (VOC) readings on a parts per billion (ppb) basis was conducted in the basement by Kleinfelder staff. Dr. Gerald Llewellyn of the Delaware Health and Social Services Division of Public Health and Mr. Alex Rittberg of DNREC-TMB were also present during the inspection. Results of the inspection indicated VOC readings between 100 and 400 ppb throughout the basement.

Air screening VOC readings of approximately 6 parts per million (ppm) were observed at the cast iron sanitary sewer cleanout adjacent to the sump in the southeast corner of the basement. A french drain system and sump pump have been installed in the basement and the sump pump discharges to a clean- out for their sanitary sewer line.

A follow-up visit was conducted on March 24, 2011 to inspect the sanitary sewer line cleanouts between the house and the street-side sanitary sewer line which indicated no to relatively low (57 ppb) VOC field readings. These readings suggest that the VOC readings detected at the sanitary sewer cleanout inside the basement do not appear to be originating from the sanitary sewer line along Hillside Road. A licensed plumber, Charles Moon Plumbing & Heating, Inc. (Charles Moon), was present to access cleanouts and to also inspect the sump and laundry sink drain inside the basement. Results of the inspection indicated that laundry tub drain was configured with an "S" pipe which allowed for vapors to escape through the sink drain, and the sump was not vented as is required by the 2009 International Plumbing Code, Section 712.3.2. The plumber applied pipe thread sealant tape to the cast iron sanitary sewer cleanout cap to further seal the cleanout.

On April 6, 2011, Kleinfelder returned to the Site to oversee the replacement of the laundry tub drain with a "P" drain equipped with an anti-syphon drum by a licensed plumber (Charles Moon). Additionally, a sample of water was collected from the basement sump and analyzed for full list VOCs and fuel oxygenates via Environmental Protection Agency (EPA) Method 8260.

Results of the basement sump water sample confirmed the presence of VOCs as summarized below:

Sample ID:	**9 Hillside Sump**
Date:	**4/6/2011**
Benzene (µg/L)	ND (5)
Toluene µg/L)	55
Ethylbenzene (µg/L)	700
Total Xylenes((µg/L)	1,400
MTBE(µg/L)	ND (5)
Naphthalene(µg/L)	230
Isopropylbenzene (µg/L)	54
n-Propylbenzene (µg/L)	170
n-Butylbenzene (µg/L)	15
sec-Butybenzene ((µg/l)	9
1,2,4 – trimethylbenzene (µg/L)	1,000
1,3,5- trimethylbenzene (µg/L)	200

Note: ND (5) = Not detected (reporting limit)
µg/L – Micrograms per liter

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DNREC and Kleinfelder subsequently agreed to install a ventilation system on the basement sump at 9 Hillside Road as summarized in the following section.

BASEMENT SUMP VENTILATION SYSTEM INSTALLATION

On June 9-10, 2011, the basement sump at the 9 Hillside Road residence was retrofitted with a ventilation system and back up sump pump. The existing sump lid was modified for the installation of a RadonAway™ GP301 in-line ventilation fan in the garage. The fan was connected to the sump via 3-inch diameter polyvinyl chloride (PVC) piping - discharging through the garage roof and above the eaves of the second floor roof on the main house. Power is supplied to the ventilation system through an existing electrical outlet with ground wire system in the garage. Photos of the ventilation system are provided in **Attachment A**.

A PHCC ProSeries 1000 battery backup sump pump equipped with a float switch was installed at the basement sump including an audible operational indicator alarm and a vacuum gauge on the suction piping. The installation of a high sumpwater level fan shut off switch was also installed to prevent pulling water into the extraction line/ventilation fan in the event of high water conditions in the sump. A process and instrumentation diagram is provided in **Figure 2**.

As requested by the resident and approved by DNREC-TMB, a window-mounted exhaust fan was installed in the nearest basement window for general purpose ventilation. A Dayton® Utility Shutter-Mounted Exhaust Fan was installed and retrofitted into the existing basement window closest to the sump. The fan is powered through an existing electrical outlet near the window and is equipped with automatic shutters and a manual on/off switch.

Copies of the operation manuals for the sump fan, backup sump pump and window-mounted fan are provided in **Attachment B**. The original product manuals were provided to the resident during the installation of the sump ventilation system.

The sump pump discharges to the sanitary sewer system. Following the completion of the sump ventilation system, the sump and discharge caps were each resealed using a low-VOC sealant.

OPERATION AND MAINTENANCE

Operation and maintenance (O&M) of the sump ventilation system will be conducted by Kleinfelder on a quarterly basis, beginning in the Third Quarter 2011. During routine groundwater sampling activities, a Kleinfelder representative will visually inspect the sump ventilation system for structural integrity and collect VOC readings using a handheld PID from the ventilation piping and before the inline fan. An airflow reading and vacuum check will be completed to confirm the ventilation fan is effectively working.

The results of the vent system monitoring will be included in the quarterly Groundwater Monitoring Reports. The report will include a summary of the inspection results.

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LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that DNREC has reviewed the document and determined that it does not need or want a greater level of service than provided.

CLOSING

Kleinfelder appreciates the opportunity to be of service on this project. If you have questions, please contact us at (410) 850-0404.

Sincerely,
Kleinfelder East, Inc.

Natalie Morales Hendricks
Senior Project Scientist

Mark C. Steele
Senior Project Manager

Figures:

Figure 1 - Site Plan
Figure 2 – Process & Instrument Diagram

Attachments

cc: Dr. Gerald Llewellyn – Delaware Department of Health
Mr. George Lewis

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FIGURES

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0 35 70 140 Feet

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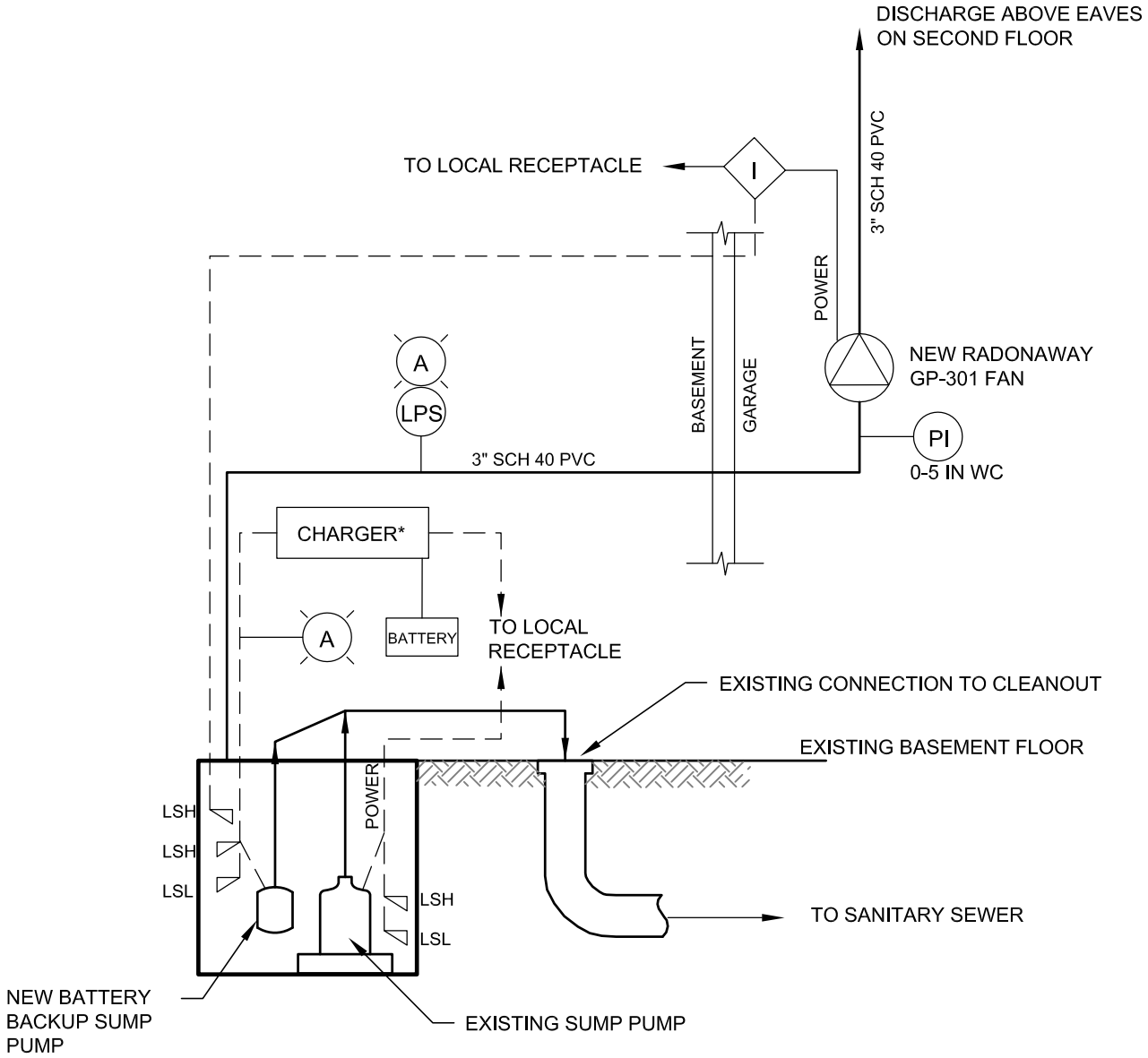
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT NO.	102570
DRAWN:	08/27/09
DRAWN BY:	AJP
CHECKED BY:	MCS
FILE NAME:	Claymont DE Prop SVP Map 012209.mxd

SITE PLAN

FACILITY ID: 3-000712
RON'S DISCOUNT ENERGY MART
2509 PHILADELPHIA PIKE
CLAYMONT, DE

FIGURE
1



NOTES:

* BACK UP SUMP PUMP CONTROL BOX

1. NEW BATTERY BACKUP SUMP PUMP IS GRAINGER ITEM NUMBER 4NE46 WITH TRIPLEGUARD 3-YEAR REPLACEMENT WARRANTY 2ACC7.

2. BATTERY FOR BACKUP SUMP PUMP IS GRAINGER ITEM NUMBER 4NE48 OR COMPARABLE.

3. WINDOW-MOUNTED EXHAUST FAN NOT SHOWN: GRAINGER ITEM NUMBER 1HKL9 WITH TRIPLEGUARD 3-YEAR REPLACEMENT WARRANTY 2ACC6. FAN IS MEANT TO BE PLUGGED INTO PROPERTY OWNER-SUPPLIED GENERATOR DURING POWER OUTAGES.

4. THE HIGH LEVEL SWITCH SHOWN INTERLOCKING WITH THE SUMP EXHAUST FAN IS A NORMALLY CLOSED, 13-AMP, 120-VOLT FLOAT SWITCH WITH A 30' CORD. THIS FLOAT SWITCH SHUTS SUMP EXHAUST FAN OFF DURING HIGH WATER EVENTS (DUE TO PUMP FAILURE).

5. THE LPS (LOW PRESSURE SWITCH) IS LOCALLY MOUNTED AUDIBLE & VISUAL ALARM INDICATOR AND ACTIVATED WHEN VACUUM SUCTION PIPE STOPS. THE LPS IS A RADONAWAY 28001-2 CHECKPOINT II A ALARM. IT WILL ACTIVATE IF VACUUM DROPS TO 0.25 IN VVC OR LESS ON SUCTION PIPING THUS INDICATING BLOWER FAILURE OR SEAL LEAK.

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PROJECT NO.	111265
DRAWN:	JULY 2011
DRAWN BY:	JDS
CHECKED BY:	NH
FILE NAME:	PID.dwg

PROCESS & INSTRUMENTATION DIAGRAM - 9 HILLSIDE ROAD

RON'S DISCOUNT ENERGY
9 HILLSIDE ROAD
CLAYMONT, DELAWARE

PLATE **2**

PLOTTED: 21 Jul 2011, 5:31pm, jsala
ATTACHED IMAGES: Images: Rons Discount Process Instrumentation Diagram_9 Hillside Road_Page_2.jpg
ATTACHED XREFS: XRef: Eng-A_8x11_P_StyleA
PLEASANTON, CA CAD FILE: D:_PROJECTS\111265\ LAYOUT: Layout1

ATTACHMENT A –

Photo documentation - Sump Ventilation System at 9 Hillside Road

Photo 1: View of open sump with exposed sump pump.

Photo 2: View of sump ventilation pipe and discharge to sanitary sewer drain.

Photo 3: Sump ventilation piping extends to basement ceiling and along southern wall.

Photo 4: Sump vent piping extends along basement ceiling through southern wall into garage.

Photo 5: View of RadonAway® fan and Magnehelic® pressure gauge inside garage.

Photo 6: View of sump ventilation piping which extends through garage roof and past second floor eaves.

Photo 7: View of sump ventilation discharge pipe.

ATTACHMENT B-

Operation Manuals

RadonAway™

The World's Leading Radon Fan Manufacturer

GP Series

Radon Mitigation Fans

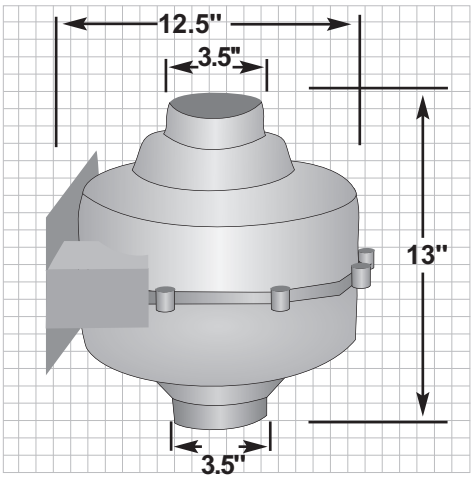
All RadonAway fans are specifically designed for radon mitigation. GP Series Fans provide a wide range of performance that makes them ideal for most sub-slab radon mitigation systems.

Features:

- Five-year hassle-free warranty
- Mounts on duct pipe or with integral flange
- 3.5" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- Meets all electrical code requirements
- Thermally protected
- Rated for commercial and residential use.

Model	Watts	Max. Pressure "WC	Typical CFM vs. Static Pressure WC						
			1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	40-60	2.0	82	58	5	-	-	-	-
GP301	55-90	2.6	92	77	45	10	-	-	-
GP401	60-110	3.4	93	82	60	40	15	-	-
GP501	70-140	4.2	95	87	80	70	57	30	10

Choice of model is dependent on building characteristics including sub-slab materials and should be made by a radon professional.



For Further Information Contact:

10/08
P/N 02002

RadonAway™

RadonAway Ward Hill, MA IN014 Rev F

XP/GP/XR Series Fan Installation Instructions

Please Read And Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible of flammable materials.

2. **WARNING!** Do not use fan to pump explosive or corrosive gases.

3. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.

4. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.

5. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory for service.

6. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician.

7. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.

DynaVac - XP/XR Series		DynaVac - GP Series	
XP101	p/n 23008-1,-2	GP201	p/n 23007-1
XP151	p/n 23010-1,-2	GP301	p/n 23006-1,-2
XP201	p/n 23011-1,-2	GP401	p/n 23009-1
XR161	p/n 23018-1,-2	GP501	p/n 23005-1,-2
XR261	p/n 23019-1,-2		

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The DynaVac GP/XP/XR Series Radon Fans are intended for use by trained, professional Radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of a DynaVac Fan. This instruction should be considered as a supplement to EPA standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

1.2 ENVIRONMENTALS

The GP/XP/XR Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F. or more than 100 degrees F.

1.3 ACOUSTICS

The GP/XP/XR Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

1.4 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes thus blocking air flow to the GP/XP/XR Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes allowing for return to normal operation.

1.5 SLAB COVERAGE

The GP/XP/XR Series Fan can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the GP/XP/XR Series Fan best suited for the sub-slab material can improve the slab coverage. The GP & XP series have a wide range of models to choose from to cover a wide range of subslab material. The higher static suction fans are generally used for tighter subslab materials. The XR Series is specifically designed for high flow applications such as stone/gravel and drain tile. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.6 CONDENSATION & DRAINAGE

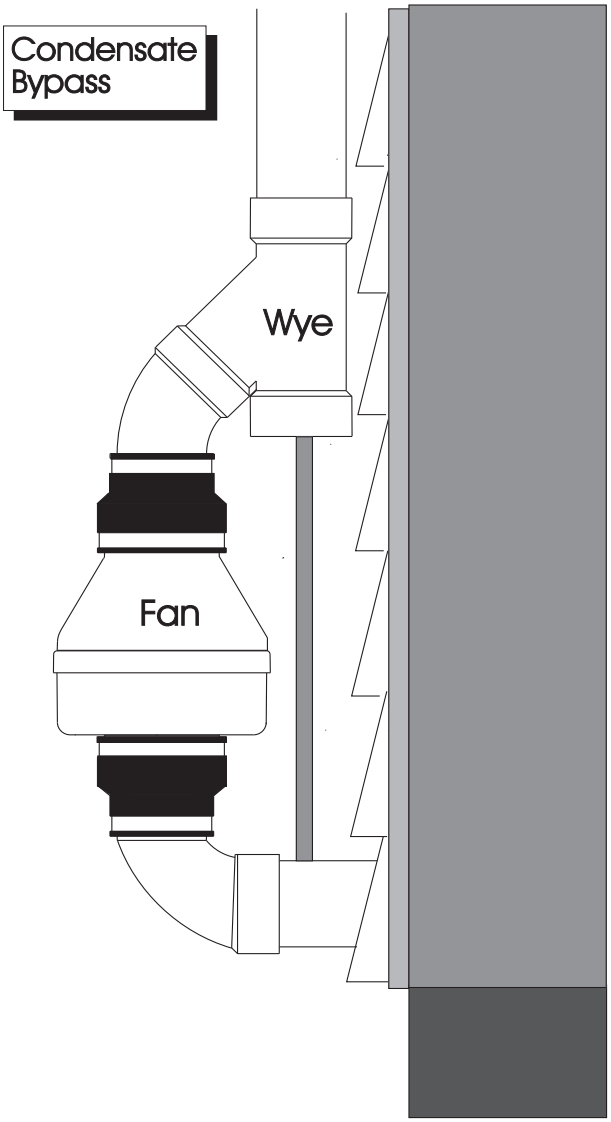
Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The GP/XP/XR Series Fan **MUST** be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The GP/XP/XR Series Fans are **NOT** suitable for underground burial.

For GP/XP/XR Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Dia.	Minimum Rise per Foot of Run* @25 CFM	@50 CFM	@100 CFM
4″	1/8″	1/4″	3/8″
3"	1/4"	3/8"	1 1/2"

*Typical GP/XP/XR Series Fan operational flow rate is 25 - 90 CFM.
(For more precision, determine flow rate by using the chart in the addendum.)

Under some circumstances in an outdoor installation a condensate bypass should be installed in the outlet ducting as shown. This may be particularly true in cold climate installations which require long lengths of outlet ducting or where the outlet ducting is likely to produce large amounts of condensation because of high soil moisture or outlet duct material. Schedule 20 piping and other thin-walled plastic ducting and Aluminum downspout will normally produce much more condensation than Schedule 40 piping.



The bypass is constructed with a 45 degree Wye fitting at the bottom of the outlet stack. The bottom of the Wye is capped and fitted with a tube that connects to the inlet piping or other drain. The condensation produced in the outlet stack is collected in the Wye fitting and drained through the bypass tube. The bypass tubing may be insulated to prevent freezing.

1.7 "SYSTEM ON" INDICATOR

A properly designed system should incorporate a "System On" Indicator for affirmation of system operation. A manometer, such as a U-Tube, or a vacuum alarm is recommended for this purpose.

1.8 ELECTRICAL WIRING

The GP/XP/XR Series Fans operate on standard 120V 60 Hz. AC. All wiring must be performed in accordance with the National Fire Protection

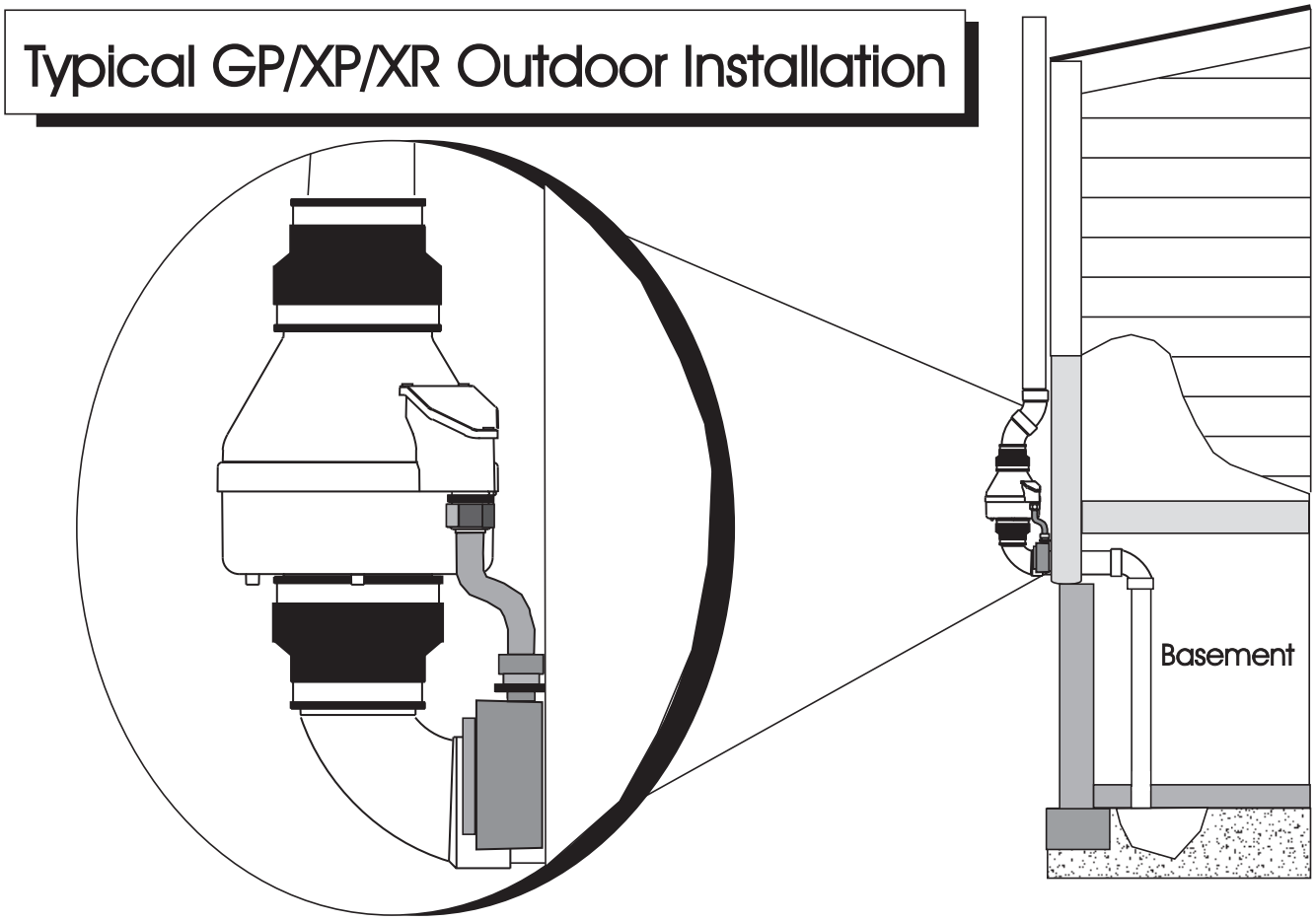
Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a U.L. listed watertight conduit.

1.9 SPEED CONTROLS

The GP/XP/XR Series Fans are rated for use with electronic speed controls ,however, they are generally not recommended.

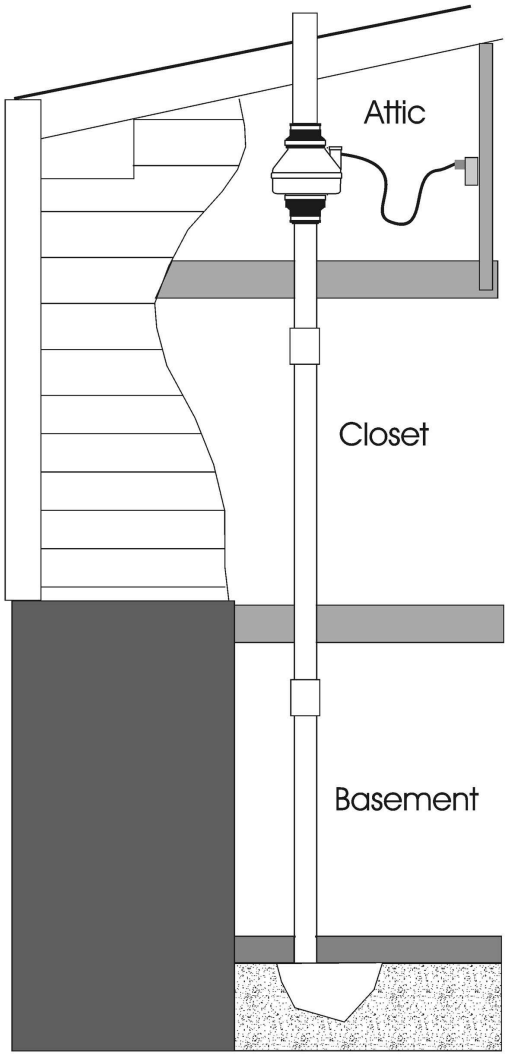
2.0 INSTALLATION

The GP/XP/XR Series Fan can be mounted indoors or outdoors. (It is suggested that EPA recommendations be followed in choosing the fan location.) The GP/XP/XR Series Fan may be mounted directly on the system piping or fastened to a supporting structure by means of optional mounting bracket.



2.1 MOUNTING

Mount the GP/XP/XR Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.



2.2 MOUNTING BRACKET (optional)

The GP/XP/XR Series fan may be optionally secured with the integral mounting bracket on the GP Series fan or with RadonAway P/N 25007-2 mounting bracket for an XP/XR Series fan. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as means of disconnect for servicing the unit and vibration isolation.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections:

Fan Wire	Connection
Green	Ground
Black	AC Hot
White	AC Common

2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS

_____ **Verify** all connections are tight and **leak-free**.

_____ **Insure** the GP/XP/XR Series Fan and all ducting is secure and vibration-free.

_____ **Verify** system vacuum pressure with manometer. **Insure** vacuum pressure is **less than** maximum recommended operating pressure

(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 Feet.)

(Further reduce Maximum Operating Pressure by 10% for High Temperature environments)

See Product Specifications. If this is exceeded, increase the number of suction points.

_____ **Verify Radon levels by testing to EPA protocol.**

XP/XR SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the XP & XR Series Fan:

	Typical CFM Vs Static Suction "WC								
	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
XP101	125	118	90	56	5	-	-	-	-
XP151	180	162	140	117	78	46	10	-	-
XP201	150	130	110	93	74	57	38	20	-
XR161	215	175	145	105	75	45	15	-	-
XR261	250	215	185	150	115	80	50	20	-

Maximum Recommended Operating Pressure*		
XP101	0.9" W.C.	(Sea Level Operation)**
XP151	1.3" W.C.	(Sea Level Operation)**
XP201	1.7" W.C.	(Sea Level Operation)**
XR161	1.3" W.C.	(Sea Level Operation)**
XR261	1.6" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
XP101	40 - 49 watts
XP151	45 - 60 watts
XP201	45 - 66 watts
XR161	48 - 75 watts
XR261	65 - 105 watts

XP Series Inlet/Outlet: 4.5" OD (4.0" PVC Sched 40 size compatible)

XR Series Inlet/Outlet: 5.875" OD

Mounting: Mount on the duct pipe or with optional mounting bracket.

Recommended ducting: 3" or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Size: 9.5H" x 8.5" Dia. **Weight**: 6 lbs. (XR261 - 7 lbs)

Continuous Duty **Thermally protected**

Class B Insulation **3000 RPM**

Residential Use Only **Rated for Indoor or Outdoor use**

LISTED
Electric Fan
77728
Tested to
UL
Std. 507

GP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the GPx01 Series Fan:

Typical CFM Vs Static Suction "WC	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP501	95	87	80	70	57	30	5
GP401	93	82	60	38	12	-	-
GP301	92	77	45	10	-	-	-
GP201	82	58	5	-	-	-	-

Maximum Recommended Operating Pressure*		
GP501	3.8" W.C.	(Sea Level Operation)**
GP401	3.0" W.C.	(Sea Level Operation)**
GP301	2.4" W.C.	(Sea Level Operation)**
GP201	1.8" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
GP501	70 - 140 watts
GP401	60 - 110 watts
GP301	55 - 90 watts
GP201	40 - 60 watts

Inlet/Outlet: 3.5" OD (3.0" PVC Sched 40 size compatible)

Mounting: Fan may be mounted on the duct pipe or with integral flanges.

Weight: 12 lbs.

Size: 13H" x 12.5" x 12.5"

Recommended ducting: 3″ or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty

Class B Insulation

3000 RPM

Thermally protected

Rated for Indoor or Outdoor Use

GP301C / GP501C Rated for Commercial Use

LISTED
Electric Fan
77728
Tested to
UL
Std. 507

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GPx01/XP/XR Series Fan for shipping damage within 15 days of receipt. Notify RadonAway of any damages immediately. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open.** Return unit to factory for service.

Install the GPx01/XP/XR Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

WARRANTY

Subject to any applicable consumer protection legislation, RadonAway warrants that the GPX01/XP/XR/RP Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway will replace any Fan which fails due to defects in materials or workmanship. The Fan must be returned (at Owner's cost) to the RadonAway factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway.

5 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway will extend the Warranty Term of the fan to 5 years from date of manufacture if the Fan is installed in a professionally designed and professionally installed radon system or installed as a replacement fan in a professionally designed and professionally installed radon system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. Outside the Continental United States and Canada the extended Warranty Term is limited to one (1) year from the date of manufacture.

RadonAway is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE GPx01/XP/XR/RP SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping cost to and from factory.

RadonAway
3 Saber Way
Ward Hill, MA 01835
TEL. (978) 521-3703
FAX (978) 521-3964

Record the following information for your records:

Serial No._____
Purchase Date_____

PRO SERIES 1000

PHCC

Instruction Manual & Safety Warnings

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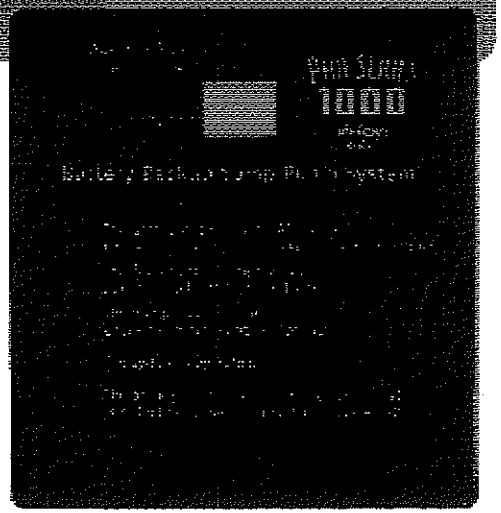


Battery Backup Sump Pump System

IMPORTANT: Even if you have the Pro Series 1000 backup sump pump system installed by someone else, you must read and follow the safety information contained in this manual. Failure to do so could result in property damage, serious injury, or death.

Important Safety Warnings & Instructions

SAVE THESE INSTRUCTIONS. This manual contains important SAFETY WARNINGS and OPERATING INSTRUCTIONS for the PHCC Pro Series 1000 battery backup sump pump system. You will need to refer to it before attempting any installation or maintenance. **ALWAYS keep these instructions with the unit so that they will be easily accessible.**

Failure to read and follow these warnings and instructions could result in property damage, serious injury, or death. It is important to read this manual, even if you did not install the Pro Series backup sump pump system, since this manual contains safety information regarding the use and maintenance of this product. **DO NOT DISCARD THIS MANUAL.**

ELECTRICAL PRECAUTIONS

⚠ DANGER

Risk of electrical and fire hazard. May result in death, serious injury, shock or burns.

To help reduce these risks, observe the following precautions:

- **DO NOT** walk on wet areas of the basement until all power has been turned off. If the main power supply is in a wet basement, call an electrician.
- **NEVER** handle the control unit with wet hands or while standing on a wet surface.
- **ALWAYS** unplug the control unit and disconnect the cables from the battery before attempting any maintenance or cleaning.
- **ALWAYS** unplug the main pump when installing or servicing the backup pump or float switch to avoid electric shock.
- **DO NOT** expose the control unit to rain or snow.
- **DO NOT** pull the cord when disconnecting the control unit. Pull the plug.
- **DO NOT** use an extension cord unless absolutely necessary. If an extension cord must be used, be sure the plug has the same configuration as the plug on the control unit.
- **DO NOT** use an attachment not recommended or sold by the manufacturer. It may result in a risk of fire or injury from an electrical shock.
- **DO NOT** operate the control unit if it has received a sharp blow, been dropped, or otherwise damaged in any way.
- **DO NOT** disassemble the control unit.

When service is required, contact Glentronics technical support at **800-991-0466, option #3,** or send an e-mail to **service@glentronics.com.** Return the control unit to the manufacturer for any repairs at the following address:

Glentronics, Inc.
640 Heathrow Drive
Lincolnshire, IL 60069-4205

BATTERY PREPARATION

⚠ WARNING / POISON

Sulfuric acid can cause blindness or severe burns. Avoid contact with skin, eyes, or clothing. In the event of an accident, flush with water and call a physician immediately. KEEP OUT OF REACH OF CHILDREN.

To help reduce these risks, observe the following precautions:

- Someone should be within range of your voice or close enough to come to your aid when you work near a lead-acid battery.
- Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- Wear eye and clothing protection and avoid touching your eyes while working with battery acid or working near the battery.
- If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 15 minutes and get prompt medical attention.
- Battery posts and terminals contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

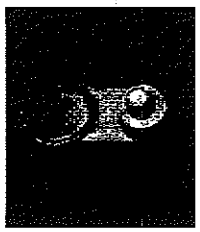
BATTERY PRECAUTIONS

⚠ DANGER

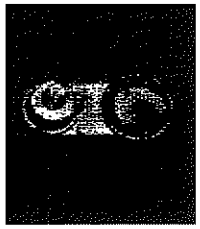
Explosive gases could cause serious injury or death. Cigarettes, flames or sparks could cause battery to explode in enclosed spaces. Charge in a well-ventilated area. Always shield eyes and face from battery. Keep vent caps tight and level.

To help reduce these risks, observe the following precautions:

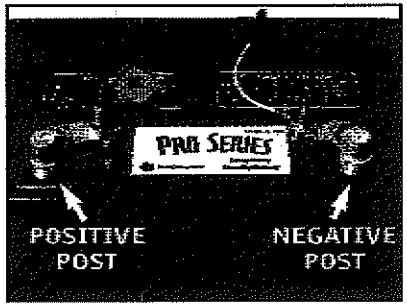
- **NEVER** smoke or allow a spark or flame in the vicinity of the battery.
- Use the Pro Series control unit for charging a LEAD-ACID battery only. **DO NOT** use the control unit for charging dry-cell batteries that are most commonly used with home appliances.
- Be sure the area around the battery is well-ventilated.
- When cleaning or adding water to the battery, first fan the top of the battery with a piece of cardboard (or another non-metallic material) to blow away any hydrogen or oxygen gas that may have been emitted from the battery.
- **DO NOT** drop a metal tool onto the battery. It might spark or short-circuit the battery and cause an explosion.
- Remove personal metal items such as rings, bracelets, watches, etc. when working with a lead-acid battery. A short circuit through one of these items can melt it, causing a severe burn.
- **ALWAYS** remove the charger from the electrical outlet before connecting or disconnecting the battery cables.
- Check the polarity of the battery posts. The POSITIVE (+) battery post usually has a larger diameter than the NEGATIVE (-) post.
- When connecting the battery cables, first connect the small ring on the end of the WHITE wire to the NEGATIVE (-) post of the battery, and then connect the large ring on the end of the BLACK wire to the POSITIVE (+) post of the battery.



POSITIVE POST HAS LARGER DIAMETER



NEGATIVE POST HAS SMALLER DIAMETER



⚠ DANGER

Do not use this system to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.

Introduction

The PHCC Pro Series 1000 backup sump pump system is battery-operated. It is designed as an emergency backup system to support your main AC sump pump, and it will automatically begin pumping any time the float switch is activated by rising water. Should any malfunction or emergency occur that involves the sump pump, the battery, or the AC power, the Pro Series system will sound an alarm. A light on the display panel of the control unit will indicate the cause of the alarm and the corrective action.

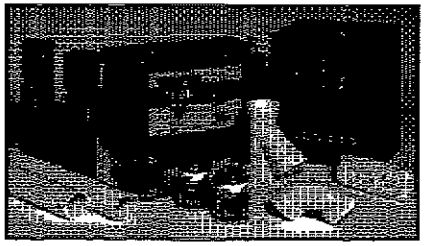
For added reliability, the float switch has, not one, but two floats. Should one float fail to operate, the second float automatically activates the pump.

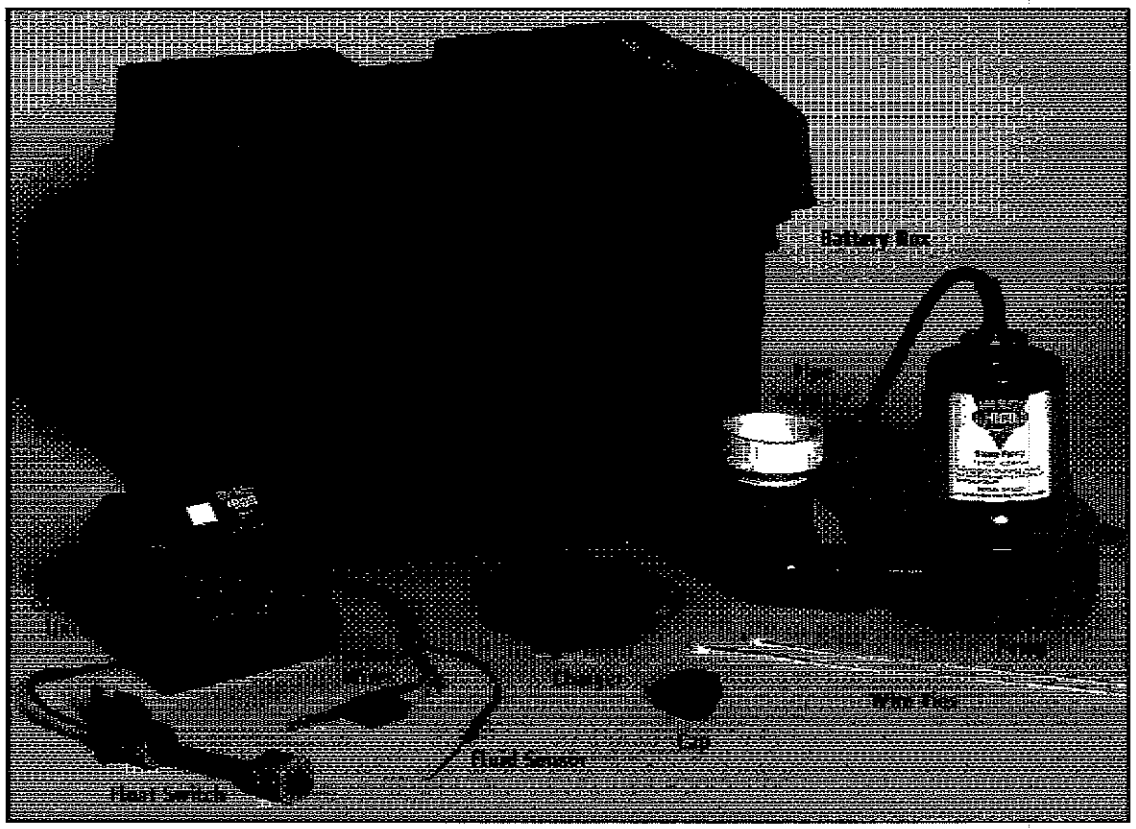
The Pro Series 1000 Sump Pump System includes:

- A control unit with a dual float switch, a battery fluid level sensor, and battery cables
- A pump with a 1½" PVC pipe adapter
- Two (2) plastic wire ties for mounting the float switch and the control unit
- A battery box
- A battery charger

You will also need to supply:

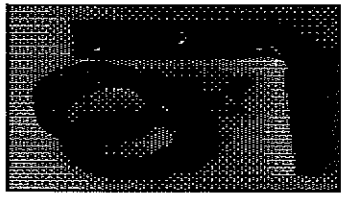
- A Pro Series 1000 Standby Battery or a Pro Series 2200 Standby Battery
  DO NOT *use an automotive battery with this system*
- 1½" rigid PVC pipe and fittings
- PVC cement and primer
- A union with hose clamps or a "Y" connector and two (2) check valves, depending on the installation method you use
- A surge protector (recommended)
- Six (6) quarts of 1.265 specific gravity battery acid



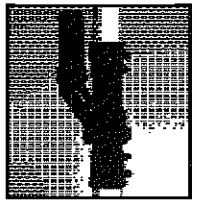


For narrow sump pits you will need some additional parts:

- An "L" bracket at least six (6) inches long (preferably one that will not rust)
- Two (2) stainless steel hose clamps
- One (1) stainless steel screw (#8-32 x 3/4"), a matching washer & nut



Use of a Pro Series Klunkless Check Valve™ will provide quieter operation. (See back cover for more information.)



Replacement Part Numbers

Pump 1011009
Float switch assembly 1020009
Fluid sensor assembly 1014001
Pipe adapter 1120002
Charger 1015003
Battery box 1113003

Call 800-991-0466, option #3 to order parts.

System Specifications

Power supply requirements . . . . . .115 volts AC
Pumping capacity . . . . . .2000 GPH @ 0'
Pumping capacity . . . . . .1000 GPH @ 10'
Pump dimensions w/elbow . . . .6½" H x 8½" W
Pump housing & strainer . . . . . .non-corrosive, will not rust
Pump . . . .can run dry for short periods of time; can be used in sumps with water softener
Float switch . . . . . .independent, can be set at any level

Pump & Pipe Installation Instructions

There are two basic methods that can be used to install the pump, a direct discharge to the outside of the building, or a connection to an existing discharge pipe. The same two options apply in very narrow sump pits where the backup pump must be mounted above the main pump.

Whenever possible, install your Pro Series backup pump with a direct discharge to the outdoors. By using this method, there will always be an outlet for the water from the sump. During times of very heavy rain, many storm sewers fill up. If your pump is trying to discharge water into a full sewer, there is nowhere for the water to go. By discharging directly outdoors, there is always an outlet for the water that is pumped out of the sump. For this method, you will need to drill a hole through a floor joist or the foundation from the basement to the outside of the house.

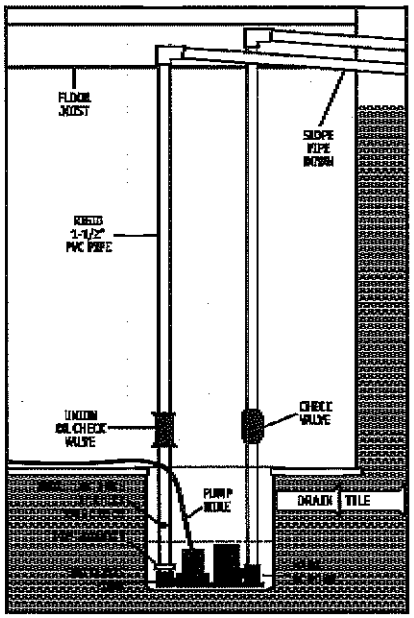
If the direct discharge method is not possible or convenient, the Pro Series pump can be connected to the same line as your main AC sump pump by installing a "Y" connector and two (2) check valves.

In most cases, the backup pump will fit next to the main AC pump in the sump pit. In very narrow pits, the backup pump can be mounted above the main AC pump. Try to fit the backup pump on the floor of the sump first. Make sure there is enough room so the backup pump and the main pump do not touch each other.

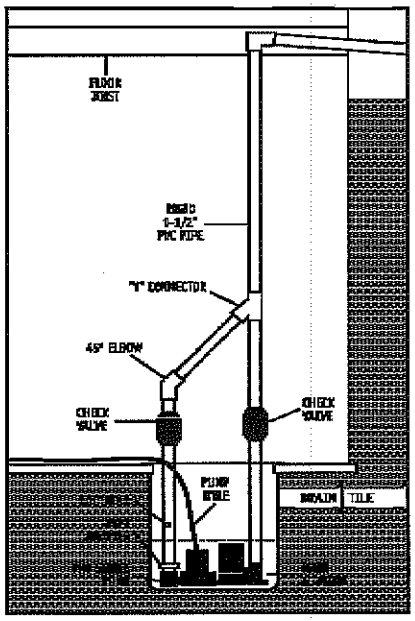
Select the installation method that will best suit your needs from the diagrams at the right. Full instructions for each installation method are provided on the following pages.

Installation will take a couple hours.

NORMAL SUMP PIT INSTALLATIONS

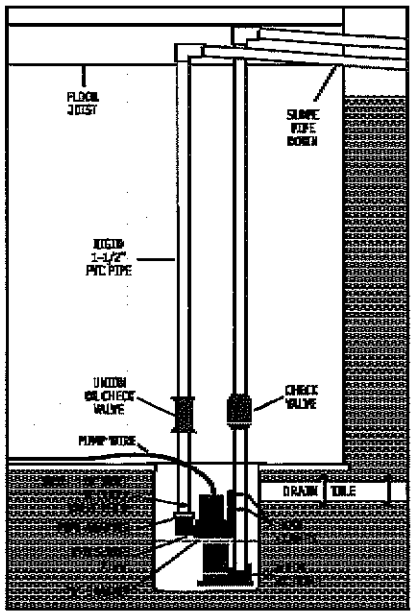


Installation A
Direct Discharge to Outside
Page 4

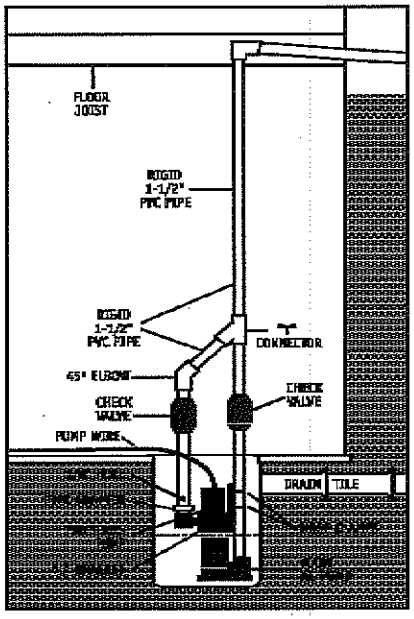


Installation B
Connection to Existing Discharge Pipe
Page 5

NARROW SUMP PIT INSTALLATIONS



Installation C
Direct Discharge to Outside
Page 6



Installation D
Connection to Existing Discharge Pipe
Page 7

Installation Instructions

INSTALLATION A:
DIRECT DISCHARGE TO THE OUTSIDE OF THE BUILDING (Diagram A)

⚠ DANGER

Unplug the main AC pump when installing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death.

1. Cut a piece of 1½" rigid PVC pipe long enough to reach from the bottom of the sump pit to one (1) foot above the floor. Prime and cement it to the 1½" pipe adapter, and then screw the adapter into the pump.

2. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.

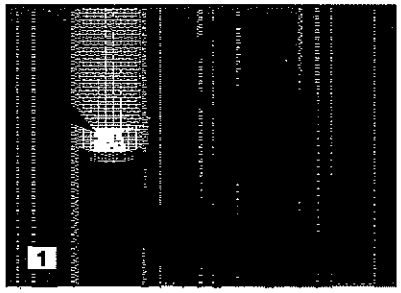
3. Place the pump with the PVC pipe attachment on the bottom of the sump floor next to the main AC pump. *The pumps should not touch each other.* Do not mount the pump to any existing pipes; it should be placed on the floor of the sump. A brick may be placed under the pump if there are rocks or other debris on the sump floor that may clog the pump.

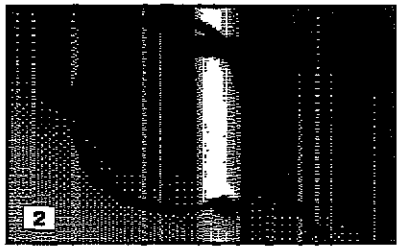
4. Attach a union or a check valve to the top of the 1½" pipe. This will allow the pump to be removed easily, should the need arise.

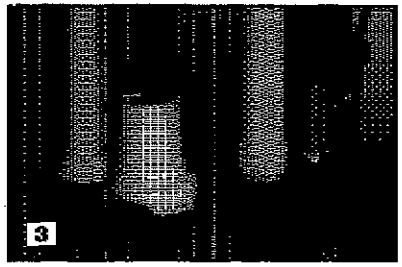
The path of the rest of the pipe and the details of each installation will vary. Using sound plumbing practices, try to route the discharge pipe to an exterior wall via the shortest path with the fewest turns. More turns will reduce the pumping capacity. The pipe section exiting the building should be on a downward slope so that the water in the pipe will exit outside instead of returning to the sump pit. Be sure to seal the hole in the wall where the pipe exits, and prime and cement or clamp all connections securely to prevent leaking. (No check valve is needed with this method of installation as long as you use less than 20 feet of pipe.)

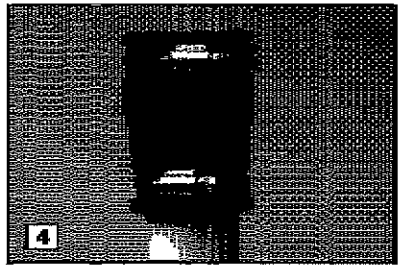
CAUTION

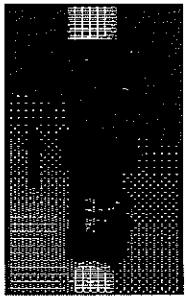
If you use more than a total of 20 feet of pipe in the installation, install a check valve in place of the union. Make sure it is installed with the arrow pointing up, or it will not prevent the backflow of water. When a check valve is used, a 1/8" hole must be drilled in the PVC pipe above the Pro Series pump. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. Make sure the hole is above the water line and below the check valve. If a hole is not drilled above the pump, an air lock may prevent the pump from operating, and the basement will flood.

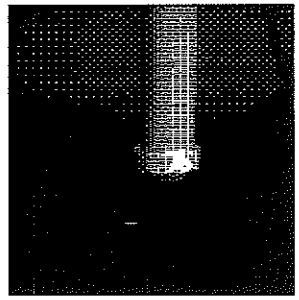












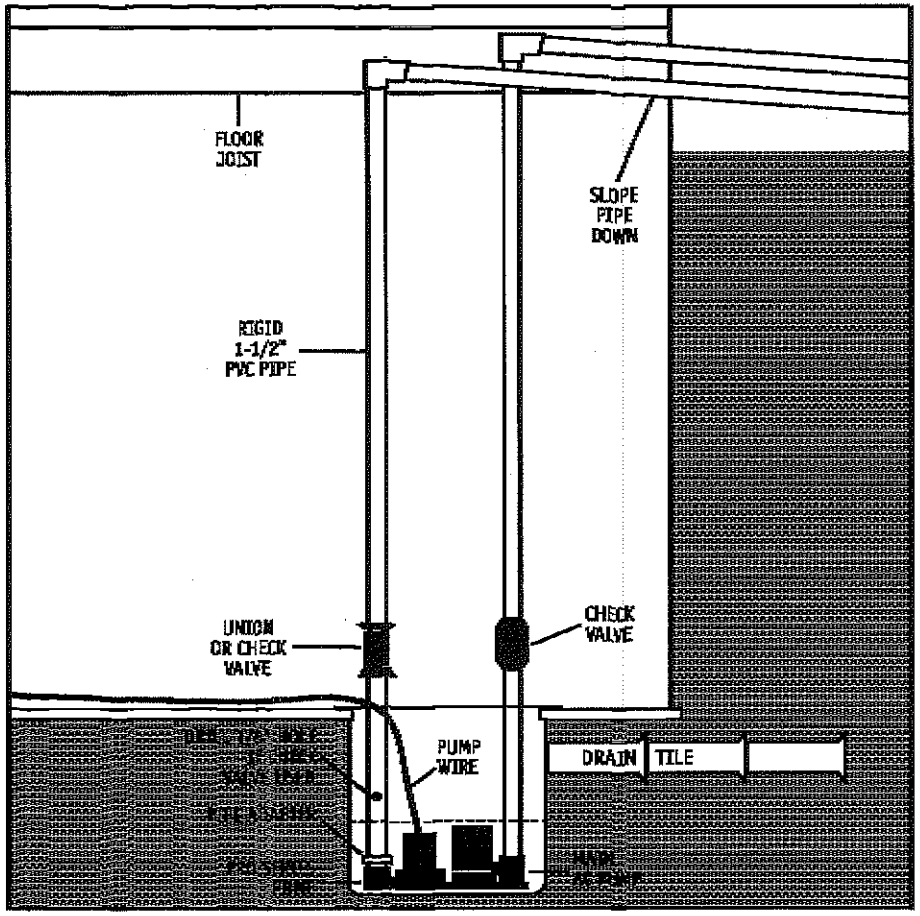


Diagram A

Pump & Pipe Installation Instructions

INSTALLATION B:
CONNECTION TO AN EXISTING DISCHARGE PIPE (Diagram B)

Depending on your installation requirements, PVC pipe lengths will vary. Cut the pipes and assemble them as shown in photo #7. *Do not cement them together until you are sure they are cut to the correct lengths.* It is important to keep the discharge pipes on both pumps parallel to each other, so that the pumps remain flat on the floor of the sump. More detailed instructions follow.

⚠ DANGER

Unplug the main AC pump when installing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death.

1. Cut a piece of 1½" rigid PVC pipe long enough to reach from the bottom of the sump pit to one (1) foot above the floor. Prime and cement it to the 1½" pipe adapter, then screw the adapter into the pump.

2. Install a check valve on the top of the PVC pipe attached to the Pro Series pump. Make sure it is installed with the arrow pointing up or it will not prevent the backflow of water.

CAUTION

3. **When a check valve is used, a 1/8" hole must be drilled in the PVC pipe above the Pro Series pump. Make sure it is above the water line and below the check valve. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. If a 1/8" hole is not drilled in the pipe above the pump, an air lock may prevent the pump from operating, and the basement will flood.**

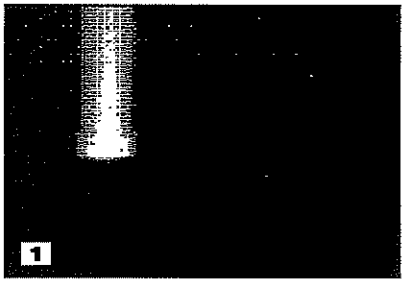
4. If there is no check valve on the discharge pipe of the main AC pump, one must be installed at this time. Cut the discharge pipe approximately one (1) foot above the floor. Install a check valve on the top of the pipe and tighten the bottom hose clamp. Now prime and cement a small piece of 1½" PVC pipe to the bottom of a "Y" connector. Prime and cement the top of the "Y" assembly to the discharge pipe with the "Y" extension facing down toward the backup pump. Now connect the bottom of the assembly to the check valve and tighten the hose clamp.

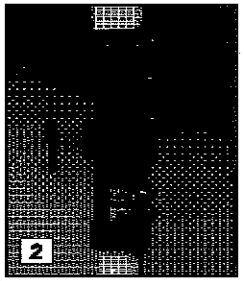
5. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.

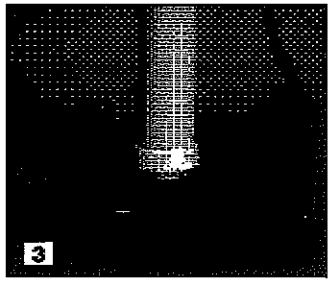
6. Place the pump with the PVC pipe attachment on the bottom of the sump floor next to the main AC pump. *The pumps should not touch each other.* Do not mount the pump to any existing pipes; it should be placed on the floor of the sump. A brick may be placed under the pump if there are rocks or other debris on the sump floor that may clog the pump.

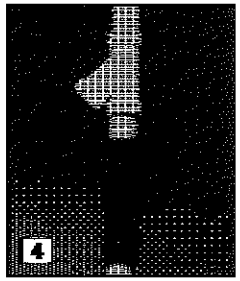
7. Connect a piece of 1½" PVC pipe above the check valve of the Pro Series pump, and attach a 45° elbow to that pipe. Extend another piece of pipe to reach from the 45° elbow to the "Y" connector on the other pipe.

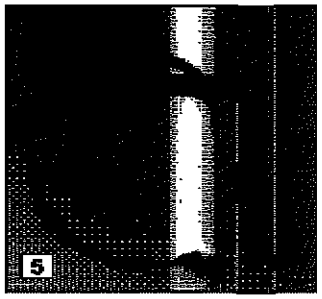
8. Prime and cement all pipe connections securely to prevent leaking, and tighten all the hose clamps.

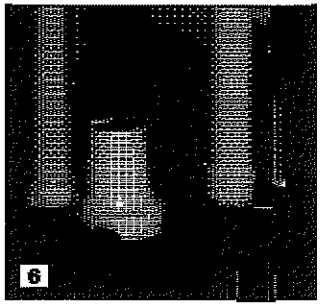


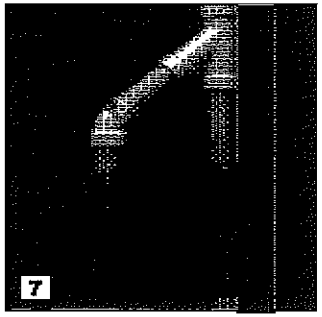












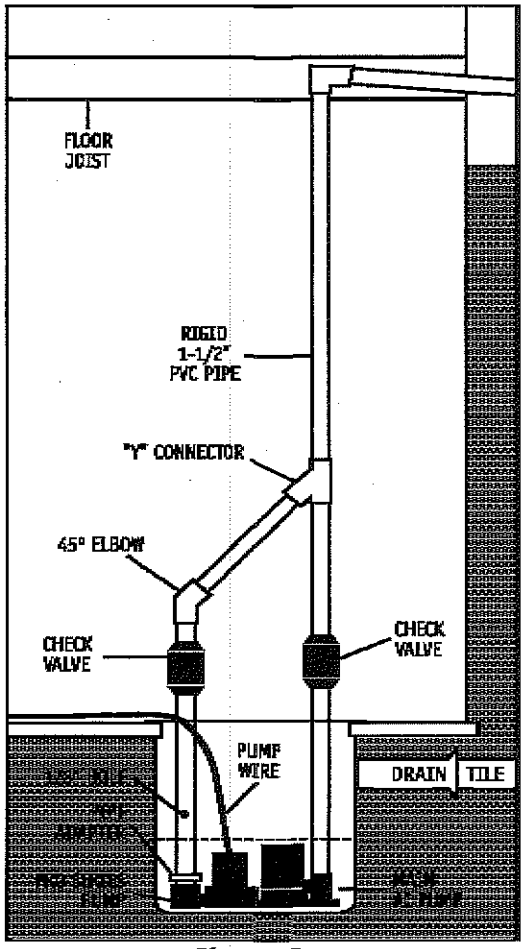


Diagram B

Pump & Pipe Installation Instructions

INSTALLATION C:
DIRECT DISCHARGE TO THE OUTSIDE OF THE BUILDING FOR NARROW SUMP PITS (Diagram C)

⚠ DANGER

Unplug the main AC pump when installing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death.

1. Attach an "L" bracket to the discharge pipe of the main AC pump with two (2) stainless steel hose clamps. Position the bracket so the bottom of the "L" is just above the top of the main pump, and out of the way of any float switch on the main pump.

2. (a) Remove the black bottom strainer of the pump by pressing in the two tabs on the strainer and pushing down. There are holes suitable for mounting on the bottom of the strainer. (b) Using the #8-32 x ¾" stainless screw, washer and nut, attach the strainer to the "L" bracket. (c) Once the strainer is attached, simply press the rest of the pump onto the mounted strainer.

3. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.

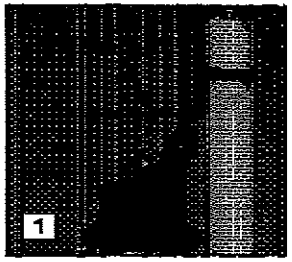
4. Cut a piece of 1½" rigid PVC pipe long enough to reach from the elbow of the backup pump to one (1) foot above the floor. Prime and cement it to the 1½" pipe adapter, then screw the adapter into the pump.

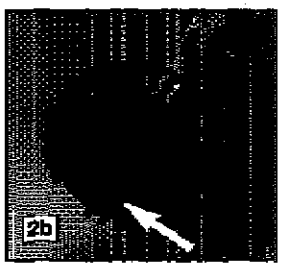
5. Attach a union or check valve to the top of the 1½" PVC pipe. This will allow the pump to be removed easily, should the need arise.

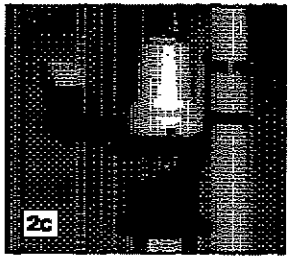
The path of the rest of the pipe and the details of each installation will vary. Using sound plumbing practices, try to route the discharge pipe to an exterior wall via the shortest path with the fewest turns. More turns will reduce the pumping capacity. The pipe section exiting the building should be on a downward slope so that the water in the pipe will exit outside instead of returning to the sump pit. Be sure to seal the hole in the wall where the pipe exits, and prime and cement or clamp all connections securely to prevent leaking. (No check valve is needed with this method of installation as long as you use less than 20 feet of pipe.)

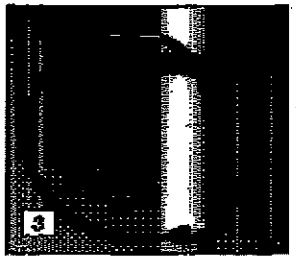
CAUTION

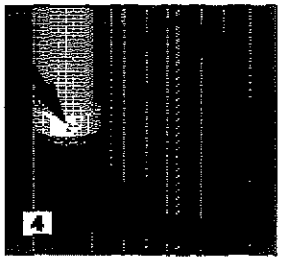
If you use more than a total of 20 feet of pipe in the installation, install a check valve in place of the union. Make sure it is installed with the arrow pointing up or it will not prevent the backflow of water. When a check valve is used, a 1/8" hole must be drilled in the PVC pipe above the Pro Series pump. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. Make sure the hole is above the water line, and below the check valve. If a hole is not drilled above the pump, an air lock may prevent the pump from operating, and the basement will flood.

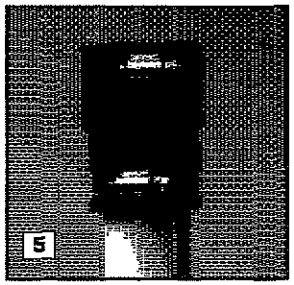


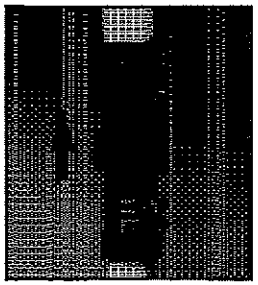


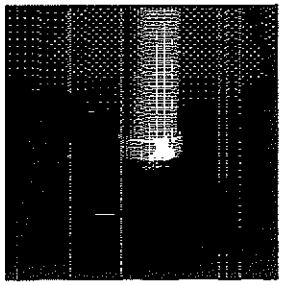












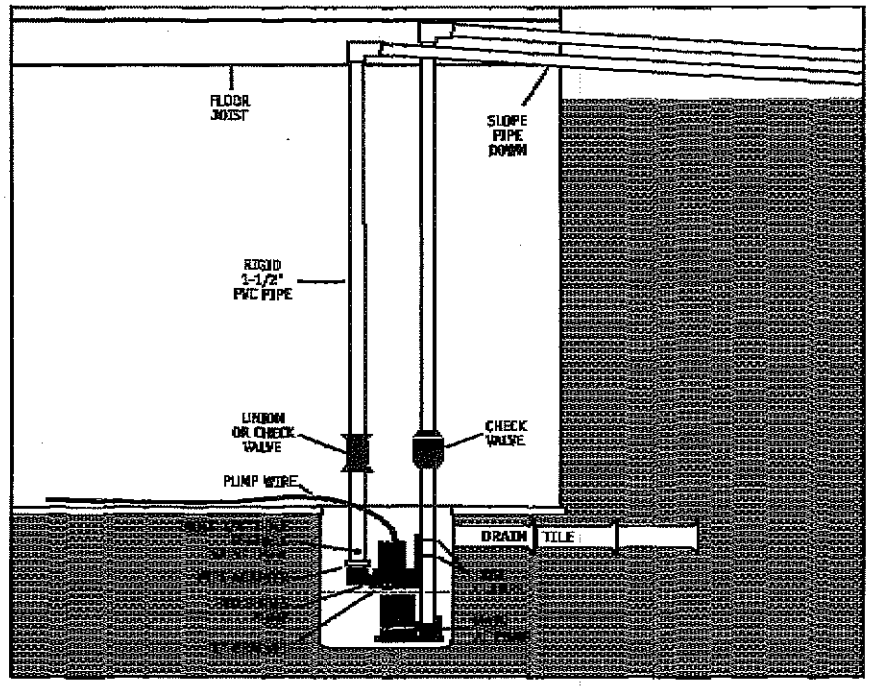


Diagram C

Pump & Pipe Installation Instructions

INSTALLATION D:
CONNECTION TO EXISTING DISCHARGE PIPE FOR NARROW SUMP PITS
(Diagram D)

Depending on your installation requirements, PVC pipe lengths will vary. Cut the pipes and assemble them as shown in photo #8. *Do not cement them together until you are sure they are cut to the correct lengths.* It is important to keep the discharge pipes on both pumps parallel to each other, so that the pumps remain flat on the floor of the sump. More detailed instructions follow.

⚠ DANGER

Unplug the main AC pump when installing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death.

1. Attach an "L" bracket to the discharge pipe of the main AC pump with two (2) stainless steel hose clamps. Position the bracket so the bottom of the "L" is just above the top of the main pump, and out of the way of any float switch on the main pump.

2. (a) Remove the black bottom strainer of the pump by pressing in the two tabs on the strainer and pushing down. There are holes suitable for mounting on the bottom of the strainer. (b) Using the # 8-32 x ¾" stainless screw, washer and nut, attach the strainer to the "L" bracket. (c) Once the strainer is attached, simply press the rest of the pump onto the mounted strainer.

3. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.

4. Cut a piece of 1½" rigid PVC pipe long enough to reach from the elbow of the backup pump to one (1) foot above the floor. Prime and cement it to the 1½" pipe adapter, then screw the adapter into the pump.

5. Install a check valve on the top of the PVC pipe attached to the Pro Series pump. Make sure it is installed with the arrow pointing up or it will not prevent the backflow of water.

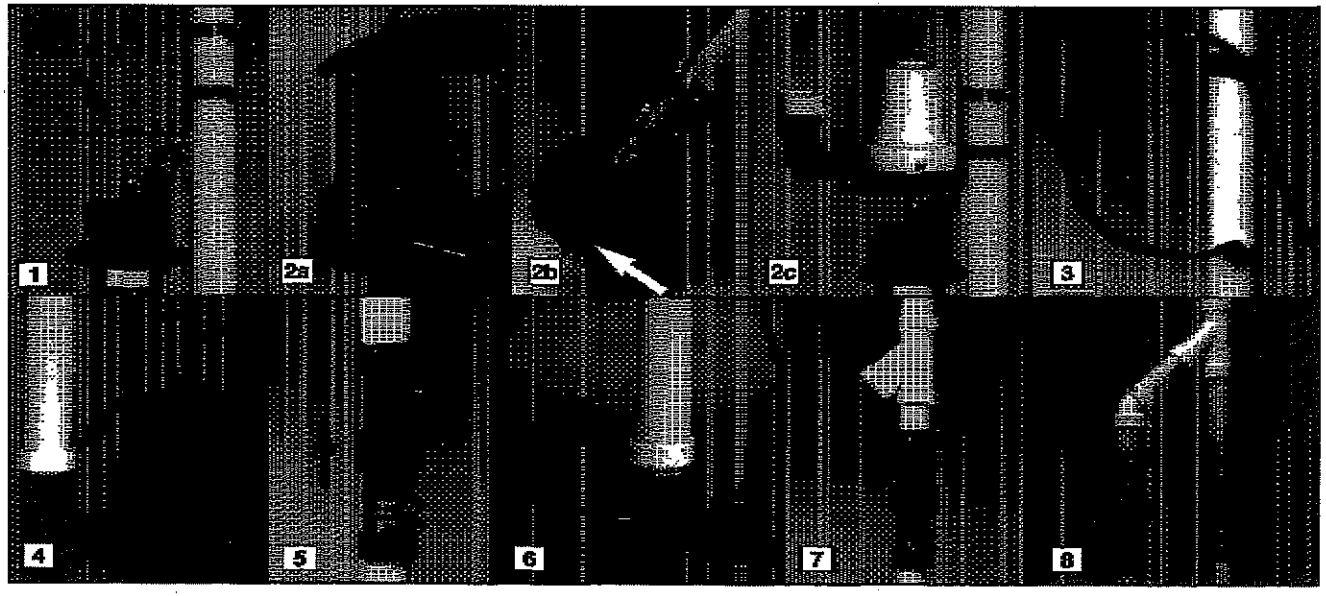
CAUTION

6. **When a check valve is used, a 1/8" hole must be drilled in the PVC pipe above the Pro Series pump. Make sure it is above the water line and below the check valve. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. If a 1/8" hole is not drilled above the pump, an air lock may prevent the pump from operating, and the basement will flood.**

7. If there is no check valve on the main AC pump discharge pipe, one must be installed at this time. Cut the discharge pipe approximately one (1) foot above the floor. Install a check valve on the pipe and tighten the bottom hose clamp. Now prime and cement a small piece of 1½" PVC pipe to the bottom of a "Y" connector. Prime and cement the top of the "Y" assembly to the discharge pipe with the "Y" extension facing down toward the backup pump. Now connect the bottom of the assembly to the check valve and tighten the hose clamp.

8. Connect a piece of 1½" PVC pipe above the check valve of the Pro Series pump, and attach a 45° elbow to that pipe. Extend another piece of pipe to reach from the 45° elbow to the "Y" connector on the other pipe.

9. Prime and cement all pipe connections securely to prevent leaking, and tighten all the hose clamps.



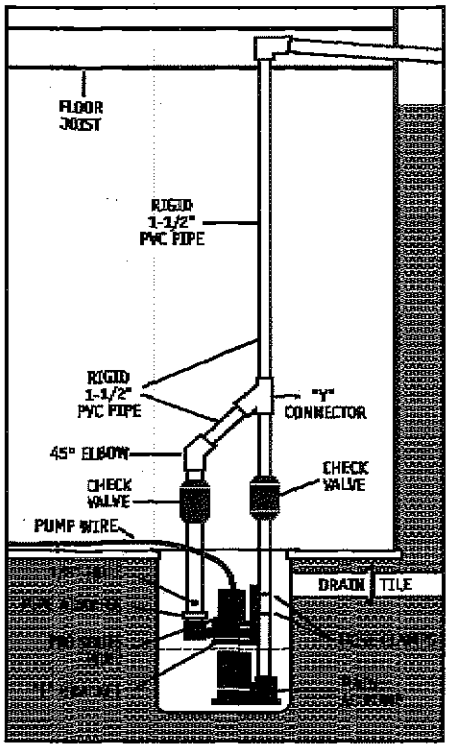


Diagram D

Battery Instructions

The Pro Series 1000 Standby Battery has been designed to run this system for a minimum of 6 hours continuously. However, most of the time the pump will turn on and off, and the battery will run the pump intermittently for days. In addition, the unique materials in the battery enable it to last for 5-7 years in standby service.

To extend the run time of the pump, use the Pro Series 2200 Standby Battery. This larger battery will run this pump continuously for 12 hours.

CAUTION

- **The use of automotive batteries is NOT recommended. Automotive batteries are not designed for this application. They will only run the pump for a short time and will have a shorter life than a standby battery.**
- **The battery fluid sensor is designed to fit the Pro Series Standby batteries. Measuring the battery fluid is one of the most important features of the system, since about 80% of backup sump pump failures are the result of a battery that has dried out.**
- **The internal construction of some wet cell batteries may not be compatible with this system. The use of a Pro Series battery is HIGHLY recommended.**

⚠ DANGER

Do not insert the fluid sensor into any battery except a Pro Series battery. Do not drill a hole in another brand of battery to accommodate the fluid sensor. Batteries emit explosive gases which can cause serious injury or death.

PREPARING THE PRO SERIES STANDBY BATTERY

The Pro Series Standby batteries are shipped dry (without acid) so they never lose power before you take them home. A battery is activated when the acid is added, and then it slowly begins to deteriorate as it ages. By adding the acid just before use, the battery will always be fresh. Use 1.265 specific gravity battery acid to fill the battery. It is available where you purchased the battery.

⚠ DANGER / POISON

Contains sulfuric acid. Wear eye and clothing protection. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eyes, flush with water for 15 minutes, and get prompt medical attention. Review the safety instructions on page 1.

TO FILL THE BATTERY

1. Remove the cover of the battery box by pushing in the tabs on the front and back of the box and lifting up.

2. Place the battery box on the floor. Place the dry (unfilled) battery into the battery box. Remove the two battery caps by lifting them up with a screwdriver. **DO NOT** lift the cap by prying it up from the groove on the back of the cap. It may damage the vent.

3. Carefully push in the perforated tab at the top of the acid pack. Lift up the large tab and pull out the dispensing hose. Hold the hose upright above the pack and squeeze the hose forcing all the acid back into the pack.

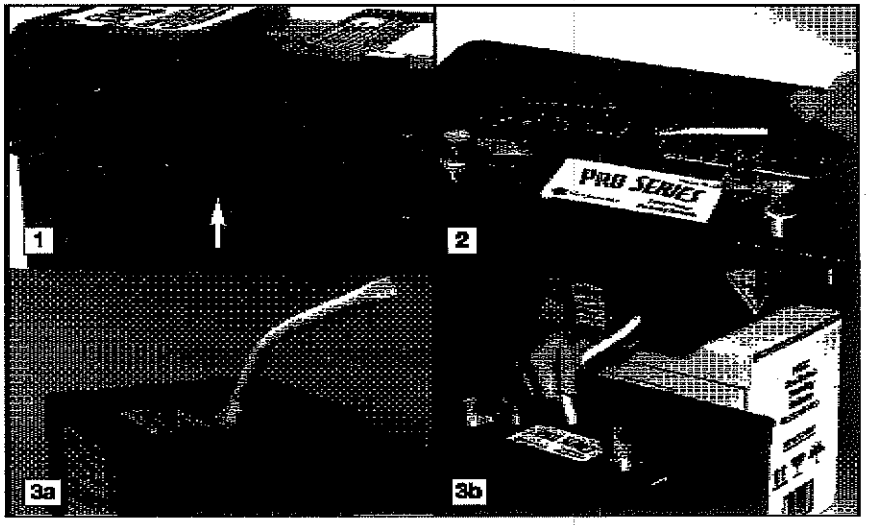
4. Position the acid pack and battery as shown at the right. Pinch the end of the hose together and cut off the tip. Insert the end of the hose into each cell. Control the flow by pinching the hose with thumb and forefinger. ***Fill each cell of the battery to a level just covering the battery plates, and then go back and top off each cell equally. It is important to have all the cells filled equally or the battery will not operate properly.*** The acid should reach a level about ¼" below the cap ring as shown in the diagram at right. DO NOT OVERFILL THE BATTERY. (Diagram E)

A newly filled battery will sometimes require additional acid after about 20 minutes. Re-examine the fill level, and add additional acid if necessary. The battery acid may bubble at this time and give off a sulfur-like smell, but this is normal. After the battery has been filled, press the caps securely on the top of the battery.

CAUTION

When you fill the battery for the FIRST time, it will be the ONLY time you add acid to the battery. In the future, when the fluid level is low, add distilled water to the cells. NEVER add more acid.

Do not throw an old battery in the trash. Take it to a service station or recycling center.



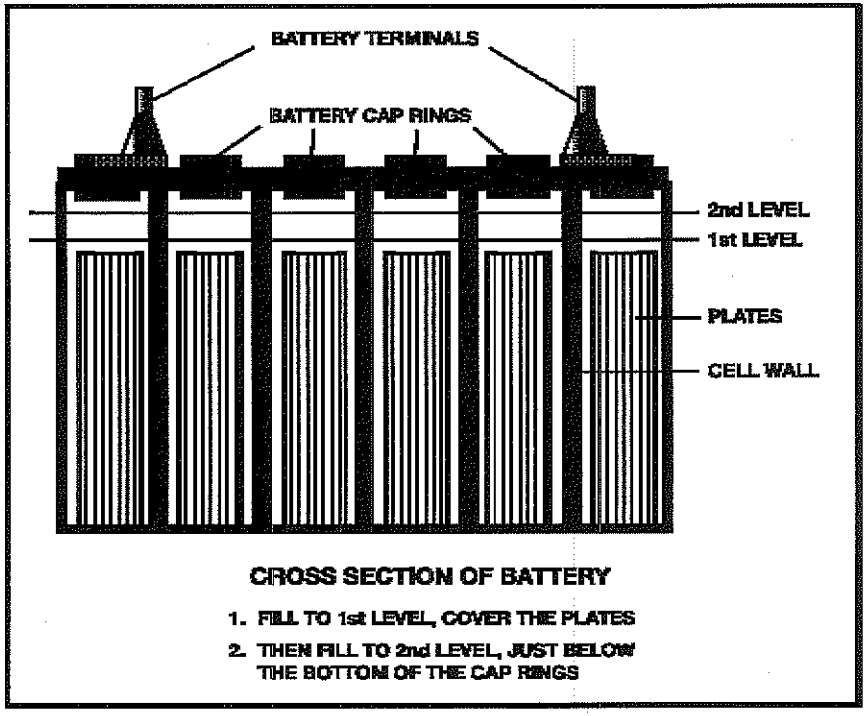


Diagram E

Control Unit Connections

⚠ DANGER

Risk of electrical shock or battery explosion, which can cause serious injury or death. Unplug the main AC pump to avoid electrical shock. Wear eye protection. Work in a well-ventilated area. Do not smoke or allow a spark or flame in the vicinity of the battery. Avoid dropping metal tools on the battery. If battery acid contacts eyes, flush with water for 15 minutes and get prompt medical attention. Review the safety instructions on page 1.

When you position the control unit on the discharge pipe, be sure the charger cord will reach the AC power outlet, and the pump cable and the float switch will reach the bottom of the sump. Position the unit in a well-ventilated area. Do not place anything on top of the battery. (Diagram F)

1. **Mounting the control unit:** (a) Thread one plastic wire tie through the two mounting brackets on the back of the control unit. (b) Secure the controller to the discharge pipe of the Pro Series pump by wrapping the tie around the pipe and pulling it tight.

2. **Positioning the dual float switch:** The float switch will activate the pump when the water raises either float, and it will remain running as long as the water is above the float. When the water drops below the float switch, an internal timer in the control unit will keep the pump running an additional 25 seconds to empty the sump pit. The switch should be mounted about six (6) inches above the water level line in the sump pit. (a) Attach the float switch very securely to the discharge pipe with the plastic wire tie. (b) If the pump is stacked above the main AC pump in a narrow sump pit, the float may be attached to the elbow of the pump. *Be sure the switch is positioned vertically with the mounting bracket at the top. Do not tilt the switch. Do not position the float switch on the side of the discharge pipe facing the drain tile or any incoming rush of water!*

3. **Connecting the pump:** Remove the security tag from the pump and plug the pump wires into the pump connector on the back of the control unit. Keep the backup pump wire, the AC pump wire, and the float wire separate from each other. Do not let them cross on the final installation.

4. **Installing the battery fluid sensor:** Remove the cover of the battery box by pushing in the tabs on the front and back, then lifting up. Fan the area around the top of the battery with a piece of cardboard (or another non-metallic material) to remove any hydrogen or oxygen gas that may have been emitted from the battery. Place the fluid sensor in the hole provided on the top of the battery. It is located in the second cell from the positive post, and the location is marked by an arrow on the top label. Hold the sensor straight up and press it firmly into the hole. Do not bend the sensor.

CAUTION

If you are not using the Pro Series Standby battery, you cannot use the battery fluid sensor. However, you must attach the sensor to the POSITIVE (+) post of the battery or the alarm will sound continuously. The Pro Series sump pump system will not warn you if the fluid level is low in this configuration. You will need to check your battery every couple of months to see if it needs water. If the battery dries out, the system will not work.

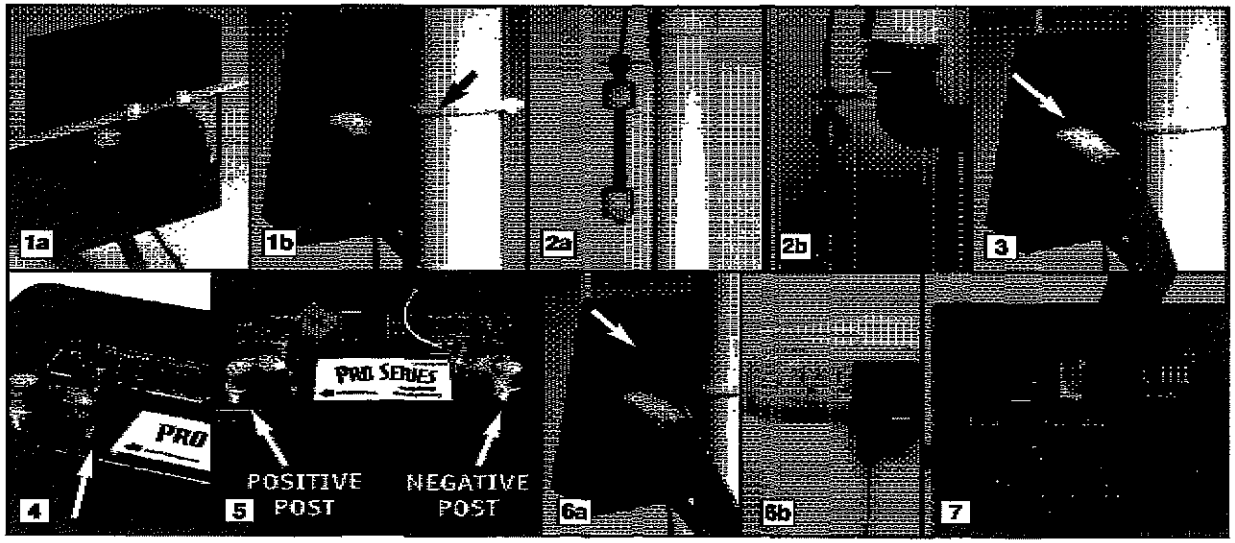
5. **Connecting the battery:** Remove the wing nuts from the battery terminals. Remove the security tag from the battery cables. Attach the battery cables to the battery...the WHITE wire to the NEGATIVE (-) post, and the BLACK wire to the POSITIVE (+) post. Replace the wing nuts and tighten them.

6. **Connecting the charger:** Immediately plug the charger into the charger hole on the back of the control unit, then into an AC outlet on the wall. (A surge protector that protects all three pins on the power plug is recommended.)

7. If the pump alarm is sounding, press the WHITE button on the front of the control panel to silence the alarm.

8. Secure the cover on the battery box by slipping the tabs through the fittings on the front and back of the box.

9. **BE SURE TO PLUG IN THE MAIN AC PUMP WHEN YOU FINISH THE INSTALLATION.**



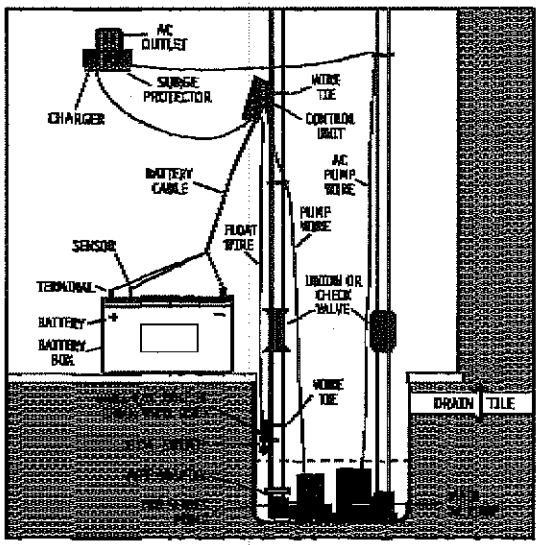


Diagram F

Understanding the Warnings & Alarms

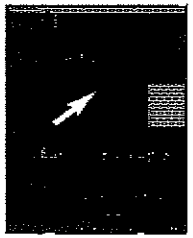
The Pro Series control unit features a series of warning lights that pinpoint potential problems. In addition, an alarm sounds to alert you to the problem. In some cases the lights and alarm will go off automatically when the problem has been solved. In others, the WHITE button on the front of the control unit must be pushed to silence the alarm. Refer to the table below for a quick review of the features and their corresponding alarm status.

Warning	Alarm can be silenced before problem is corrected	Alarm shuts off automatically when the problem is corrected
Power problem	Yes	Yes
Fluid level is low	No	Yes
Pump was activated	Yes	No, push the WHITE button
System is operating	No alarm	No alarm
Battery problem	No	Yes

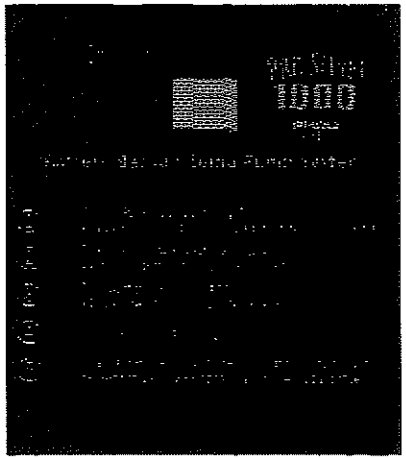
SILENCING THE ALARM DURING AN EMERGENCY

The Pro Series 1000 is equipped with a switch that will silence the audible alarm during an extended emergency. The "AC power" ① and "Pump" ③ alarms can be silenced during a power outage or during heavy rains when the pump is activated repeatedly.

To silence both the "AC power" and "Pump" alarms, slide the "Audible Alarm" switch to OFF. The "AC power" and/or the "Pump" light will remain on, but the audible alarm will not sound. **When the emergency has ended, slide the switch to the ON position to resume the full monitoring capability, or you will not be warned the next time an emergency occurs.**



The "Fluid level" ② and "Battery problem" ⑤ alarms cannot be silenced. Both require immediate attention.

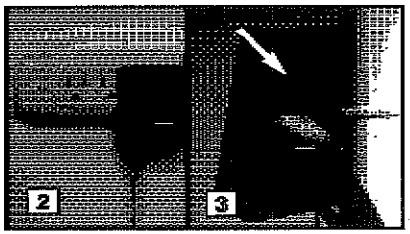


① The unit is not receiving AC power

There are several causes for power failure. The most common is a power outage by your electric company. During this emergency, the Pro Series system will automatically switch to battery power and protect your basement from flooding.

You can silence the "AC power" alarm by sliding the" Audible Alarm" switch to OFF. The alarm will be silenced, but the light will stay on. The system will continue to operate while the power alarm is silenced. **Be sure to slide the switch to the ON position when the power is restored to resume full monitoring capability.**

1. If the power is on in the rest of the house, check the home circuit breaker or fuse box for failure, and correct the problem.
2. Check the charger. Make sure it is securely plugged into the wall outlet. Make sure the outlet is working.



3. Check the charger plug that fits into the rear panel of the control unit. Make sure it is securely plugged into the control unit.

The control unit must receive 115 volts AC +/- 5% from the AC outlet. Any voltage lower than 110 volts will activate the "AC power" alarm. Lower voltages can be caused by utility company brown outs or a heavy power draw from other appliances on the same circuit. Reduce the number of appliances on the circuit.

If all the connections are secure and the wall outlet is operating, but the "AC power" warning light is still on, replace the charger unit with the Pro Series part number 1015003. Contact Glentronics at 800-991-0466, option #3 for parts.

② The fluid in the battery is low

⚠ DANGER

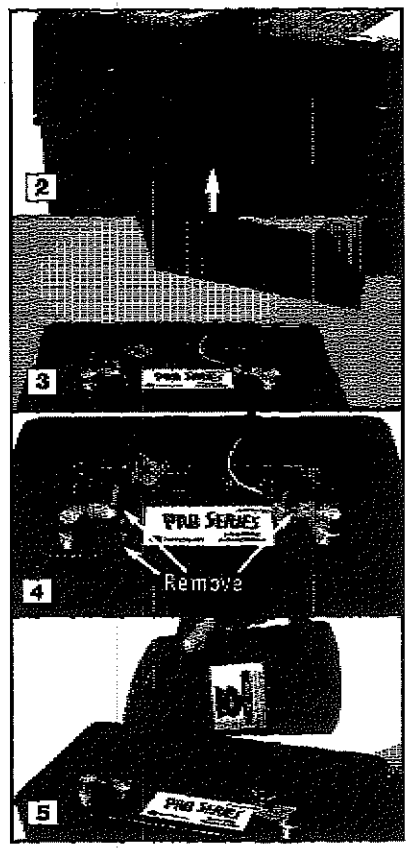
Risk of electrical shock or battery explosion, which can cause serious injury or death. Wear eye protection. Work in a well-ventilated area. Do not smoke or allow a spark or flame in the vicinity of the battery. Avoid dropping metal tools on the battery. If battery acid contacts eyes, flush with water for 15 minutes and get prompt medical attention. Review the safety instructions on page 1.

REFER TO THE PHOTOS AT RIGHT

If this warning light and alarm are on, you need to add distilled water to the battery. (This alarm cannot be silenced. When the battery is refilled and the sensor is replaced, the alarm will go off automatically.)

REFILLING THE BATTERY

1. Unplug the charger from the wall outlet.
2. Remove the cover of the battery box by pushing in the tabs on the front and back, then lifting up.
3. Fan the area around the top of the battery with a piece of cardboard (or another non-metallic material) to remove any hydrogen or oxygen gas that may have been emitted from the battery.
4. Remove the fluid sensor from the top of the battery, and then unscrew the wing nuts and remove the battery cables from the battery.
5. Pry up the two battery caps. Add distilled water to each cell. If distilled water is not available, tap water with a low mineral



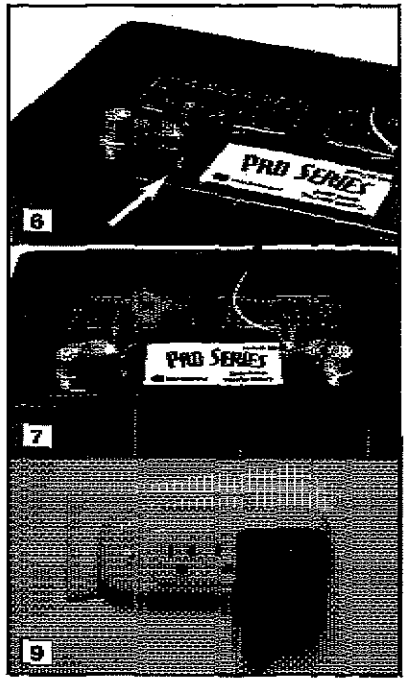
content may be used. Well water is not recommended. **NEVER ADD MORE ACID.** Fill the battery to level 2 as shown in Diagram E on page 8. (The Pro Series battery filler will automatically fill the level to the correct height. See enclosed order form.)

6. Replace the battery caps. Replace the fluid sensor in the hole on the top of the battery. The hole is marked with an arrow.

7. Replace the battery cables...the WHITE wire to the NEGATIVE (-) post, and the BLACK wire to the POSITIVE (+) post. Replace the wing nuts and tighten.

8. Replace the cover of the battery.

9. Plug the charger back into the outlet. (You should provide additional protection for the control unit by using a surge protector.)

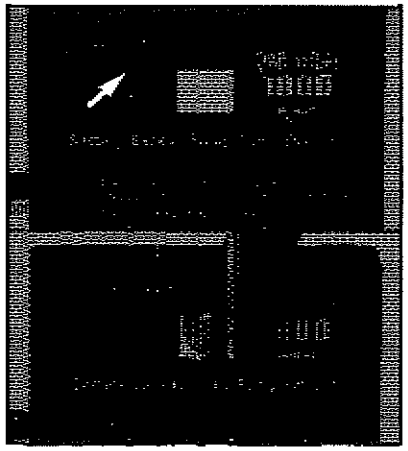


③ The pump was activated

When the water rises in the sump pit and activates the float switch, the pump will begin pumping, and the "Pump was activated" light and alarm will turn on. The alarm stays on to alert you to the fact that the standby system was used to empty water from the sump. Try to determine what caused the system to activate.

- Check the main AC pump for failure. It may not be working, the float switch may be stuck, or it may be too small to handle the inflow of water.
- Make sure the discharge pipe is not clogged or frozen.
- If the power was out, the backup pump was automatically activated. You need to push the WHITE button on the front of the control panel to reset the alarm.

During a power outage or times when the pump is activated repeatedly, you can temporarily silence the alarm by sliding the "Audible Alarm" switch to OFF. **When the primary pump has resumed normal operation, and the backup pump is no longer activating repeatedly, slide the switch to the ON position to resume the full monitoring capability.** The alarm and pump light will still be on. Push the WHITE button on the front of the control panel to silence the alarm.



REPLACING THE PUMP

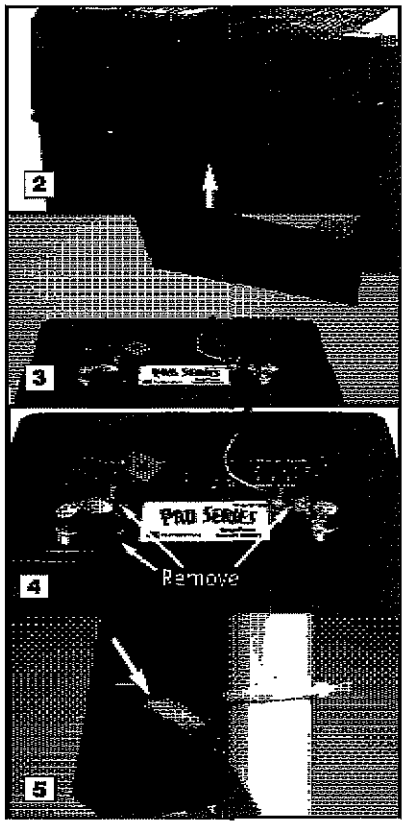
⚠ DANGER

Unplug the main AC pump when installing or servicing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death. Review the safety instructions on page 1.

REFER TO PHOTOS BELOW

1. Unplug the Pro Series charger from the wall outlet.

2. Remove the cover of the battery box by pushing in the tabs on the front and back, then lifting up.



3. Fan the area around the top of the battery with a piece of cardboard (or another non-metallic material) to remove any hydrogen or oxygen gas that may have been emitted from the battery.

4. Remove the fluid sensor from the top of the battery. Unscrew the wing nuts and remove the battery cables from the battery.

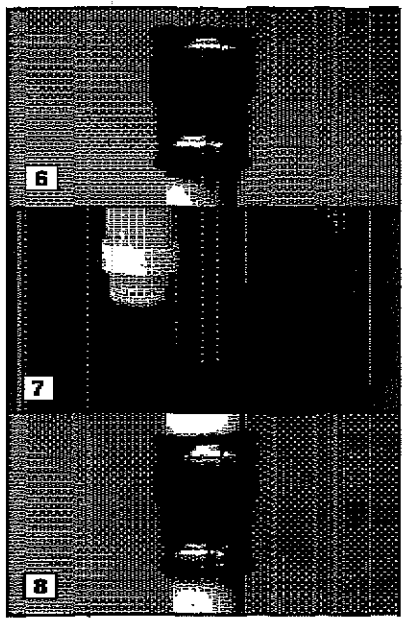
5. Unplug the pump from the back of the control unit.

6. Release the union or check valve and remove the pump and the rigid PVC pipe section from the sump pit.

7. Unscrew the pipe and adapter from the old pump, and screw them into the new pump.

8. Lower the pump into the sump and reconnect the union or check valve.

9. Plug the pump wires into the back of the control unit.



10. Replace the fluid sensor in the top of the battery. Connect the battery cables to the battery...the WHITE wire to the NEGATIVE (-) post, and then the BLACK wire to the POSITIVE (+) post. Tighten the wing nuts.

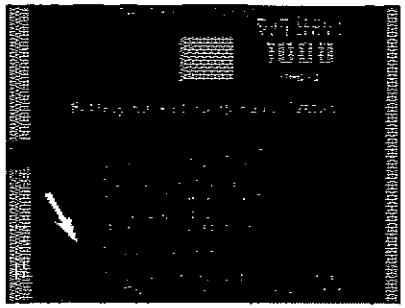
11. Replace the cover on the battery box.

12. Plug the charger and the main AC pump back into the wall outlet. (You should provide additional protection for the control unit by using a surge protector.)

13. If any alarms are sounding, press the WHITE button on the front of the control panel for one (1) second to silence them.

④ The system is operating

This green light should always be flashing. It will flash when there is power coming from either the battery or the AC outlet.



⑤ The battery terminals are corroded or the battery is defective

This light and alarm will come on when the control unit detects there is less than ½ hour of pumping power left in the battery, or that the battery is defective. The alarm cannot be silenced, because action needs to be taken to protect your basement. If your battery is more than five (5) years old, replace it. If not, here are several situations that would cause the pump to run the battery for an extended time and discharge the battery. Check the list below before you replace the battery.

- If the top light on the controller is also on, it means that the unit is not receiving AC power. Either the AC power is out, the circuit breaker has blown, or the outlet is bad. When the problem is corrected, the battery should recharge.

- If the third light on the controller is also on, check your main pump for failure. The backup pump may have been activated repeatedly if your main AC pump is broken or you are experiencing heavy rains and your main pump cannot keep up with the inflow of water. You may need to upgrade or replace your main pump. When the problem is corrected, the battery should recharge.

- If no other lights are on, this means the terminals may be corroded, and the battery cannot charge properly. Unplug the charger from the wall outlet. Then, check the battery cables and the battery terminals for corrosion. Clean and tighten them as needed. The procedure is described in the next column.

- If the battery terminals have been cleaned and the light is still on, there could be a problem with the controller or the battery. The best way to determine if the battery is the problem is to have it charged and load tested at any local car service station. If the battery is bad and less than one (1) year old, it can be returned to the place of purchase for a replacement (receipt required). If the battery is good, contact Glentronics' service department for further instructions. The phone number is 800-991-0466, option #3.

If the battery alarm goes on while the pump is running and the power is out, you will have a minimum of one-half (1/2) hour of continuous pumping time to replace the battery. (In most cases, the pump does not run continuously, and therefore, you actually have a longer time to replace it.) You will not be able to silence the alarm. Left unattended, the basement will flood. In a severe emergency, if a replacement battery is not available, you could temporarily use your car battery, or recharge this battery by connecting it to your car battery. Once the AC power is restored, the battery will recharge automatically, unless it is old or damaged. The alarm will turn off when the AC power is restored and the pumping energy reaches one-half (½) hour or more.

In the event that your Pro Series sump pump system has pumped for an extended period of time, the battery may be very depleted. In this condition, when the AC power is returned to the unit, a battery alarm will continue to sound. The battery may need a longer period to recharge.

For a faster recharge, an automotive or marine battery charger can be used to recharge the battery. Follow the manufacturer's instructions and safety information included with the charger.

⚠ WARNING

When another charger is used, first disconnect the Pro Series charger from the control unit, and then disconnect the control unit from the battery. Using another charger without disconnecting the control unit will destroy the control unit and void the warranty.

TO CLEAN THE BATTERY TERMINALS AND CABLES

⚠ DANGER

Risk of electrical shock or battery explosion, which can cause serious injury or death. Wear eye protection. Work in a well-ventilated area. Do not smoke or allow a spark or flame in the vicinity of the battery. Avoid dropping metal tools on the battery. If battery acid contacts eyes, flush with water for 15 minutes and get prompt medical attention. Review the safety instructions on page 1.

REFER TO THE PHOTOS AT RIGHT & ON PAGE 13

1. Unplug the charger from the wall outlet.

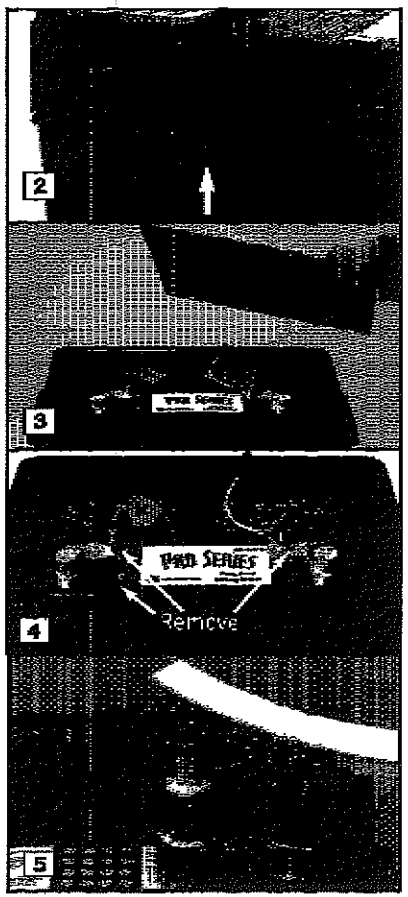
2. Remove the cover of the battery box by pushing in the tabs on the front and back, then lifting up.

3. Fan the area around the top of the battery with a piece of cardboard (or another non-metallic material) to remove any hydrogen or oxygen gas that may have been emitted from the battery.

4. Remove the fluid sensor from the top of the battery. Unscrew the wing nuts. Remove the battery cables.

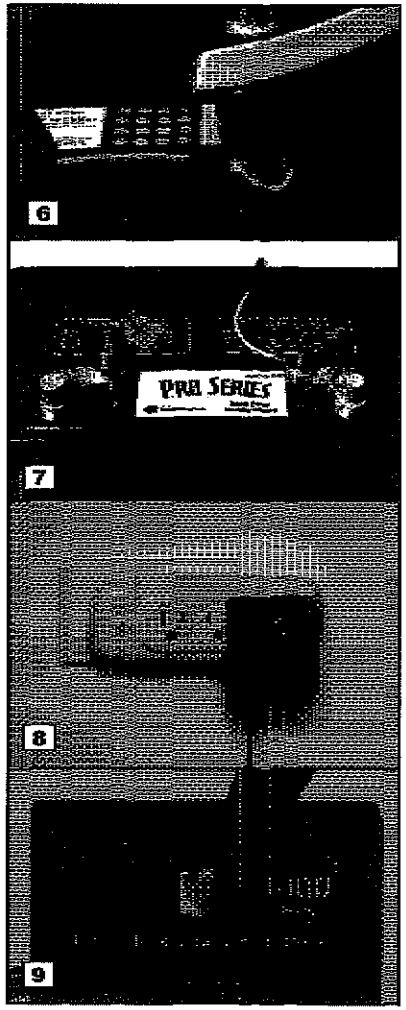
5. Clean the battery posts with a battery terminal cleaner or a wire brush.

6. Clean any corrosion off of the ring connectors on the ends of the battery wires. Use a stiff brush or sandpaper. **DO NOT** apply corrosion resisting sprays or pads to the terminal rings or posts after you have cleaned them, since this could prevent the system from charging properly.



7. Replace the fluid sensor in the top of the battery. Then replace the battery cables, WHITE to the NEGATIVE (-) post and BLACK to the POSITIVE (+) post. Tighten the wing nuts.

8. Plug the charger back into the wall outlet. (You should provide additional protection for the control unit by using a surge protector.)



9. If any of the alarms are sounding, press the WHITE button on the front of the control panel for one (1) second.

REPLACING THE BATTERY

⚠ DANGER

Risk of electrical shock or battery explosion, which can cause serious injury or death. Wear eye protection. Work in a well-ventilated area. Do not smoke or allow a spark or flame in the vicinity of the battery. Avoid dropping metal tools on the battery. If battery acid contacts eyes, flush with water for 15 minutes and get prompt medical attention. Review the safety instructions on page 1.

REFER TO THE PHOTOS AT RIGHT

1. Unplug the charger from the wall outlet.

2. Remove the cover of the battery box by pushing in the tabs on the front and back, then lifting up.

3. Fan the area around the top of the battery with a piece of cardboard (or another non-metallic material) to remove any hydrogen or oxygen gas that may have been emitted from the battery.

4. Remove the fluid sensor from the top of the battery. Unscrew the wing nuts and remove the battery cables.

5. Remove the old battery from the battery box and place the new battery in the box. Fill the battery following the instructions on page 6.

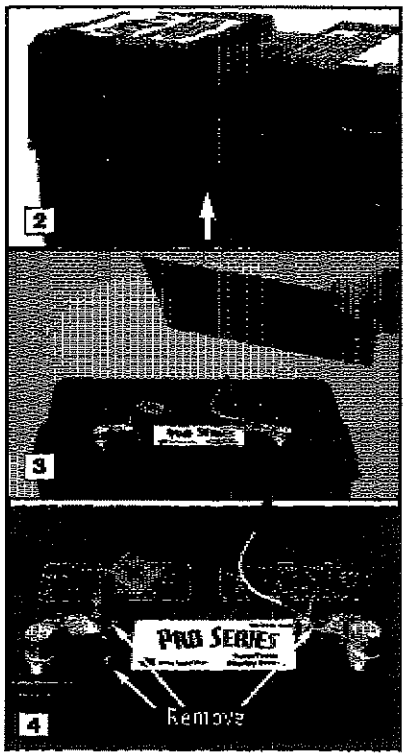
6. Clean any corrosion off of the ring connectors on the ends of the battery wires. Use a stiff brush or sandpaper. **DO NOT** apply corrosion resisting sprays or pads to the terminal rings or posts after you have cleaned them, since this could prevent the battery from charging properly.

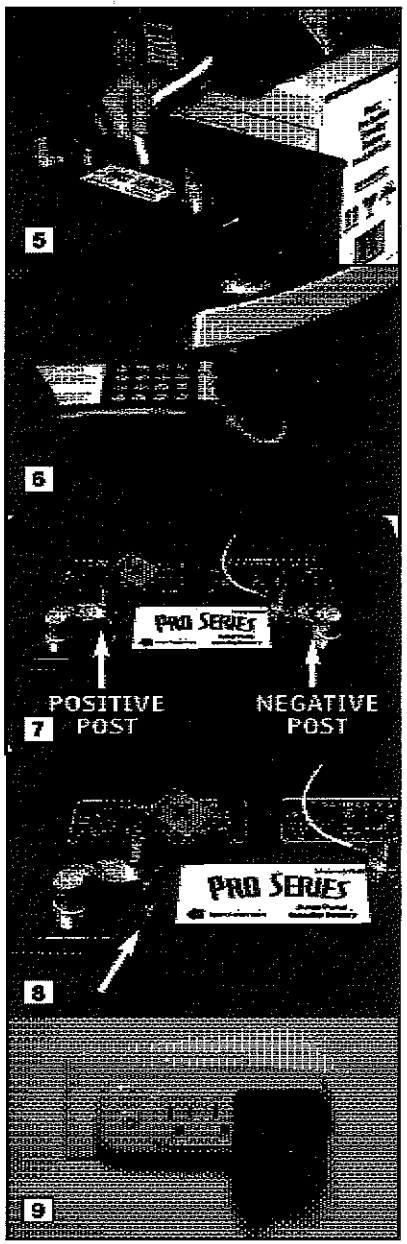
7. Replace the battery cables, WHITE to the NEGATIVE (-) post and BLACK to the POSITIVE (+) post. Tighten the wing nuts.

8. Insert the fluid sensor in the top of the battery.

9. Plug the charger back into the wall outlet. (You should provide additional protection for the control unit by using a surge protector.)

10. If any of the alarms are sounding, press the WHITE button on the front of the control panel for one (1) second.





TEST/RESET BUTTON

The TEST button may be used to check the pump and system. Push the TEST button. This will activate the pump for as long as you hold the button. It will stop as soon as you let go of the button.

If the "Pump was activated" alarm is sounding, press the button for one (1) second to reset the alarm.

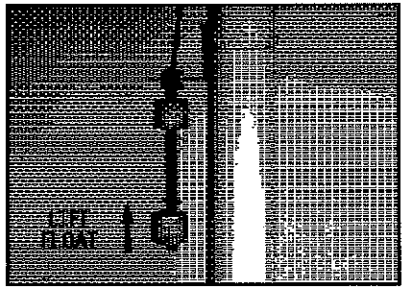
TESTING THE FLOAT SWITCH

It is important to manually test the float switch periodically.

⚠ DANGER

Unplug the main AC pump when installing or servicing the backup pump to avoid electric shock. Failure to do so could cause serious injury or death. Review the safety instructions on page 1.

Lift the float up and let go. This will activate the pump. The control unit will run the pump for approximately 25 seconds so it can empty all the water in the sump pit. If there is no water in the pit, the pump can run dry for this amount of time. The alarm will sound and the "Pump was activated" light will go on. Push the WHITE button to reset the alarm. **BE SURE TO PLUG IN THE MAIN AC PUMP WHEN YOU HAVE COMPLETED THE TEST.**



PARTS & SERVICE INFORMATION

You can receive technical support, or order parts by calling Glentronics, Inc. at **800-991-0466, option #3**, or by visiting the Pro Series website at **www.stopflooding.com**. Send your unit to the following address if repairs are needed:

Glentronics, Inc.
640 Heathrow Drive
Lincolnshire, IL 60069-4205

Troubleshooting Guide

⚠ DANGER

Read safety warnings & instructions before attempting any repairs or maintenance.

POWER FAILURE

Possible Reasons	Remedies
Power outage	None. The backup pump will run on the battery
An outlet, fuse or circuit breaker has failed	Try another outlet, replace the fuse or reset the circuit breaker
The power cord is unplugged from the wall	Make sure the power cord is plugged in securely
The charger is receiving less than 110 volts from the outlet	None, if the utility company has instigated brown outs. Otherwise, reduce the number of other appliances on the circuit

BATTERY FLUID LOW

Possible Reasons	Remedies
The battery fluid is low	Add distilled water to the battery

PUMP WAS ACTIVATED

Possible Reasons	Remedies
The main AC pump failed because of a power outage	None. The backup pump was activated
The main AC pump is broken	Replace the main AC pump
The float switch on the main pump is jammed or defective	Free the float switch or replace it
The main AC pump could not keep up with the inflow of water	None. The backup pump was activated. If this is a recurring problem, install a higher capacity main pump
The check valve is stuck or installed improperly and the water returns to the sump pit	Replace the check valve or correct the installation
The discharge pipe is blocked and the water returns to the sump pit	Clean out or replace the discharge pipe

BATTERY PROBLEM

Possible Reasons	Remedies
Terminals are corroded	Clean terminals & cables
Cables are loose	Tighten wing nuts
Battery is discharged	Replace battery if power is out. There is only 1/2 hour of continuous pumping power left. Battery will recharge when power is restored
Battery is damaged or old	Replace battery

Limited Warranty

GLENTRONICS, INC. warrants to the original retail purchaser that all of its pump, switch, sensor, battery box and control unit products are free from defective materials and workmanship for the period indicated below:

All parts and labor (excluding installation) for a period of
three (3) years from the date of purchase

The defective product must be returned directly to the factory, postage prepaid with the original bill of sale or receipt to the address listed below. Glentronics, Inc., at its option, will either repair or replace the product and return it postage prepaid.

CONDITIONS

The unit must be shipped freight prepaid, or delivered, to Glentronics, Inc. to provide the services described hereunder in either its original carton and inserts, or a similar package affording an equal degree of protection.

The unit must not have been previously altered, repaired or serviced by anyone other than Glentronics, Inc., or its agent; the serial number on the unit must not have been altered or removed; the unit must not have been subject to accident, misuse, abuse or operated contrary to the instructions contained in the accompanying manual.

The dealer's dated bill of sale, or retailer's receipt, must be retained as evidence of the date of purchase and to establish warranty eligibility.

This warranty does not cover product problems resulting from handling liquids hotter than 120 degrees Fahrenheit, handling inflammable liquids, solvents, strong chemicals or severe abrasive solutions; normal wear; user abuse; misuse, neglect, improper maintenance, commercial or industrial use; improper connections or installation; damages caused by lightning strikes, excessive surges in AC line voltage, water damage to the controller, other acts of nature, or failure to operate in accordance with the enclosed written instructions.

GLENTRONICS, INC. WILL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTIES ON THIS PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CONSEQUENTIAL OR INDIRECT DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS EXPRESS WARRANTY SHALL BE EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE CUSTOMER'S EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY, OR OF ANY IMPLIED WARRANTY NOT EXCLUDED HEREIN, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT.

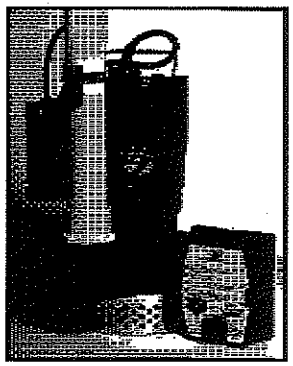
For information or service contact:
Glentronics, Inc.
640 Heathrow Drive
Lincolnshire, IL 60069-4205
800-991-0466

Model # PHCC-1000 Serial # _____ Purchase Date_____

Register online at www.stopflooding.com

CHECK OUT THESE OTHER PHCC PRO SERIES PRODUCTS

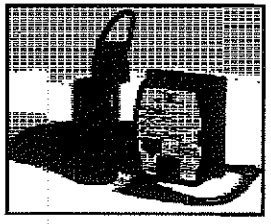
AC PUMPS



Industrial Grade Pumps for the Residential Market

The Pro Series line of AC sump pumps and sewage pumps are strong, dependable, and so energy efficient they could pay for themselves in a few years. The sump pumps are equipped with dual float switches for added reliability, and a controller that will sound an alarm if there is an AC power loss or a pump problem. The control unit has a terminal which can be connected to your security system or an auto dialer to forward the signal to you or your alarm company. When your main AC pump needs replacement, consider upgrading to one of the pumps in the PHCC Pro Series line.

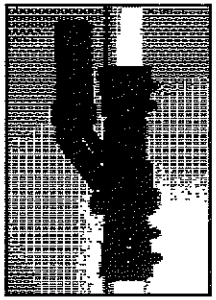
FLOAT SWITCHES



What's the most common reason your main AC pump fails?

It's probably the result of a float switch that is stuck or broken. Replace it with a PHCC Pro Series dual float and controller for reliable operation. The dual float has, not one, but two floats mounted within a protective cage. Should one float fail to operate, the second float automatically activates the pump. The protective cage prevents debris or other wires from interfering with the movement of the float. It can be used to replace the float on most AC pumps.

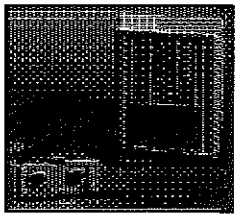
CHECK VALVES



What's a Klunkless Check Valve™?

If you've spent any time in your basement, you've probably noticed your sump pump turning on and off with a loud clunk. That's the result of the water pressure slamming the valve closed in the check valve. The Klunkless Check Valve has a built-in air chamber to counteract that pressure and muffle the sound. It works just like a conventional check valve, only quieter.

WATER ALARMS



Minimize the risk of water damage

You can detect leaks before they become bigger problems by placing a water alarm wherever there is a risk of water damage...in the utility room, laundry room, kitchen, bathroom or basement. The alarm will sound when as little as 1/32" of water reaches the sensor.

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Operating Instructions & Parts Manual

1HKL9, 1HLA1, 1HLA2, 1HLA3, 1HLA4, 1HLA5, 1HLA6, 1HLA7, 1HLA8, 1HLA9, 1HLB1, 1HLB2, 1HLB3, 1HLB4, 1HLB5, 1HLB6

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Utility Shutter-Mounted Exhaust Fans

Description

Dayton utility exhaust fans are designed for general purpose exhaust applications and may be used in stores, offices, factories, shops, farm buildings, greenhouses, etc. Efficient, easy-to-install exhaust fans with automatic shutters. Model 1HKL9, 7" Shutter fan fits in half of an 8 x 16" concrete block. Shutter flanges have eight pre-punched 1/4 x 1/2" slotted mounting holes for ease of installation. 7 to 36" diameter deep pitched propeller. Fan guards have charcoal grey metallic polyester finish to resist corrosion. Wire guards comply with OSHA Federal 1/2" max. opening requirement. Shipped completely assembled.

Optional Speed controllers available, see table below.

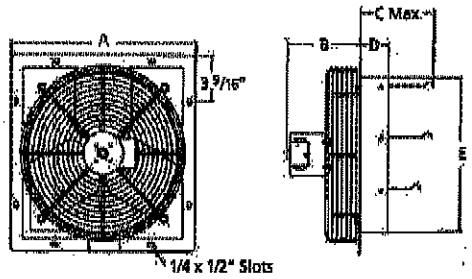

Figure 1 - Dimensions

Unpacking

1. Inspect for any damage that may have occurred during shipment.
2. Shipping damage claim must be filed with carrier.
3. Check all bolts, screws, setscrews, etc. for looseness that may have occurred during transit. Retighten as required.
4. Before installing, rotate the propeller to be sure there are no obstructions which would interfere with proper operation. Adjust as required.

E307468

Dimensions

Model	Prop. Dia.	A Square	B	C	D	E
1HKL9	7"	11 1/8"	4 15/16"	6"	2 3/8"	8"
1HLA1	10	13 1/8	5 9/16	5 1/8	2 3/8	10
1HLA2	12	15 1/8	6	6 1/8	2 3/8	12
1HLA3	16	19 1/8	6 1/2	6 1/8	2 3/8	16
1HLA4	18	21 1/8	8 3/4	6 1/8	2 3/8	18
1HLA5	18	21 1/8	12 1/2	5 3/4	3	18
1HLA6	20	23 1/8	12 1/8	5 3/4	3	20
1HLA7	20	23 1/8	12 1/8	5 3/4	3	20
1HLA8	20	23 1/8	11 9/16	5 3/4	3	20
1HLA9	20	23 1/8	12 1/8	5 3/4	3	20
1HLB1	24	27 1/8	12 5/16	5 3/4	3	24
1HLB2	24	27 1/8	12 5/16	5 3/4	3	24
1HLB3	24	27 1/8	13 5/8	5 3/4	3	24
1HLB4	24	27 1/8	11 13/16	5 3/4	3	24
1HLB5	30	33 1/8	13 1/8	5 3/4	3	30
1HLB6	36	39 1/8	13 1/8	5 3/4	3	36

Performance

Model	Prop. Dia.	CFM @ 0.0" SP	CFM @ 0.125" SP	CFM @ 0.250" SP	Sones@ 0.0" SP @ 5'	Nom. HP	Amps	Nom. RPM	Recommended Speed Control
1HKL9	7"	140	N/A	N/A	4.8	1/30	1.4	1550	1DGV1
1HLA1	10	585	285	N/A	6.6	1/30	1.4	1550	1DGV1
1HLA2	12	800	470	N/A	7.6	1/30	1.4	1550	1DGV1
1HLA3	16	1095	720	N/A	8.0	1/20	1.8	1550	1DGV1
1HLA4	18	1860	850	N/A	8.4	1/15	1.3	1075	1DGV1
1HLA5	18	2590	2190	1705	14.3	1/4	4.5	1725	
1HLA6	20	2830	2255	1235	11.3	1/4	5.0	1725	1DGV2
1HLA8	20	2955	2450	1960	14.4	1/4	4.5	1725	
1HLA7	20	3635	3115	2760	16.9	1/3	4.8	1075	
1HLA6	20	2985	2445	1965	14.3	1/4	4.3	1725	
1HLB3	24	3240	2485	1110	11.7	1/4	4.0	1075	1DGV2
1HLB2	24	3270	2515	1205	10.7	1/4	4.1	1075	
1HLB4	24	3970	3240	1900	12.1	1/3	5.3	1075	
1HLB1	24	3985/3760	3255/2995	1950/1563	11.8/11.3	1/3	5.3	1075	
1HLB5	30	6075	4195	2150	13.5	1/3	4.5	825	
1HLB6	36	8225	6480	2935	14.7	1/2	6.4	825	

ENGLISH

ESPAÑOL

FRANCAIS

Form 555617

Printed in U.S.A.
01280
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Dayton®

Dayton® Utility Shutter-Mounted Exhaust Fans

ENGLISH

General Safety Information

⚠WARNING ***Do not depend on any switch as sole means of disconnecting power when installing or servicing the fan. If the power disconnect is out-of-sight, lock it in the open position and tag to prevent application of power. Failure to do so may result in fatal electrical shock. Employ proper lock-out procedures during maintenance and installation.***

⚠CAUTION ***All electrical connections should be made by a qualified electrician.***

1. Follow all local electrical and safety codes in the United States and Canada, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA) in the United States, and the Canadian Electric Code (CEC) in Canada.
2. Always disconnect power source before working on or near a motor or its connected load.

⚠WARNING ***Motor will restart without warning after protector trips.***

⚠CAUTION ***In United States to reduce the risk of injury to persons, OSHA complying guards are required when fan is installed within 7 feet of floor or working level.***

⚠CAUTION ***In Canada to reduce the risk of injury to persons, CSA complying guards are required when fan is installed below 2.5 meters (8.2 feet) above floor or grade level.***

3. Protect the power cable from coming in contact with sharp objects.
4. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.

⚠CAUTION ***Do not use in explosive atmospheres.***

5. Make certain that the power source conforms to the requirements of your equipment.
6. The fan frame and motor must be electrically grounded to a suitable electrical ground, such as a grounded water pipe or ground wire system.

Installation

1. The unit should be securely mounted in a rigid framework.

NOTE: Allowing the fan frame to flex or move will result in undue vibrations and possible premature motor, propeller, or shutter failure.

2. Install any auxiliary components.
3. Connect power to the motor, using an approved wiring method.

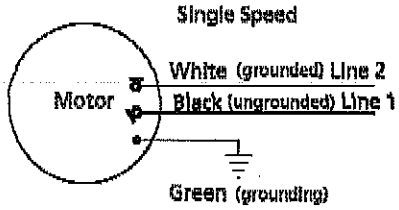

Figure 2 - Wiring Diagram: 115 Volt Connection

⚠CAUTION ***Fan frame and motor must be securely and adequately grounded to a suitable electrical ground, such as a ground water pipe or ground wiring system.***

4. Before activating the fan, check to ensure that there are no obstructions (framing, stud, shutter, etc.) which would interfere with proper fan operation by turning the propeller by hand. Also verify that there are no obstructions interfering with the full opening and closing of the shutter.

Operation

1. Keep the area free of objects that could impede air flow on both the intake and exhaust side of fan.
2. For proper exhaust operation, a window, door, or louver should be opened on the opposite side of the area to be ventilated.
3. Turn the fan on, the shutter will open automatically. When the unit is turned OFF, the shutter will close.
4. Speed controllable units are designed to operate at a minimum of fifty percent line voltage.

Maintenance

⚠WARNING ***Do not depend on any switch as sole means of disconnecting power when installing or servicing the fan. If the power disconnect is out-of-sight, lock it in the open position and tag to prevent application of power. Failure to do so may result in fatal electrical shock. Employ proper lock-out procedures when performing maintenance.***

MINOR AND ROUTINE

1. Disconnect power source before servicing.
2. Lubricate the motor sleeve bearings every six months using S.A.E. 20 non-detergent oil as per instructions (see motor label).
3. Periodically clean the propeller, guard, motor, and shutter of any accumulated dirt.

PARTS REPAIR

1. Refer to illustration of parts placement (Figure 3).
2. Disconnect power before servicing.
3. Remove the four screws holding the guard to the venturi panel. Remove the guard/motor/propeller assembly.
4. Loosen the setscrew on propeller hub and remove the propeller.

⚠CAUTION ***Do not repair damaged propeller. Replace with a properly balanced unit (see Figure 3 Reference No. 3).***

5. Loosen the nuts holding motor on guard and remove motor.
6. Reassemble the unit in reverse order of disassembly.

⚠CAUTION ***Propeller is installed hub first on motor shaft, flush with end, and setscrew located over the flat area.***

For Repair Parts, call 1-800-323-0620

24 hours a day - 365 days a year

Please provide following information:
-Model number
-Serial number (if any)
-Part description and number as shown in par

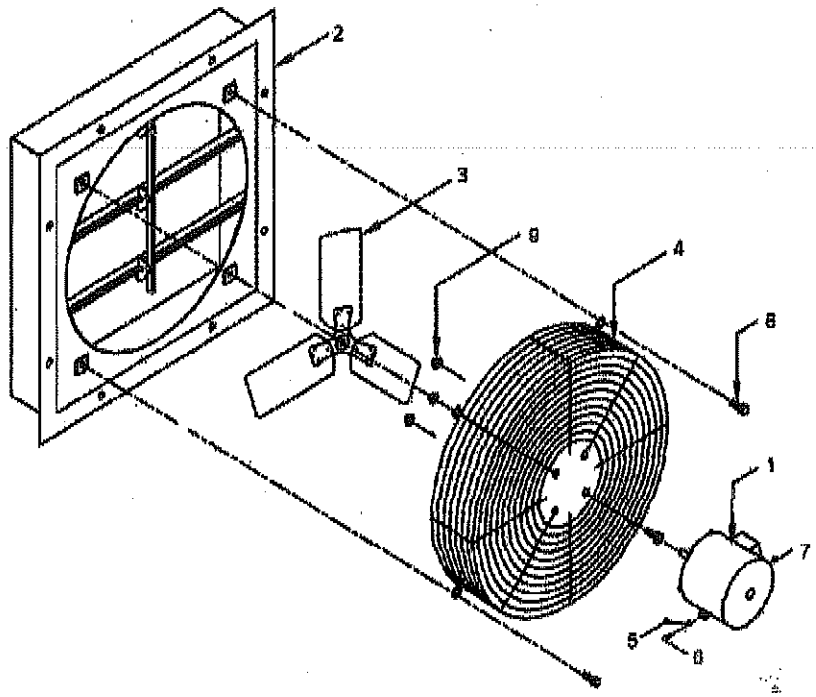

Figure 3 — Repair Parts Illustration

Repair Parts List

Ref. No.	Description	Part Number for Models: 1HKL9	1HLA1	1HLA2	1HLA3	1HLA4	1HLA5	Qty.
1.	Motor	XXMT71731715	XXMT71731715	XXMT71731715	XXMTHX2185	XXMTHX3835	XXMTKZ6804	1
2	Shutter assembly	502G-08	502G-10	502G-12	502G-16	502G-18	502G-18	1
3	Propeller	XXPR07A	XXPR10A	XXPR12A	XXPR16A	XXPR18B	XXPR18A	1
4	Intake guard	XXWG07A	XXWG10A	XXWG12A	XXWG16A	XXWG18B	XXWG18A	1
5	Yoke Brace	NA	NA	NA	NA	NA	XX55494PC	1
6	3/8-24 X 1" Screw	*	*	*	*	*	*	1
7	3/8-24 Locknut	*	*	*	*	*	*	1
8	#10-16 x 5/8" SM Screw	*	*	*	*	*	*	4
9	#8-32 Spinlock Nut	*	*	*	*	*	*	4

Ref. No.	Description	Part Number for Models: 1HLA6	1HLA7	1HLA8	1HLA9	1HLB1	Qty.
1	Motor	XXMTKZ6805	XXMTKZ6805	XXMTKZ6804	XXMT71265117	XXMTHX6065	1
2	Shutter assembly	502G-20	502G-20	502G-20	502G-20	502G-24	1
3	Propeller	XXPR20A	XXPR20B	XXPR20A	XXPR20C	XXPR24B	1
4	Intake guard	XXWG20A	XXWG20A	XXWG20A	XXWG20A	XXWG24A	1
5	Yoke Brace	XX55680PC	XX55680PC	XX55680PC	XX54680PC	XX55930PC	1
6	3/8-24 X 1" Screw	*	*	*	*	*	1
7	3/8-24 Locknut	*	*	*	*	*	1
8	#10-16 x 5/8" SM Screw	*	*	*	*	*	4
9	#8-32 Spinlock Nut	*	*	*	*	*	4

Ref. No.	Description	Part Number for Models: 1HLB2	1HLB3	1HLB4	1HLB5	1HLB6	Qty.
1	Motor	XXMTHX6082	XXMTHX6804	XXMTHX6083	XXMTHX7341	XXMTHX7278	1
2	Shutter assembly	502G-24	502G-24	502G-24	556G-30	556G-36	1
3	Propeller	XXPR24A	XXPR24A	XXPR24B	XXPR30A	XXPR36A	1
4	Intake guard	XXWG24A	XXWG24A	XXWG24A	XXWG30A	XXWG36A	1
5	Yoke Brace	XX55930PC	XX55930PC	XX55930PC	XX55930PC	XX55135OPC	1
6	3/8-24 X 1" Screw	*	*	*	*	*	1
7	3/8-24 Locknut	*	*	*	*	*	1
8	#10-16 x 5/8" SM Screw	*	*	*	*	*	4
9	#8-32 Spinlock Nut	*	*	*	*	*	4

(*) Standard hardware items, available locally.

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Dayton® Utility Shutter-Mounted Exhaust Fans

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Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Excessive noise	1. Dry motor bearings	1. Relubricate motor bearings as per instructions or replace motor.
	2. Loose propeller	2. Tighten setscrews in hub
	3. Crooked or damaged propeller	3. Replace propeller
Fan inoperative	1. Blown fuse or open circuit breaker	1. Replace fuse or reset circuit breaker
	2. Defective motor	2. Repair or replace motor (see Figure 3)
	3. Speed control off or too low	3. Turn controller on
Insufficient air flow	1. Blocked intake or exhaust opening	1. Clear opening of obstruction or increase size of opening, clean guard/shutter
	2. Low voltage	2. Determine cause and correct
	3. Speed control set too low	3. Increase speed with controller

LIMITED WARRANTY

DAYTON ONE-YEAR LIMITED WARRANTY. *DAYTON® UTILITY SHUTTER-MOUNTED EXHAUST FANS, MODELS COVERED IN THIS MANUAL, ARE WARRANTED BY DAYTON ELECTRIC MFG. CO. (DAYTON) TO THE ORIGINAL USER AGAINST DEFECTS IN WORKMANSHIP OR MATERIALS UNDER NORMAL USE FOR ONE YEAR AFTER DATE OF PURCHASE. ANY PART WHICH IS DETERMINED TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP AND RETURNED TO AN AUTHORIZED SERVICE LOCATION, AS DAYTON DESIGNATES, SHIPPING COSTS PREPAID, WILL BE, AS THE EXCLUSIVE REMEDY, REPAIRED OR REPLACED AT DAYTON'S OPTION. FOR LIMITED WARRANTY CLAIM PROCEDURES, SEE "PROMPT DISPOSITION" BELOW. THIS LIMITED WARRANTY GIVES PURCHASERS SPECIFIC LEGAL RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION.*

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Prompt Disposition. *A good faith effort will be made for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write or call dealer from whom the product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealer's name, address, date, and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.*

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714-4014 U.S.A.

Appendix H -

Lancaster Laboratories Analysis Report- Sub-Slab Vapor Data
(November 10, 2010)

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Kleinfelder
30 Porter Road
Littleton MA 01460

November 23, 2010

Project: Ron's Discount Energy Mart - Claymont, DE

Submittal Date: 11/12/2010
Group Number: 1221115
PO Number: 08531-097766
State of Sample Origin: DE

Client Sample Description	Lancaster Labs (LLI) #
SS-1 Grab Air Summa Canister #046	6139845
SS-2 Grab Air Summa Canister #048	6139846
Ambient Grab Air Summa Canister #074	6139847

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Kleinfelder	Attn: Mark Steele
ELECTRONIC COPY TO	Kleinfelder	Attn: Angela Vogt

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jessica A Oknefski at (717) 656-2300 Ext. 1815

Respectfully Submitted,

Barbara F. Reedy
Senior Specialist

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: SS-1 Grab Air Summa Canister #046
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139845
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 14:35 by BS
through 11/10/2010 15:12
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.026**	0.0048	**0.011**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	Benzene	71-43-2	< 0.0032	0.0032	< 0.0010	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	**tert-Butyl Alcohol**	75-65-0	**0.0041**	0.0030	**0.0014**	0.0010	1
05298	**Carbon Disulfide**	75-15-0	**0.0040**	0.0031	**0.0013**	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**Chloroform**	67-66-3	**0.0067**	0.0049	**0.0014**	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	**Cumene**	98-82-8	**0.14**	0.049	**0.028**	0.010	10
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Ethylbenzene**	100-41-4	**0.0086**	0.0043	**0.0020**	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1

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Analysis Report

Sample Description: SS-1 Grab Air Summa Canister #046
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139845
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 14:35 by BS
through 11/10/2010 15:12
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air EPA TO-15			mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Alpha Methyl Styrene**	98-83-9	**0.0074**	0.0048	**0.0015**	0.0010	1
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methylene Chloride	75-09-2	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	**Styrene**	100-42-5	**0.0074**	0.0043	**0.0017**	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.016**	0.0038	**0.0043**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.0063**	0.0049	**0.0013**	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.025**	0.0043	**0.0057**	0.0010	1
05298	**o-Xylene**	95-47-6	**0.0085**	0.0043	**0.0020**	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1032030AA	11/17/2010 00:38	Michael A Ziegler	1
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1032030AA	11/17/2010 10:38	Jeffrey B Smith	10

Analysis Report

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Sample Description: SS-2 Grab Air Summa Canister #048
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139846
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 15:29 by BS
through 11/10/2010 16:40
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.033**	0.0071	**0.014**	0.0030	1.5
05298	Acetonitrile	75-05-8	< 0.0050	0.0050	< 0.0030	0.0030	1.5
05298	Acrolein	107-02-8	< 0.0069	0.0069	< 0.0030	0.0030	1.5
05298	Acrylonitrile	107-13-1	< 0.0065	0.0065	< 0.0030	0.0030	1.5
05298	Benzene	71-43-2	< 0.0048	0.0048	< 0.0015	0.0015	1.5
05298	Bromobenzene	108-86-1	< 0.0096	0.0096	< 0.0015	0.0015	1.5
05298	Bromodichloromethane	75-27-4	< 0.010	0.010	< 0.0015	0.0015	1.5
05298	Bromoform	75-25-2	< 0.016	0.016	< 0.0015	0.0015	1.5
05298	Bromomethane	74-83-9	< 0.0058	0.0058	< 0.0015	0.0015	1.5
05298	1,3-Butadiene	106-99-0	< 0.0066	0.0066	< 0.0030	0.0030	1.5
05298	2-Butanone	78-93-3	< 0.0088	0.0088	< 0.0030	0.0030	1.5
05298	tert-Butyl Alcohol	75-65-0	< 0.0045	0.0045	< 0.0015	0.0015	1.5
05298	Carbon Disulfide	75-15-0	< 0.0047	0.0047	< 0.0015	0.0015	1.5
05298	Carbon Tetrachloride	56-23-5	< 0.0094	0.0094	< 0.0015	0.0015	1.5
05298	Chlorobenzene	108-90-7	< 0.0069	0.0069	< 0.0015	0.0015	1.5
05298	Chlorodifluoromethane	75-45-6	< 0.0053	0.0053	< 0.0015	0.0015	1.5
05298	Chloroethane	75-00-3	< 0.0040	0.0040	< 0.0015	0.0015	1.5
05298	Chloroform	67-66-3	< 0.0073	0.0073	< 0.0015	0.0015	1.5
05298	Chloromethane	74-87-3	< 0.0031	0.0031	< 0.0015	0.0015	1.5
05298	3-Chloropropene	107-05-1	< 0.0047	0.0047	< 0.0015	0.0015	1.5
05298	**Cumene**	98-82-8	**0.18**	0.0074	**0.036**	0.0015	1.5
05298	Dibromochloromethane	124-48-1	< 0.013	0.013	< 0.0015	0.0015	1.5
05298	1,2-Dibromoethane	106-93-4	< 0.012	0.012	< 0.0015	0.0015	1.5
05298	Dibromomethane	74-95-3	< 0.011	0.011	< 0.0015	0.0015	1.5
05298	1,2-Dichlorobenzene	95-50-1	< 0.0090	0.0090	< 0.0015	0.0015	1.5
05298	1,3-Dichlorobenzene	541-73-1	< 0.0090	0.0090	< 0.0015	0.0015	1.5
05298	1,4-Dichlorobenzene	106-46-7	< 0.0090	0.0090	< 0.0015	0.0015	1.5
05298	Dichlorodifluoromethane	75-71-8	< 0.0074	0.0074	< 0.0015	0.0015	1.5
05298	1,1-Dichloroethane	75-34-3	< 0.0061	0.0061	< 0.0015	0.0015	1.5
05298	1,2-Dichloroethane	107-06-2	< 0.0061	0.0061	< 0.0015	0.0015	1.5
05298	1,1-Dichloroethene	75-35-4	< 0.0059	0.0059	< 0.0015	0.0015	1.5
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0059	0.0059	< 0.0015	0.0015	1.5
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0059	0.0059	< 0.0015	0.0015	1.5
05298	Dichlorofluoromethane	75-43-4	< 0.0063	0.0063	< 0.0015	0.0015	1.5
05298	1,2-Dichloropropane	78-87-5	< 0.0069	0.0069	< 0.0015	0.0015	1.5
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0068	0.0068	< 0.0015	0.0015	1.5
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0068	0.0068	< 0.0015	0.0015	1.5
05298	1,4-Dioxane	123-91-1	< 0.0054	0.0054	< 0.0015	0.0015	1.5
05298	Ethyl Acetate	141-78-6	< 0.0054	0.0054	< 0.0015	0.0015	1.5
05298	Ethyl Acrylate	140-88-5	< 0.0061	0.0061	< 0.0015	0.0015	1.5
05298	Ethyl Methacrylate	97-63-2	< 0.0070	0.0070	< 0.0015	0.0015	1.5
05298	**Ethylbenzene**	100-41-4	**0.011**	0.0065	**0.0026**	0.0015	1.5
05298	4-Ethyltoluene	622-96-8	< 0.0074	0.0074	< 0.0015	0.0015	1.5
05298	Freon 113	76-13-1	< 0.023	0.023	< 0.0030	0.0030	1.5
05298	Freon 114	76-14-2	< 0.010	0.010	< 0.0015	0.0015	1.5
05298	Hexachlorobutadiene	87-68-3	< 0.032	0.032	< 0.0030	0.0030	1.5
05298	Hexachloroethane	67-72-1	< 0.015	0.015	< 0.0015	0.0015	1.5
05298	2-Hexanone	591-78-6	< 0.012	0.012	< 0.0030	0.0030	1.5
05298	Methyl Acrylate	96-33-3	< 0.0053	0.0053	< 0.0015	0.0015	1.5
05298	Methyl Iodide	74-88-4	< 0.0087	0.0087	< 0.0015	0.0015	1.5
05298	Methyl Methacrylate	80-62-6	< 0.0061	0.0061	< 0.0015	0.0015	1.5
05298	Alpha Methyl Styrene	98-83-9	< 0.0073	0.0073	< 0.0015	0.0015	1.5

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Analysis Report

Sample Description: SS-2 Grab Air Summa Canister #048
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139846
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 15:29 by BS
through 11/10/2010 16:40
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air EPA TO-15			mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0054	0.0054	< 0.0015	0.0015	1.5
05298	4-Methyl-2-Pentanone	108-10-1	< 0.012	0.012	< 0.0030	0.0030	1.5
05298	Methylene Chloride	75-09-2	< 0.0052	0.0052	< 0.0015	0.0015	1.5
05298	**Styrene**	100-42-5	**0.0083**	0.0064	**0.0020**	0.0015	1.5
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.010	0.010	< 0.0015	0.0015	1.5
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.010	0.010	< 0.0015	0.0015	1.5
05298	Tetrachloroethene	127-18-4	< 0.010	0.010	< 0.0015	0.0015	1.5
05298	**Toluene**	108-88-3	**0.028**	0.0057	**0.0074**	0.0015	1.5
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.022	0.022	< 0.0030	0.0030	1.5
05298	1,1,1-Trichloroethane	71-55-6	< 0.0082	0.0082	< 0.0015	0.0015	1.5
05298	1,1,2-Trichloroethane	79-00-5	< 0.0082	0.0082	< 0.0015	0.0015	1.5
05298	Trichloroethene	79-01-6	< 0.0081	0.0081	< 0.0015	0.0015	1.5
05298	Trichlorofluoromethane	75-69-4	< 0.0084	0.0084	< 0.0015	0.0015	1.5
05298	1,2,3-Trichloropropane	96-18-4	< 0.0090	0.0090	< 0.0015	0.0015	1.5
05298	1,2,4-Trimethylbenzene	95-63-6	< 0.0074	0.0074	< 0.0015	0.0015	1.5
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0074	0.0074	< 0.0015	0.0015	1.5
05298	Vinyl Acetate	108-05-4	< 0.0053	0.0053	< 0.0015	0.0015	1.5
05298	Vinyl Chloride	75-01-4	< 0.0038	0.0038	< 0.0015	0.0015	1.5
05298	**m/p-Xylene**	179601-23-1	**0.031**	0.0065	**0.0071**	0.0015	1.5
05298	**o-Xylene**	95-47-6	**0.0094**	0.0065	**0.0022**	0.0015	1.5

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1032030AA	11/17/2010 01:23	Michael A Ziegler	1.5

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Analysis Report

Sample Description: Ambient Grab Air Summa Canister #074
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139847
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 14:55 by BS
through 11/10/2010 15:30
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air	**EPA TO-15**		mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	**Acetone**	67-64-1	**0.025**	0.0048	**0.011**	0.0020	1
05298	Acetonitrile	75-05-8	< 0.0034	0.0034	< 0.0020	0.0020	1
05298	Acrolein	107-02-8	< 0.0046	0.0046	< 0.0020	0.0020	1
05298	Acrylonitrile	107-13-1	< 0.0043	0.0043	< 0.0020	0.0020	1
05298	**Benzene**	71-43-2	**0.0072**	0.0032	**0.0022**	0.0010	1
05298	Bromobenzene	108-86-1	< 0.0064	0.0064	< 0.0010	0.0010	1
05298	Bromodichloromethane	75-27-4	< 0.0067	0.0067	< 0.0010	0.0010	1
05298	Bromoform	75-25-2	< 0.010	0.010	< 0.0010	0.0010	1
05298	Bromomethane	74-83-9	< 0.0039	0.0039	< 0.0010	0.0010	1
05298	1,3-Butadiene	106-99-0	< 0.0044	0.0044	< 0.0020	0.0020	1
05298	2-Butanone	78-93-3	< 0.0059	0.0059	< 0.0020	0.0020	1
05298	tert-Butyl Alcohol	75-65-0	< 0.0030	0.0030	< 0.0010	0.0010	1
05298	Carbon Disulfide	75-15-0	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Carbon Tetrachloride	56-23-5	< 0.0063	0.0063	< 0.0010	0.0010	1
05298	Chlorobenzene	108-90-7	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	Chlorodifluoromethane	75-45-6	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Chloroethane	75-00-3	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	Chloroform	67-66-3	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Chloromethane	74-87-3	< 0.0021	0.0021	< 0.0010	0.0010	1
05298	3-Chloropropene	107-05-1	< 0.0031	0.0031	< 0.0010	0.0010	1
05298	Cumene	98-82-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Dibromochloromethane	124-48-1	< 0.0085	0.0085	< 0.0010	0.0010	1
05298	1,2-Dibromoethane	106-93-4	< 0.0077	0.0077	< 0.0010	0.0010	1
05298	Dibromomethane	74-95-3	< 0.0071	0.0071	< 0.0010	0.0010	1
05298	1,2-Dichlorobenzene	95-50-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,3-Dichlorobenzene	541-73-1	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	1,4-Dichlorobenzene	106-46-7	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	Dichlorodifluoromethane	75-71-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	1,1-Dichloroethane	75-34-3	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,2-Dichloroethane	107-06-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	1,1-Dichloroethene	75-35-4	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	cis-1,2-Dichloroethene	156-59-2	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	trans-1,2-Dichloroethene	156-60-5	< 0.0040	0.0040	< 0.0010	0.0010	1
05298	Dichlorofluoromethane	75-43-4	< 0.0042	0.0042	< 0.0010	0.0010	1
05298	1,2-Dichloropropane	78-87-5	< 0.0046	0.0046	< 0.0010	0.0010	1
05298	cis-1,3-Dichloropropene	10061-01-5	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	trans-1,3-Dichloropropene	10061-02-6	< 0.0045	0.0045	< 0.0010	0.0010	1
05298	1,4-Dioxane	123-91-1	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acetate	141-78-6	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	Ethyl Acrylate	140-88-5	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Ethyl Methacrylate	97-63-2	< 0.0047	0.0047	< 0.0010	0.0010	1
05298	**Ethylbenzene**	100-41-4	**0.0062**	0.0043	**0.0014**	0.0010	1
05298	4-Ethyltoluene	622-96-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Freon 113	76-13-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	Freon 114	76-14-2	< 0.0070	0.0070	< 0.0010	0.0010	1
05298	Hexachlorobutadiene	87-68-3	< 0.021	0.021	< 0.0020	0.0020	1
05298	Hexachloroethane	67-72-1	< 0.0097	0.0097	< 0.0010	0.0010	1
05298	2-Hexanone	591-78-6	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	Methyl Acrylate	96-33-3	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Methyl Iodide	74-88-4	< 0.0058	0.0058	< 0.0010	0.0010	1
05298	Methyl Methacrylate	80-62-6	< 0.0041	0.0041	< 0.0010	0.0010	1
05298	Alpha Methyl Styrene	98-83-9	< 0.0048	0.0048	< 0.0010	0.0010	1

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Analysis Report

Sample Description: Ambient Grab Air Summa Canister #074
Ron's Discount Energy Mart - Claymont, DE

LLI Sample # AQ 6139847
LLI Group # 1221115
Account # 12152

Project Name: Ron's Discount Energy Mart - Claymont, DE

Collected: 11/10/2010 14:55 by BS
through 11/10/2010 15:30
Submitted: 11/12/2010 15:05
Reported: 11/23/2010 14:55

Kleinfelder
30 Porter Road
Littleton MA 01460

CAT No.	Analysis Name	CAS Number	As Received Final Result	LOQ	As Received Final Result	LOQ	DF
Volatiles in Air EPA TO-15			mg/m3	mg/m3	ppm(v)	ppm(v)	
05298	Methyl t-Butyl Ether	1634-04-4	< 0.0036	0.0036	< 0.0010	0.0010	1
05298	4-Methyl-2-Pentanone	108-10-1	< 0.0082	0.0082	< 0.0020	0.0020	1
05298	**Methylene Chloride**	75-09-2	**0.024**	0.0035	**0.0070**	0.0010	1
05298	Styrene	100-42-5	< 0.0043	0.0043	< 0.0010	0.0010	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	< 0.0069	0.0069	< 0.0010	0.0010	1
05298	Tetrachloroethene	127-18-4	< 0.0068	0.0068	< 0.0010	0.0010	1
05298	**Toluene**	108-88-3	**0.045**	0.0038	**0.012**	0.0010	1
05298	1,2,4-Trichlorobenzene	120-82-1	< 0.015	0.015	< 0.0020	0.0020	1
05298	1,1,1-Trichloroethane	71-55-6	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	1,1,2-Trichloroethane	79-00-5	< 0.0055	0.0055	< 0.0010	0.0010	1
05298	Trichloroethene	79-01-6	< 0.0054	0.0054	< 0.0010	0.0010	1
05298	Trichlorofluoromethane	75-69-4	< 0.0056	0.0056	< 0.0010	0.0010	1
05298	1,2,3-Trichloropropane	96-18-4	< 0.0060	0.0060	< 0.0010	0.0010	1
05298	**1,2,4-Trimethylbenzene**	95-63-6	**0.0073**	0.0049	**0.0015**	0.0010	1
05298	1,3,5-Trimethylbenzene	108-67-8	< 0.0049	0.0049	< 0.0010	0.0010	1
05298	Vinyl Acetate	108-05-4	< 0.0035	0.0035	< 0.0010	0.0010	1
05298	Vinyl Chloride	75-01-4	< 0.0026	0.0026	< 0.0010	0.0010	1
05298	**m/p-Xylene**	179601-23-1	**0.028**	0.0043	**0.0065**	0.0010	1
05298	**o-Xylene**	95-47-6	**0.0082**	0.0043	**0.0019**	0.0010	1

LOQ = Limit of Quantitation

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	C1032030AA	11/17/2010 02:07	Michael A Ziegler	1

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Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1221115
Reported: 11/23/10 at 02:55 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C1032030AA	Sample number(s): 6139845-6139847							
Acetone	< 0.0048	0.0048	mg/m3	108	114	56-144	6	25
Acetonitrile	< 0.0034	0.0034	mg/m3					
Acrolein	< 0.0046	0.0046	mg/m3	93	101	70-130	8	25
Acrylonitrile	< 0.0043	0.0043	mg/m3					
Benzene	< 0.0032	0.0032	mg/m3	106	110	70-130	3	25
Bromobenzene	< 0.0064	0.0064	mg/m3					
Bromodichloromethane	< 0.0067	0.0067	mg/m3	115	117	73-132	1	25
Bromoform	< 0.010	0.010	mg/m3	110	110	65-135	0	25
Bromomethane	< 0.0039	0.0039	mg/m3	107	112	70-130	5	25
1,3-Butadiene	< 0.0044	0.0044	mg/m3	101	106	65-138	4	25
2-Butanone	< 0.0059	0.0059	mg/m3	98	101	63-135	3	25
tert-Butyl Alcohol	< 0.0030	0.0030	mg/m3					
Carbon Disulfide	< 0.0031	0.0031	mg/m3	84	87	59-112	4	25
Carbon Tetrachloride	< 0.0063	0.0063	mg/m3	109	110	70-130	1	25
Chlorobenzene	< 0.0046	0.0046	mg/m3	101	102	70-130	0	25
Chlorodifluoromethane	< 0.0035	0.0035	mg/m3					
Chloroethane	< 0.0026	0.0026	mg/m3	105	112	71-137	7	25
Chloroform	< 0.0049	0.0049	mg/m3	111	113	70-130	2	25
Chloromethane	< 0.0021	0.0021	mg/m3	93	100	59-135	7	25
3-Chloropropene	< 0.0031	0.0031	mg/m3					
Cumene	< 0.0049	0.0049	mg/m3					
Dibromochloromethane	< 0.0085	0.0085	mg/m3	106	105	70-128	0	25
1,2-Dibromoethane	< 0.0077	0.0077	mg/m3	107	108	71-129	0	25
Dibromomethane	< 0.0071	0.0071	mg/m3					
1,2-Dichlorobenzene	< 0.0060	0.0060	mg/m3	116	115	42-149	1	25
1,3-Dichlorobenzene	< 0.0060	0.0060	mg/m3	105	104	47-141	1	25
1,4-Dichlorobenzene	< 0.0060	0.0060	mg/m3	108	108	43-143	0	25
Dichlorodifluoromethane	< 0.0049	0.0049	mg/m3	112	115	75-141	2	25
1,1-Dichloroethane	< 0.0040	0.0040	mg/m3	103	106	65-127	3	25
1,2-Dichloroethane	< 0.0040	0.0040	mg/m3	118	117	70-130	1	25
1,1-Dichloroethene	< 0.0040	0.0040	mg/m3	92	95	62-118	3	25
cis-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	100	103	63-125	3	25
trans-1,2-Dichloroethene	< 0.0040	0.0040	mg/m3	92	97	63-119	5	25
Dichlorofluoromethane	< 0.0042	0.0042	mg/m3					
1,2-Dichloropropane	< 0.0046	0.0046	mg/m3	96	98	70-130	3	25
cis-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	105	110	66-127	4	25
trans-1,3-Dichloropropene	< 0.0045	0.0045	mg/m3	97	98	64-126	2	25
1,4-Dioxane	< 0.0036	0.0036	mg/m3	122	136	10-200	11	25
Ethyl Acetate	< 0.0036	0.0036	mg/m3	93	99	55-161	6	25
Ethyl Acrylate	< 0.0041	0.0041	mg/m3					
Ethyl Methacrylate	< 0.0047	0.0047	mg/m3					
Ethylbenzene	< 0.0043	0.0043	mg/m3	105	106	70-130	1	25
4-Ethyltoluene	< 0.0049	0.0049	mg/m3	105	105	56-138	0	25
Freon 113	< 0.015	0.015	mg/m3	95	98	66-120	3	25
Freon 114	< 0.0070	0.0070	mg/m3	97	99	64-141	3	25
Hexachlorobutadiene	< 0.021	0.021	mg/m3	109	105	28-158	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

Quality Control Summary

Client Name: Kleinfelder Group Number: 1221115
Reported: 11/23/10 at 02:55 PM

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	< 0.0097	0.0097	mg/m3					
2-Hexanone	< 0.0082	0.0082	mg/m3	94	95	44-184	2	25
Methyl Acrylate	< 0.0035	0.0035	mg/m3					
Methyl Iodide	< 0.0058	0.0058	mg/m3					
Methyl Methacrylate	< 0.0041	0.0041	mg/m3	107	111	70-137	4	25
Alpha Methyl Styrene	< 0.0048	0.0048	mg/m3					
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	89	95	62-125	7	25
4-Methyl-2-Pentanone	< 0.0082	0.0082	mg/m3	97	100	62-151	3	25
Methylene Chloride	< 0.0035	0.0035	mg/m3	96	100	70-130	4	25
Styrene	< 0.0043	0.0043	mg/m3	110	109	65-136	0	25
1,1,1,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3					
1,1,2,2-Tetrachloroethane	< 0.0069	0.0069	mg/m3	104	105	49-148	1	25
Tetrachloroethene	< 0.0068	0.0068	mg/m3	100	100	70-130	0	25
Toluene	< 0.0038	0.0038	mg/m3	102	102	70-130	0	25
1,2,4-Trichlorobenzene	< 0.015	0.015	mg/m3	113	112	10-183	1	25
1,1,1-Trichloroethane	< 0.0055	0.0055	mg/m3	110	110	70-130	1	25
1,1,2-Trichloroethane	< 0.0055	0.0055	mg/m3	98	98	64-129	0	25
Trichloroethene	< 0.0054	0.0054	mg/m3	108	108	70-130	0	25
Trichlorofluoromethane	< 0.0056	0.0056	mg/m3	113	116	70-130	2	25
1,2,3-Trichloropropane	< 0.0060	0.0060	mg/m3					
1,2,4-Trimethylbenzene	< 0.0049	0.0049	mg/m3	108	108	52-142	0	25
1,3,5-Trimethylbenzene	< 0.0049	0.0049	mg/m3	113	113	59-144	0	25
Vinyl Acetate	< 0.0035	0.0035	mg/m3	92	104	12-154	11	25
Vinyl Chloride	< 0.0026	0.0026	mg/m3	104	110	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	118	118	70-130	0	25
o-Xylene	< 0.0043	0.0043	mg/m3	115	114	70-130	0	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12152 Group# 1221115 Sample # 6139845-47

COC # 240412

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: DNREC Acct. #:

Project Name/#: Ron's Discount PWSID #:

Project Manager: Mark Steele P.O.#: 08531-0977666

Sampler: Brian Shedd Quote #: per AV 11/16/10

Name of state where samples were collected: DE

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

FC # ( )

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (Potable / NPDES)	Matrix: Other	Total # of Containers	VOLs by TO-15	Remarks
SS-1 [046]	11/10/10	1435/1512	X				X	1	X	(329160)
SS-2 [048]	11/10/10	1529/1640	X				X	1	X	(236802)
Ambient [074]	11/10/10	1455/1530	X				X	1	X	(303421)

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	11/10/10	1911	Sample Room		
Sample Room	11/12/10	11:30	[signature]	11/12/10	11:30
[signature]	11/12/10	15:05			
			Laura Lapp	11/12/10	15:05

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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