Remedial Investigation Report

# 1529 Route 206 (Block 320, Lot 5)
# Joan's Cleaners Site
## Tabernacle Township, New Jersey

**Volume I of II**
**Text, Tables, Figures**

## Remedial Investigation and Remedial Action Selection Term Contract Number A-73073

Submitted to:

**STATE OF NEW JERSEY**
**Department of Environmental Protection**
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# 1.0 INTRODUCTION

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The Louis Berger Group, Inc. (LBG) has been contracted by the New Jersey Department of Environmental Protection (NJDEP) to perform site specific Remedial Investigation and Remedial Action Selection (RI/RAS) services throughout the State (NJDEP Term Contract A-73073). Through this contract, LBG has completed a Remedial Investigation addressing the volatile organic compound (VOC) contamination at the Joan's Cleaners Site, located at 1529 Route 206 in Tabernacle Township, Burlington County, New Jersey (hereinafter referred to as the "Site"). A Site Location Map is provided as Figure 1. This Remedial Investigation Report (RIR) provides a discussion of the Site background and physical setting, a description of the completed RI activities and the associated findings, and conclusions and recommendations based on those findings.

## 1.1 SCOPE AND OBJECTIVE

The purpose of this RI was to investigate and document subsurface conditions, specifically with regard to VOC-related groundwater contamination associated with the former dry cleaning operations on-Site. Previous groundwater sampling implemented by the NJDEP has indicated levels of VOCs in exceedance of safe drinking water standards in a residential neighborhood near the Site and further investigations have identified the Site to be a potential source for this contamination. While onsite investigations have been performed, vertical and horizontal delineation of the contaminant plume had not been completed. The primary objectives of this RI included the following:

- Confirm and delineate the source(s) of contamination;
- Characterize site geologic and hydrogeologic conditions;
- Characterize the groundwater flow regime;
- Assess groundwater quality and delineate the extent of groundwater contamination using Class I-PL (protection Area) criterion;
- Identify potential contaminant impacts to surrounding surface water; and
- Evaluate potential effects to human receptors and natural ecological resources.

In order to accomplish these objectives, LBG proposed to perform the following investigative activities, as detailed in the Site Sampling and Investigation Plan (SSIP), dated May 2009:

- Geophysical Survey;
- Soil Sampling;
- Septic Investigation;
- Groundwater Screening;
- Monitoring Well Installation and Sampling;
- Surface Water and Sediment Investigation; and,
- Receptor Evaluation.

## 1.2 SITE HISTORY AND PREVIOUS SITE INVESTIGATIONS

The following subsections present a brief history of the Site, followed by a summary of the previous environmental investigations that have been performed.

Joan's Cleaners was a dry cleaning facility that operated within a strip mall between 1983 and 2005. The space that was occupied by Joan's Cleaners is presently a Subway restaurant. The strip mall is serviced by one shared septic system and one common well, which is believed to be drilled to a depth of 55 feet below ground surface (bgs). The original installation date of the septic system is unknown; however, the system was replaced in 1988 and again in 2005.

NJDEP records indicate that Joan's Cleaners utilized tetrachloroethylene (PCE) for the entire period that the business was in operation. According to manifests, between April 1988 and December 1994, approximately 3,300 lbs of waste solvent was disposed of offsite. There are no records indicating that any waste solvents were removed from the Site before April 1988 or after December 1994.

A 1,000 gallon underground storage tank (UST) that contained fuel oil was removed from the strip mall property in January 2005. Soil contamination was discovered during the UST removal activities and the contamination was remediated. Post excavation soil sample results were all below the NJDEP's Soil Cleanup Criteria (SCC) and, according to reports, groundwater was not impacted. The NJDEP issued a No Further Action (NFA) letter on August 9, 2005. There is presently an active 575 gallon above ground fuel oil storage tank at the strip mall property.

In March 2006, groundwater contamination was detected in a private well northeast and down-gradient of the Site. The NJDEP and the local health department sampled over 70 of the private

wells in the area and PCE and derivative chlorinated products, such as trichloroethene (TCE) and cis-1,2 dichloroethene, were present in the groundwater samples collected from approximately 30 of the wells. Based on NJDEP correspondence, it was determined that private wells in that neighborhood are typically screened in the Cohansey aquifer between 40 and 70 feet bgs. The gasoline additive methyl tert-butyl ether (MTBE) was also present in several of the groundwater samples collected from the private wells. Point of entry treatment units (POETS) were subsequently provided to all the impacted private wells.

In May 2006, the NJDEP performed groundwater screening at 10 locations at and near the Joan's Site. A total of 37 groundwater samples were collected; concentrations of four of the samples exceeded the NJDEP Class-IIA groundwater quality standards (GWQS) for PCE and the concentration of one of the groundwater samples exceeded the GWQS for TCE. Three of the groundwater samples with only PCE exceedances were collected from 21 to 24 feet bgs. The one groundwater sample with both PCE and TCE exceeding the NJDEP criteria was collected from 57 to 60 feet bgs. A sample collected at the same location from the 69 to72 foot interval did not exceed the criteria for either PCE or TCE.

In July 2006, the NJDEP performed groundwater screening at 18 locations at the Site as well as up-gradient and down-gradient of the Site. Eighteen groundwater samples were collected from varying intervals ranging from the water table to a depth of 72 feet bgs, and the concentrations of five of the samples exceeded the GWQS for PCE. Locations up-gradient to the Site did not exhibit groundwater concentrations above the GWQS; however, several down-gradient groundwater samples that were collected near a Sunoco Service Station, (formerly Highway Petroleum Inc. [HPI], a known contaminated Site), exhibited low levels of MTBE and benzene, toluene, ethylbenzene and xylene, collectively referred to as BTEX compounds.

The NJDEP performed 20 borings in the neighborhood northeast of the Site in July 2007. From these 20 borings, 38 groundwater samples and 20 soil gas samples were collected. No soil gas samples exhibited concentrations above NJDEP screening levels; however, there were PCE and TCE exceedances of the GWQS as deep as 64 feet bgs, and MTBE exceedances of the GWQS as deep as 44 feet bgs. In March 2008, the NJDEP performed additional borings within the same neighborhood and PCE and MTBE exceedances were identified as deep as 52 feet bgs, and benzene exceedances were detected as deep as 44 feet bgs. Samples collected from the 60 to 64 foot bgs intervals did not contain concentrations above criteria.

The HPI site is identified as a Known Contaminated Site (KCS) by the NJDEP and is located directly across Route 206 from the Site. In May 1999, seven USTs were removed from HPI. According to NJDEP reports, some or all of the USTs released gasoline and 176 tons of contaminated soil were removed from the HPI Site and three (3) groundwater monitoring wells

were installed. In October 2002, PCE was detected at a concentration of 114 parts per billion (ppb) in one of the HPI monitoring wells. In a June 2007 sampling event, the PCE concentration was 1.4 ppb. In August 2000, MTBE was detected in groundwater at HPI at a concentration of 7.48 ppb. In June 2007 the MTBE concentration was 1 ppb.

While onsite investigations have been performed and groundwater sampling has been conducted within the residential neighborhood, vertical and horizontal delineation of the contaminant plume was not completed. Consequently, the NJDEP contracted LBG to perform the outstanding RI activities. In May 2009, LBG prepared a Site Sampling and Investigation Plan (SSIP) to detail proposed field activities. The SSIP provided an approach to investigate and document the surface and subsurface conditions as necessary to satisfy NJDEP requirements for site remediation, specifically with regard to soil and groundwater contamination associated with the former Joan's Cleaners facility.

# 2.0 SITE DESCRIPTION

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The Site is located within a strip mall at 1529 Route 206 (Block 320, Lot 5) in Tabernacle Township, Burlington County, New Jersey situated at approximately 39° 51' 12" north latitude and 74° 44' 3" west longitude. The Site is within the limits of the Pinelands Management Area (Pinelands), part of the Pinelands National Reserve. Figure 1 is an annotated U.S.G.S. 7.5-minute quadrangle (Indian Mills and Medford Lakes, NJ 1981) showing the Site's location, local topography, surface water, and cultural features. The property was used as a dry cleaning facility from 1983 to 2005, and is presently a Subway Restaurant. The Site is surrounded by residential and commercial properties and is currently owned by Haas Plaza, LLC. Figure 2 is a site plan showing the Site property and the surrounding area and a photo log is provided as Appendix A.

## 2.1 TOPOGRAPHY

The Site is located within the Atlantic Coastal Plain Physiographic Province, which is typically characterized by low-relief terraces underlain by marginal marine sediments. The topography is relatively flat, with an elevation of approximately 120 feet above mean sea level (amsl). Surface elevations within the neighborhood to the northeast of the Site range from 118 feet amsl near the Site to 90 feet amsl to the northeast near the high school. The topography change of the entire investigation area is approximately 28 feet from the Site to the eastern most extent just west of the high school.

## 2.2 CLIMATE

The climate of the region is temperate-humid, with warm summers and moderate winters. The high temperature in the summer seldom exceeds 100°F and the low temperature in the winter rarely drops below 0°F. The temperature from late May through early September often reaches 90°F, and the mean annual temperature is 53°F. Precipitation averages 45 inches per year with the heaviest amounts typically falling in the summer months (Rutgers, 2007)

## 2.3 GEOLOGY AND SOILS

According to a NJDEP *Site Investigation Report* (September 2006) soils at the Site and in the surrounding area are of the Evesboro series which consists of deep, loose, excessively drained sands. The NJDEP performed several soil borings at the Site, these borings were advanced to 20 feet bgs and indicated poorly sorted yellow-orange fine to medium sands. The USGS *Surfical Geologic Map of Central and Southern New Jersey* classifies soil at the Site as Colluvium and Alluvium (Pleistocene) consisting of poorly sorted, quartz rich, sand, gravel, silt and clay. The unit is generally less than 6 feet thick but may range up to 25 feet.

Based on the *Bedrock Geologic Map of Central and Southern New Jersey* (Owens et al., 1998), the Cohansey Formation underlies the Site. The Cohansey Formation is middle Miocene in age and is comprised of fine to coarse grained sand with local gravel and clay, and is underlain by the Kirkwood Formation, which is comprised of fine to medium grained sand and silty sand and is also middle to lower Miocene in age. The lowermost clay-silt layer of the Kirkwood Formation, termed the Asbury Clay or Asbury Park Member of the Kirkwood Formation, is a dark, peaty, massive to laminated clay-silt with occasional interbeds of fine sand and is typically a few feet thick. The Cohansey and Kirkwood formations extend to a depth of approximately 150 feet bgs.

A confining layer of interbedded massive clays and silty clays consisting of the Shark River (upper middle Eocene), Manasquan (lower Eocene), Hornerstown (lower Paleocene) and Tinton (upper Cretaceous) Formations extends to a depth of approximately 400 feet bgs.

Soil encountered during the RI activities were consistent with the above descriptions, and generally consisted of yellowish orange coarse to fine sand with little Silt. A clayey silt with some sand lenses was encountered at approximately 120 feet bgs, assumed to be the lower Kirkwood/Asbury Clay. A clay layer assumed to be the Shark River formation was encountered at approximately 150 feet bgs at the eastern most extent of the investigation area.

## 2.4 HYDROGEOLOGY

During past NJDEP investigations groundwater was encountered at approximately 20 feet bgs, and shallow groundwater flow was assumed to be northeast towards Bear Swamp and Bread and Cheese Run (USGS, 1995). The shallow aquifer at the Site is the Kirkwood-Cohansey aquifer system, which is comprised of predominantly highly permeable sand and is approximately 150 feet thick at the Site. Due to its location within the Pinelands, this aquifer system at the Site is classified as a Class I-PL Protection Area, with the primary designated use being the preservation of Pinelands plant and animal species and their habitats (NJAC 7:9-6 – NJDEP, 1993). Secondary designated uses of the aquifer include potable and agricultural water.

Below the Kirkwood-Cohansey aquifer and a 250 foot thick confining layer is the Mount Laurel-Wenonah aquifer, which is approximately 400 feet bgs and approximately 100 feet thick. There are supply wells within 2 miles northeast of the Site that are screened in the Mount Laurel-Wenonah aquifer.

## 2.5 SURFACE WATER AND WETLANDS

The nearest surface water bodies are the headwaters of the Bear Swamp River, located approximately 3,800 feet northeast of the Site, and the Bread and Cheese Run located approximately 2,500 feet southeast of the Site. Bread and Cheese Run is ponded before it travels under Carranza Road southeast of the Site. Both of these are tributaries of the South Branch of Rancocas Creek. The *New Jersey Surface Water Quality Standards* (N.J.A.C 7:9B) classify the South Branch of Rancocas Creek as PL (Pinelands Waters). Designated uses of Pineland Waters include the maintenance, migration and propagation of natural and established biota. There are deciduous wooded wetlands approximately 1,000 feet southeast of the Site and approximately 3,500 feet northeast of the Site (NJDEP Burlington County Wetland shape files). Figure 3 depicts the wetlands in the area.

# 3.0 TECHNICAL OVERVIEW AND FINDINGS

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The field activities associated with the RI were carried out between July 2010 and September 2012. Field activities were conducted to address delineation and outstanding data gaps identified during previous investigations, and consisted of the following:

- Geophysical Survey;
- Soil Investigation;
- Septic Investigation;
- Groundwater Screening;
- Monitoring Well Installations and Sampling;
- Surface Water and Sediment Investigation;
- Hydrogeologic Testing; and,
- Receptor Evaluation.

The above activities, as well as the associated findings, are described in the following subsections. All sampling and investigation activities were performed in accordance with N.J.A.C. 7:26E; New Jersey *Technical Requirements for Site Remediation* (NJDEP, 2009) and the New Jersey *Field Sampling Procedures Manual* (NJDEP, 2009). The task-specific descriptions of field activities are supplemented by detailed procedures outlined in the *Site Sampling and Investigation Plan* (SSIP) (LBG, 2009). Any deviations from the SSIP are noted in the following sections. All field work was also performed in accordance with the contract *Programmatic Health and Safety Plan* (HASP) (LBG, 2009) and a *Site-Specific Health and Safety Plan* (SSHASP) (LBG, 2009).

## 3.1 GEOPHYSICAL SURVEY

An initial geophysical survey was completed in June 2010 for the purpose of identifying subsurface utilities at proposed soil boring and shallow groundwater screening locations both onsite and offsite. All geophysical work was performed by Advanced Geophysical Services (AGS) of Malvern PA, using electromagnetic (EM), and radio frequency (RF) methods. A Time-Domain EM survey was conducted using an EM-31 high sensitivity detector, capable of detecting metal and other non-metallic anomalies at depths of 10 feet. Any subsurface anomalies

identified were marked in the field and further investigated with a more localized, focused ground penetrating radar (GPR) survey. Additional geophysical clearing for proposed borings were done prior to drilling as necessary.

Onsite subsurface locations such as the septic tank, transfer box and leach field were identified using a GPR survey. Findings of the geophysical survey including the utilities and septic system are shown on Figure 4, as well as presented in Appendix B. Additionally, proposed offsite boring locations were cleared using geophysical techniques to locate subsurface utilities (sewer, electrical, gas) in the immediate vicinity of each proposed location. Each proposed location was demarcated in the field using spray-paint and pin flags, and recorded using GPS.

## 3.2 SOIL INVESTIGATION

The purpose of the soil investigation was to identify and delineate onsite contamination related to the possible release of PCE from the former Joan's Cleaners facility. Four sampling events were conducted between July 2010 and May 2012. Soil samples were collected for laboratory analysis to document the presence of any contamination resulting from the identified concerns. These soil samples were collected from soil borings and were subsequently submitted to Accutest Laboratories (Accutest) (NJDEP Certification #12129) of Dayton, New Jersey for analysis. A soil sample summary table, which includes all of the soil samples collected during the RI activities, is presented as Table 1.

The analytical results of the soil samples collected from the soil investigation are summarized on Table 2. The analytical results were evaluated with respect to the *NJDEP Residential Direct Contact* (RDCSRS), *Non-Residential Direct Contact* (NRDCSRS) and *Impact to Groundwater* (IGWSRS) *Soil Remediation Standard* (revised November 2009). For each individual chemical compound, the most stringent of the three sets of criteria comprises the NJDEP's *Unrestricted Use Soil Remediation Standard* (SRS), which was used to identify soil contaminant exceedances. Locations of all soil borings and contaminant exceedances are presented in Figure 4. The laboratory analytical data reports are included as Appendix C.

### 3.2.1 July 2010 Soil Sampling Event

On July 19 and July 20, 2010, Summit Drilling of Bound Brook, New Jersey (Summit) advanced ten soil borings at the Joan's Cleaners Site (SB01 to SB10) using direct push methods primarily around the perimeter of the leach field but also adjacent to the garage area. Continuous soil cores (4-feet in length) were collected in acetate liners from ground surface to a depth of 20 feet below ground surface (bgs). The water table was encountered between 17 and 18 feet bgs. One soil boring (SB-10) was advanced until refusal (36 feet bgs) in order to document deeper

subsurface conditions onsite. All soil cores retrieved were screened using a properly calibrated photoionization detector (PID) for volatile organic compounds (VOCs). Soil cores were then described by a LBG geologist using the Burmister Soil Classification System. All observations were recorded in a bound field book and borehole logs were subsequently produced from this data. Boring logs summarizing lithology and sample intervals are included in Appendix D.

One soil sample was collected from the six-inch interval immediately above the water table from each onsite boring location for analyses of Target Compound List (TCL) Volatile Organic Compound (VOC+10), method SW846 8260. Selected soil samples (SB01 and SB08) were also analyzed for Total Organic Carbon (TOC), method SW846 9060M, to establish a site-specific soil remediation standard for impact to groundwater if the need arose.

The results of borehole geologic logging indicate that the subsurface in the investigation area consists of coarse to fine sand with little silt; no identifiable confining layer was encountered above 83 feet bgs at any borehole location. The maximum depth attainable before refusal during the combined groundwater screening/soil boring program was 83 feet bgs. Water was encountered between 17 and 18 feet bgs onsite.

The analytical results of the soil sampling indicated that no exceedances were observed in these samples collected. Furthermore, all soil samples were non-detect for the parameters analyzed with the exception of acetone (SB-07). Acetone is not a contaminant of concern at this Site and may be a laboratory contaminant.

Based on the findings of the soil investigation, there did not appear to be any site related soil contamination present onsite at the locations and depths sampled. Subsequently, LBG in consultation with the NJDEP decided to perform additional shallow soil borings in the rear parking lot of the Site, specifically near the past and current dumpster locations to investigate the possible use of dumpsters as a PCE waste disposal method. In addition, due to groundwater contamination encountered at screening location GW-102 (as discussed in Section 3.4), LBG proposed to perform three additional soil borings in the front of the building.

### 3.2.2 June 2011 Soil Sampling Event

On June 13, 2011, a total of eight soil borings (SB-11 to SB-18) were advanced at the Joan's Site to a depth of 25 feet below grade surface (bgs). Soil borings SB-11 to SB-15 were performed to investigate the possible use of dumpsters as a PCE waste disposal method while soil borings SB-16 to SB-18 were performed to investigate groundwater contamination previously encountered at screening location GW-102. A soil sample was collected from each boring from the six inch

interval above the water table due to the absence of noticeably impacted soil. All samples were analyzed for TCL VOC+10, and TBA using USEPA method SW846 8260.

Results of the soil sampling did not indicate any exceedances to the NJDEP soil remediation standards. In fact, no detections of VOCs were observed. In an effort to investigate any potential for spillage near the building, five additional soil borings were proposed in the rear of the building, biased to the location of the former cleaners.

### 3.2.3 February 2012 Soil Sampling Event

On February 2 and February 3, 2012, a total of five soil borings (SB-19 to SB-23) were advanced along the rear of the Joan's Site building to a maximum depth of 40 feet bgs. A total of 10 soil samples (a shallow "A" sample and deeper "B" sample) were collected from the five boring locations. The "A" sample was collected at the six-inch interval immediately above the water table while a deeper "B" sample was collected at the bottom of the boring to further document deeper subsurface conditions. All samples were analyzed for TCL VOC+10.

Results of the third soil sampling event exhibited no detections of VOCs; however, during the sampling activities, LBG field staff recorded high PID readings and noted a faint chemical odor at locations SB22 and SB23. At both locations, elevated PIDs were recorded at the water table (between 17 and 18 feet bgs) and soil samples were collected from the interval exhibiting the highest PID reading.

Based on the high PID readings and faint chemical odor but lack of VOC detections in analytical results from soil collected at those intervals, LBG and NJDEP collaboratively decided to return to the site and perform additional soil borings near the recently sampled locations.

### 3.2.4 May 2012 Soil Sampling Event

On May 3, 2012, a total of seven soil borings (SB25 to SB30) were advanced to a maximum depth of 25 feet bgs at the Joan's Site to investigate the high PID readings observed during the third soil sampling event. A soil sample was collected from each boring from the six inch interval above the water table due to the absence of noticeably impacted soil. In addition split samples of the same interval were collected for analysis using two different methods of field preservation. One sample was collected using methanol preservation performed in the field (eg. SB30A) while the second sample was collected using the Encore methodology (eg. SB30AE), which is how all previous soil samples were collected. All samples were analyzed for TCL VOC+10.

Results of the fourth soil sampling event exhibited detections of PCE in the samples collected in SB25, SB26, SB27 and SB30; however none of the concentrations were above the NJDEP's soil remediation standards. Results from the samples collected using methanol preservation in the field were generally higher than the samples collected using Encores; however the concentrations were still very low to make any kind of determination regarding the validity of one method over the other. For example, at location SB30 the concentration of PCE using methanol extraction in the field was 0.0020 mg/kg, as opposed to 0.0017 mg/kg in the sample collected using the encore sampler.

## 3.3 SEPTIC INVESTIGATION

The septic tank at the Joan's Cleaners site was removed and replaced with a new tank in 1988 and again in 2005. Eight soil borings (SB03 through SB10) were advanced around the perimeter of the septic field and nine (9) additional borings were performed down-gradient of the septic system with no evidence of any contamination. Consequently, LBG recommended and NJDEP agreed that the collection of aqueous and sludge samples from the new tank would not be valuable to the investigation.

## 3.4 GROUNDWATER INVESTIGATION

The purpose of the groundwater investigation was to characterize the existing contamination and assess its horizontal and vertical extent. The investigation was comprised of shallow and deep groundwater screening and the installation and sampling of permanent monitoring wells.

### 3.4.1 Groundwater Screening

Groundwater screening was conducted between July 2010 and July 2011 using direct push and mud rotary drilling techniques. The findings of these activities guided the placement of permanent monitoring wells.

<u>July 2010 – October 2010 Groundwater Screening Event</u>

In conjunction with the first soil sampling event, the installation and sampling of temporary well points (TWP) were conducted at the Joan's Site. A total of two groundwater samples (SB03/TWP02 and SB05/TWP01) were collected from the respective soil boring locations, shown on Figure 5. Groundwater samples were collected through the installation/sampling of temporary PVC wells, also known as passively placed narrow diameter points (PPNDPs). Each PPNDP was constructed with 1-inch diameter PVC 10 foot screen and extended to a depth of 20 feet bgs. Ground water was encountered at approximately 17 feet bgs. Prior to sampling, at least three well volumes were purged with a check-valve system prior to sampling. Each

groundwater sample was collected through Teflon® lined tubing. Samples were placed into laboratory-supplied glassware for sample preservation. The samples were immediately placed on ice in a cooler and later transported to Accutest for analyses using chain of custody protocols. Samples were analyzed for TCL VOC+10, method SW846 8260 as well as TBA. Table 3 provides a summary of all groundwater samples collected from the PPNDPs.

Groundwater screening utilizing a Geoprobe SP15/16© sampler was conducted at a total of 40 locations offsite within the investigation area with discrete groundwater samples collected every 10 feet from the estimated groundwater table to a depth of approximately 83 feet bgs, where possible. Prior to sampling, approximately three well volumes were purged with a check-valve system. Each groundwater sample was collected using disposable Teflon® lined tubing and a reusable, decontaminated stainless steel check-valve. Samples were placed into laboratory-supplied glassware for sample preservation. The samples were immediately placed on ice in a cooler and later transported to Accutest for TCL VOC+10, and TBA analyses. Table 3 provides a summary of all shallow groundwater screening samples collected, including QA/QC samples.

In almost all cases, both a preserved and unpreserved set of samples were collected due to the reaction of the preservative hydrochloric acid (HCl) with the sediment in the sample container creating an air bubble in the sample vial after collection. In these instances, the unpreserved sample was analyzed using a shorter sample holding time. Field blanks were collected daily by pouring laboratory-supplied deionized water over/through groundwater sampling equipment. Blind duplicates were collected at a rate of one blind duplicate per 20 field samples. Trip blanks, supplied by the laboratory, were included in every sample shipment. Both field blanks and trip blanks were analyzed for TCL VOC+10, and TBA.

At predetermined locations, continuous soil cores were collected from ground surface to a depth of 83 feet bgs, or refusal, whichever was encountered first at 17 of the 40 groundwater screening locations. All soil cores retrieved were screened using a properly calibrated PID for VOCs and soil cores were described by a LBG geologist using the Burmister Soil Classification System. All observations were recorded in a bound field book and borehole logs were subsequently produced from this data. Boring logs summarizing lithology and sample intervals are included in Appendix D.

The Site is located within the NJDEP's Class I-PL Protection Area. Based on the NJDEP Groundwater Quality Standards (GWQS) (NJAC 7:9C), "the groundwater quality criteria for Class I-PL (Protection Area) shall be background water quality". Through the course of this investigation, the most up-gradient monitoring well (MW01) exhibited no detections above the laboratory method detection limits (MDL). In addition side-gradient monitoring wells MW05, MW09 and MW10 did not have concentrations of contaminants of concern above the MDL's.

Therefore, it can be assumed that the background levels for the contaminants of concern related to the Joan's Site, chlorinated volatile organic compounds (CVOCs), would be non-detectable. For comparison purposes, any CVOC that was detected above the MDL has been highlighted and subsequently discussed in this RIR. Table 4 includes a summary of the analytical results and Figure 5 depicts each PPNDP and shallow groundwater screening location and all CVOC detections.

The results of the groundwater screening indicate that a total of 52 samples collected from 17 screening locations exhibited concentrations of chlorinated solvent related compounds including PCE, TCE, cis-1,2-dichloroethene, and/or 1,1,2,2-Tetrachloroethane at or above the laboratory MDL. Of the 52 samples with detections of CVOCs, 30 are exceedances to the Class IIa GWQS of PCE, TCE, or 1,1,2,2 tetrachloroethane. Other screening locations exhibited concentrations above the MDL but were below the Class IIA GWQS for non-chlorinated VOCs including: benzene, toluene, ethylbenzene, xylenes, and MTBE. These analytes are primary components and additives to gasoline, although no definable plume of gasoline related VOCs was discernible. Acetone and chloroform were also detected in many samples, although below the GWQS.

Based on the findings of the groundwater screening, one large "main plume" of chlorinated solvent contaminated groundwater was shown to emanate from the Site and flow northeast, towards the Bear Swamp River headwaters (between locations GW-148 and GW-149) The findings also indicated a secondary "branch plume" flowing east towards Carranza Road (location GW-150). Figure 5 shows the results of the GW screening and extent of the plumes.

The larger main plume appears to originate immediately at the eastern edge of the suspected source property (GW-102) and extends to the northeast bounded by Hill Road (GW-115) continuing northeast along Worrell Road (GW-138 &-139) to Hawkins Road (GW-145). The second, less continuous branch plume appears to extend from the suspected source area east along Cramer Road (GW-133) to Worrell Road (GW-143) and Carranza Road (GW-150). The full extent of this plume was not known as groundwater screening location GW-150 was the eastern extent of the initial investigation area.

Vertically, groundwater contamination appeared to extend from the water table at GW-102 (16-19 feet bgs) to at least 68-71 feet bgs at GW-126. The majority of exceedances appeared to range from 40 to 63 feet bgs with the highest frequency of exceedances occurring between 60 to 63 feet bgs. In the western area of the plume, concentrations of PCE increased one to two orders of magnitude with depth to a maximum and then decreased by an order of magnitude in the underlying sample range. Sample locations in the center and eastern extent of the plume did not obtain a vertical delineation to the contamination.

Consequently, LBG recommended additional groundwater screening using mud rotary drilling combined with Hydropunch-II® groundwater sample collection vertically and horizontally delineate the extent of the contaminant plume.

June 2011 – July 2011 Groundwater Screening Event

Between June 14, 2011 and July 1, 2011, deep groundwater screening was conducted. A total of 50 groundwater samples were collected from six locations (GW201 to GW206) through the use of a hydropunch sampler used in conjunction with mud rotary drilling techniques. Discrete groundwater samples were collected to a depth of approximately 150 feet bgs. At each of the predetermined groundwater sampling intervals, the hydropunch sampler was driven approximately 3 to 4 feet below the bottom of the drilled borehole in an effort to obtain a representative groundwater sample at depth. Samples were transferred into laboratory glassware for analyses of TCL VOC+10, and TBA. Table 5 provides a summary of all deep groundwater screening samples collected, including QA/QC samples. Table 6 includes a summary of the analytical results and Figure 5 depicts each deep groundwater screening location and all contaminant exceedances.

There were no exceedances to the NJDEP's Class IIA GWQS, however several compounds were detected above the MDL, including the chlorinated solvent compounds 1,1,1-trichloroethane, 1,1-dichloroethane, and cis-1,2, dichloroethene. These compounds were found to be present in two locations; GW-201 located onsite near the septic area, and at GW-202, located in the center of the plume, adjacent to the shallow location GW-139, which exhibited the highest concentrations of chlorinated solvent compounds.

Other screening locations exhibited concentrations above the MDL but below the Class IIA GWQS of analytes including: benzene, toluene, ethylbenzene, xylenes, and MTBE. These analytes are primary components and additives to gasoline.

Based on the results of the deep groundwater screening program, the extent of the two contaminant plumes was identified. LBG consequently recommended the installation of permanent monitoring wells to verify the extent of the plumes and to better characterize flow and hydrogeologic characteristics necessary to obtain the goal of establishing a classification exception area (CEA).

### 3.4.2 Monitoring Well Installations

Based on the groundwater screening results 16 monitoring wells (MW01 to MW16) shown on Figures 6, 7, and 8, were installed between January 10 and February 2, 2012. MW01 was installed to characterize up-gradient groundwater quality while MW02, MW12 and MW14 to

MW16 were installed to further characterize the contaminant plume and groundwater flow. MW03 to MW06 and MW08 to MW10 were installed to characterize the horizontal extent of the plume both side and down gradient, while MW07 and MW13 were installed to vertically delineate the extent of the plume.

All new monitoring wells were installed using a combination of hollow-stem auger and mud rotary drilling techniques with split-spoon samples collected to facilitate lithologic logging of each monitoring well location. Wells were constructed with 2-inch diameter, schedule 40, PVC casing threaded into a 10-foot length of 0.02-slotted PVC screen. The annular space between the PVC and the wall of each well boring was filled with #2 size well gravel to a depth corresponding to at least two feet above the well screen. A seal was formed by using #00 size sand in the annular space to immediately above the #2 well gravel. The remaining annular space was tremied with grout. Each well is equipped with an expandable locking well plug and a protective steel housing (flushmount or stick-up, as appropriate) over the PVC.

Following monitoring well installation, each new well was hand-surged and developed with a submersible pump to remove as much sediment from the well as practical. Well development procedures were performed until a near turbid-free discharge was achieved, or for a period of one hour, assuming that at least three well volumes were extracted from the well. Monitoring well logs, well permits, records and documentation are included in Appendix E.

### 3.4.3 Monitoring Well Sampling and Analysis

Following the monitoring well installations, two sampling events were completed as part of this RI. The first sampling event was conducted in March 2012 and the second was conducted in May 2012. The two sampling events included the sampling of the 16 newly installed monitoring wells as well as two existing monitoring wells (HPIMW2 and HPIMW4) located at the Sunoco station (formally HPI) situated directly across Route 206 from the Site.

During the first sampling event, one groundwater sample was collected for every five feet of submerged screen in accordance with NJAC 7:26E and the *NJDEP Field Sampling Procedures Manual* (NJDEP, 2009). With the exception of MW02 and HPIMW2, each newly installed monitoring well and Sunoco well HPIMW4 had 10 feet of submerged well screen. Consequently, two samples were collected from these monitoring wells during the first sampling event. Groundwater samples collected from the first 5-foot section of submerged screen were identified as "A" samples while groundwater samples collected from the second 5-foot section of submerged screen were identified as "B" samples.

Prior to sampling, depth to water measurements were collected from all wells. As each monitoring well plug was removed, a headspace vapor reading was recorded with a PID. Water levels were then measured from the top of the PVC well casing. These water level readings were subsequently subtracted from the surveyed well elevations to establish a water level elevation at each location (Table 7). Groundwater elevation contours generated from water level measurements collected from the monitoring wells during the first and second sampling events indicate that shallow groundwater is generally flowing northeast (Figure 6 and Figure 7).

Subsequent to the water level measurement at each well, groundwater samples were collected by low flow purging and sampling technologies in accordance with the *NJDEP Field Sampling Procedures Manual* (2009). Dedicated Teflon®-lined tubing was installed and connected to a QED SamplePro® bladder pump with a disposable Teflon bladder. A low-flow purge was initiated and maintained at a pumping rate not in exceedance of 500 ml/min. A continuous flow was monitored for pH, dissolved oxygen, turbidity, conductivity, redox potential, and temperature. Additionally, water levels, pump depth, purge rates/times, sampling times, and weather were all recorded on purge logs (Appendix F). After well purging and water stabilization requirements were met, groundwater samples were collected directly from the effluent, prior to the flow-through apparatus.

All groundwater samples were submitted for TCL VOC+10, and TBA. Laboratory analysis also included a total of three duplicate sample, eight field blanks, and four trip blanks. A summary of the monitoring well samples collected are presented on Table 8.

As discussed on previous sections 3.4.1, the Site is located within the NJDEP's Class I-PL Protection Area and therefore any contaminants of concern that were detected above the MDLs were highlighted and discussed in the RIR. Table 9 includes a summary of the analytical results for both sampling events and Figure 8 depicts each monitoring well location and all CVOCs detected.

March 2012 Groundwater Sampling Event

A total of 34 groundwater samples were collected from the 18 monitoring wells during the first sampling event. Similar to the groundwater screening (Section 3.4), concentrations of chlorinated solvent related compounds such as PCE, TCE, cis-1,2 dichloroethene, trans-1,2-dichloroethene, 1,1,2,2-tetrachloroethane and 1,2-dichloroethane were detected in six of the newly installed monitoring wells (MW02, MW07, MW12, MW14, MW15 and MW16) and in the Sunoco monitoring well (HPIMW4) with PCE concentrations being the most prevalent. Vertically, the majority of elevated concentrations are present at depths up to approximately 67

feet bgs. While additional exceedances of Class I-PL are present at a deeper interval (132-136 feet bgs) further down-gradient in MW07, these exceedances are below the Class IIA GWQS.

The following exceedances to the Class I-PL GWQS were identified in the analytical results:

- PCE – exceedances were detected in seven monitoring well locations with concentrations ranging from 0.64 ppb (MW15 at 54 feet bgs) to 268 ppb (MW14 at 61.5 feet bgs). The deepest sample intervals exhibiting exceedances of PCE was at a depth of 132 feet bgs (MW07A) where a detection of 1 ppb was identified and 136 feet bgs, also at MW07, with a concentration of 0.42 ppb.

- TCE – exceedances were detected in monitoring wells MW14 and MW16 with concentrations ranging from 2.4 ppb (MW16A at 46.10 feet bgs) to 4.4 ppb (MW14A at 61.50 feet bgs). The most elevated concentrations were detected between 51 and 62 feet bgs;

- Cis-1,2-dichloroethene – exceedances were detected in monitoring wells MW14 and MW16 with concentrations ranging from 0.52 ppb (MW16B at 51.10 feet bgs) to 15.3 ppb (MW14B at 66.50 feet bgs). The most elevated concentrations were detected in MW14 between 61and 67 feet bgs. Concentrations of cis-1,2 Dichloroethene detected in the monitoring wells are above the MDL but below the Class IIA GWQS;

- Trans-1,2-dichloroethene – exceedances were detected in monitoring well MW14 with concentrations of 0.33 ppb at 61.50 feet bgs (MW14A) and 0.32 ppb at 66.50 feet bgs (MW14B). These concentrations are above the MDL but below the Class IIA GWQS;

- 1,1,2,2-tetrachloroethane - exceedances were detected in monitoring well MW16 with concentrations of 0.43 ppb at 46.10 feet bgs (MW16A) and 0.31 ppb at 51.10 feet bgs (MW16B). These concentrations are above the MDL but below the Class IIA GWQS, and

- 1,2-dichloroethane - exceedances were detected in monitoring well MW15 with concentrations of 0.64 ppb at 54 feet bgs (MW15A) and 1.3 ppb at 59 feet bgs (MW15B). These concentrations are above the MDL but below the Class IIA GWQS.

<u>May 2012 Groundwater Sampling Event</u>

A total of 18 groundwater samples were collected from the 18 monitoring wells during the second groundwater sampling event. The analytical results of the second sampling event identified exceedances of chlorinated solvent related compounds in the same seven monitoring wells MW02, MW07, MW12, MW14, MW15, MW16 and HPIMW4 that exhibited exceedances

during the first sampling event. In addition, a second monitoring well in the Sunoco property (HPIMW2) exhibited PCE exceedance above the MDL but below the Class IIA GWQS.

The following exceedances to the Class I-PL GWQS were identified in the analytical results:

- PCE – exceedances were detected in eight monitoring well locations with concentrations ranging from 0.36 ppb (HPIMW2 at 18 feet bgs) to 221 ppb (MW14 at 66.5 feet bgs). The deepest sample intervals exhibiting exceedances were at a depth of 66.50 feet bgs at MW14 where a detection of 221 ppb was identified, and at MW07 which exhibited a concentration of 0.53 ug/l at 131 feet bgs.

- TCE – exceedances were detected in monitoring wells MW14 and MW16 with concentrations of 4.2 ug/l and 3.4 ug/l, respectively;

- Cis-1,2-dichloroethene – exceedances were detected in monitoring wells MW14 and MW16 with concentrations of 13.4 ug/l and 0.52 ug/l, respectively These concentrations are above the MDL but below the Class IIA GWQS;

- Trans-1,2-dichloroethene – one exceedance was observed in MW14 with a concentration of 0.57 ug/l. This concentration is above the MDL but below the Class IIA GWQS;

- 1,1,2,2-tetrachloroethane - one exceedance was observed in MW16 with a concentration of 0.66 ug/l. This concentration is above the MDL but below the Class IIA GWQS, and

- 1,2-dichloroethane - one exceedance was observed in MW15 with a concentration of 2 ug/l.

### 3.4.4 Summary of Groundwater Investigation

Using lithology from soil borings, groundwater screening locations, and monitoring well locations cross-sections have been generated. Figure 10 shows the longitudinal and latitudinal axis of the cross sections and Figure 11 presents the lithological cross-sections with PCE concentration isopleths from groundwater screening and monitoring well sampling results.

Plume Longitudinal Axis (A – A')

Along the longitudinal axis of the groundwater plume, concentrations of chlorinated solvent related compounds generally decrease as they migrate to the northeast, driven by horizontal groundwater flow (Figures 6, 7 and 11). There is an area with high concentrations near the center of the plume (MW14), which may have migrated as a "slug" with groundwater flow

Based on groundwater elevations from adjacent monitoring wells MW13 (deep) and MW14 (intermediate), a vertical hydraulic gradient is indiscernible. Although there is virtually no vertical gradient, the trend is reflected in the vertical contaminant distribution; with shallow groundwater (water table) concentrations typically decreasing to the northeast while intermediate and deep groundwater concentrations (40 to 133 feet bgs) continue to exhibit exceedances toward Carranza Road and the Seneca High School [GW145, MW15 and MW07] (Figure 11). At the northeastern extent of this plume groundwater screening locations GW-148, GW-203 and GW-151 provide delineation.

Plume Latitudinal Axis (B – B')

This cross-section depicts the groundwater contamination along the latitudinal axis of the groundwater plume from MW04 to MW09. Groundwater data shows the highest concentrations of PCE in the center of the plume, between 50 to 70 feet bgs (51-31 feet msl).

## 3.5 SURFACE WATER AND SEDIMENT INVESTIGATION

Based on the results of the groundwater investigation, sampling the surface water of the ephemeral headwaters of the Bear Swamp River was deemed to not be necessary by LBG and NJDEP. No exceedances were identified in the shallow groundwater locations immediately west of the Bear Swamp River. Furthermore, contamination was encountered at depths below at least 40 feet of clean water. The clean water would be the water that ultimately feeds headwaters of the stream.

## 3.6 HYDROGEOLOGIC TESTING

Hydraulic conductivity testing (slug testing) was performed in an effort to calculate the horizontal permeability of the groundwater within soils across the investigation area. On October 5, 2012 rising and/or falling head slug tests were performed on monitoring wells MW01, MW12 and MW13. These wells represent three interconnected depths of the Kirkwood-Cohansey aquifer.

Prior to beginning the slug test at each well, a static water table elevation to water measurement was recorded. A pressure transducer probe was placed in the well. Following a waiting period to allow the disturbed water level in the well to equilibrate to natural conditions, the slug test was initiated.

Water was displaced by removing a five-foot long, 1½-inch PVC pipe filled with sand and capped on both ends into the water column. As the displaced water recharged from the

formation, the automatic datalogger continuously recorded the rising water level until it reached a level corresponding to a recovery of greater than 85% of the maximum drawdown. The slug test data was subsequently downloaded from the datalogger, graphed, and analyzed using both the *Bouwer and Rice* (Bouwer and Rice, 1976) and the *Hvorslev* (Hvorslev, 1951) methods for calculating hydraulic conductivities. The results of the slug test analyses are summarized in Appendix G in addition to all test computations and graphs.

Monitoring well MW01, located on the Joan's site, is constructed with the screen bridging the shallow water table (17 to 27 feet bgs) in coarse to fine sand with trace silt. Six falling head tests were conducted at this well and the average hydraulic conductivity (permeability) of the aquifer was calculated to be 316 feet/day using the Bower-Rice method and 555 feet/day using the Hvorslev method. Using the Hvorslev method, which is more appropriate in these cases due to the well placement in the top or middle of the aquifer, and a vertical gradient of 0.0021 feet/feet, the horizontal seepage velocity was calculated. Using an effective porosity of 25%, the seepage velocity is 1,708 feet/year. Using an effective porosity of 30%, the seepage velocity is 1,423 feet/year.

Monitoring well MW12, located within the investigation area, is constructed with a submerged screen from 33 to 43 feet bgs in medium to fine sand with some silt. Six rising head tests and six falling head tests were conducted at this well and the average hydraulic conductivity of the aquifer was calculated to be 50 feet/day using the Bower-Rice method and 63 feet/day using the Hvorslev method. Using the Hvorslev method and a vertical gradient of 0.0021 feet/feet, the horizontal seepage velocity was calculated to be 164 feet/year with a porosity of 30%, and 140 feet/year using an effective porosity of 35%.

Monitoring well MW13, located witin the investigation area, is constructed with a submerged screen from 87 to 97 feet bgs in silty sand. Five rising head and falling head tests were conducted at this well and the average hydraulic conductivity of the aquifer was calculated to be 22 feet/day using the Bower-Rice method and 23 feet/day using the Hvorslev method. Using the Hvorslev method and a vertical gradient of 0.0021 feet/feet, the horizontal seepage velocity was calculated to be 53 feet/year with a porosity of 35%, and 46 feet/year using an effective porosity of 40%.

## 3.7 IDW CHARACTERIZATION

The majority of the soil and groundwater generated by drilling activities as well as purge water pumped during groundwater the groundwater sampling activities at the Site were containerized in 55-gallon steel drums as investigative derived waste (IDW). Sixty-nine (69) 55-gallon drums

of IDW were immediately removed from site at the conclusion of each sample activity. The containerized materials consisted of the following:

- Soil cuttings generated during drilling activities
- Groundwater generated during drilling activities
- Purge water generated during groundwater sampling activities.

The drums were removed from the Site and disposed of by Prime Environmental Inc., as non-hazardous material. Documentation is provided as Appendix H.

## 3.8 SITE SURVEY AND MAPPING

Upon completion of the monitoring wells, a New Jersey-licensed surveyor conducted a survey of the locations and elevations of all site wells. All horizontal data on the plan were plotted in the New Jersey State Plane Coordinate System (NAD83) and all spot elevations are in the North American Geodetic Vertical Datum (NAGVD88). The survey was conducted in accordance with standards described in the *NJDEP Geographic Information System Digital Data Standards* in accordance with the requirements set forth in the *New Jersey State Board of Professional Engineers and Land Surveyors Administrative Rules and Regulations*. Form A's and B's are included with the Monitoring Well logs in Appendix E.

## 3.9 RECEPTOR EVALUATION

In an effort to identify receptors that could be affected by potential off-site migration of contaminants, a receptor evaluation was performed as part of the RI. The evaluation included a well search and Baseline Ecological Evaluation (BEE).

### 3.9.1 Well Search

For the well search, the NJDEP Bureau of Water Allocation was contacted to identify any domestic wells within the investigation area. The well search results provided by the NJDEP Bureau of Water Allocation identified 234 domestic wells within the investigation area.

The potable supply well for the Seneca High School is located at the eastern most extent of the groundwater contamination area; however that well is screened in the deeper Mt. Laurel-Wenonah aquifer.

Table 10 includes a summary of the domestic wells and Figure 9 depicts each domestic well location. It is LBGs understanding that the local health department along with the NJDEP

previously sampled residential wells in the area in 2006 and that the potable wells impacted by PCE contamination were retrofitted with POET systems; however, the contamination plume likely has migrated since that time and additional potable well sampling may be warranted.

It should also be noted that sampling for vapor intrusion (VI) had previously been conducted by NJDEP during or shortly after the potable well testing and no VI issues were identified. Based on the results of this remedial investigation, it is evident that within the neighborhood where residential properties are located, a clean water lens exists between any surface structure and contaminated groundwater present at depth, and therefore no additional VI investigations are warranted within the residential neighborhood. However, at onsite monitoring well MW02 which bridges the water table, a PCE concentration of 53 ug/l was detected above the NJDEP Groundwater Screening Level (GWSL) of 30 ug/l. The only structure within 100 feet of MW02 is the Haas Plaza building and a vapor intrusion assessment may be warranted for this building.

### 3.9.2 Baseline Ecological Evaluation

On August 20, 2010, a Site inspection was conducted by LBG scientists experienced in the use of techniques and methodologies for conducting ecological risk assessments in accordance with the *U.S. Environmental Protection Agency's Final Guidelines for Ecological Risk Assessment* (April 1998). The BEE is conducted to identify

- Environmentally sensitive areas on, or immediately adjacent to, the Site;
- Contaminants of ecological concern exist on-Site; and
- Potential contamination migration pathways to an environmentally sensitive area exist.

Based on the data collected during this investigation, there are no known contaminants of ecological concern within the Site boundaries. Contaminated groundwater identified at the Site was found at depths that are not directly accessible to wildlife.

Environmentally sensitive areas were identified down-gradient of the Site and include wetlands and surface waters associated with Bread and Cheese Run and Bear Swamp River.

The only potential contaminant migration pathways from Site contaminants to environmentally sensitive areas would be in the form of the discharging to down-gradient surface water features. However, based on the results of the groundwater investigation, the contaminant plume is observed to be fairly deep, with the majority of exceedances appearing to range from 40 to 63 feet bgs with the highest frequency of exceedances occurring between 60-63 feet bgs.

Horizontally, no exceedances were identified in the monitoring wells and groundwater screening locations immediately west (upgradient) of the Bear Swamp River.

No other pathways to environmentally sensitive areas, such as seeps or discharges, were identified. There was no evidence of stressed or dead vegetation within, adjacent to, or down-gradient of the Site. No discolored soil, sediment, or surface water was observed within, adjacent to, or down-gradient of the Site. Based on the results of this BEE, Berger does not recommend further ecological sampling or evaluation pursuant to NJAC 7:26E-4.7. The complete BEE is included as Appendix I.

# 4.0 CONCLUSIONS AND RECOMMEDATIONS

# 4.0 CONCLUSIONS AND RECOMMENDATIONS

Through the completion of soil sampling, groundwater screening, monitoring well installation and sampling, this Remedial Investigation was implemented to achieve the following objectives:

- Confirm and delineate the source(s) of contamination;
- Characterize site geologic and hydrogeologic conditions;
- Characterize the groundwater flow regime,
- Assess groundwater quality and delineate the extent of groundwater contamination using Class I-PL (protection Area) criterion;
- Identify potential contaminant impacts to surrounding surface water; and
- Evaluate potential effects to human receptors and natural ecological resources.

The following sections provide conclusions and recommendations regarding the objectives of the remedial investigative activities.

## 4.1 SOIL

The results of the two initial soil sampling events did not reveal any site-related soil contamination present on the Joan's Cleaners property. Two additional soil sampling events were conducted to investigate any potential spillage areas near the former Joan's Cleaners space. The results of these sampling events also did not reveal any site related contamination with the exception of some low level PCE concentrations, below the soil remediation standards, found in the rear of the shopping center between the former Joan's space and the septic system at a depth corresponding to the water table approximately, 17 feet bgs,

Based on the results of the July 2010 and June 2011 sampling events, there is no conclusive evidence of product discharges to the subsurface. Rather, it appears that dissolved PCE may have been discharged into the ground surface either through the septic system, dumpsters or direct spillage. The septic system and all associated components have been twice removed and upgraded and potentially contaminated soil may have been removed at that time. No remedial actions are recommended with regard to soil.

## 4.2 GROUNDWATER

Groundwater contamination was identified in 20 of the 46 groundwater screening locations and eight (8) of the 18 monitoring wells sampled. Exceedances of chlorinated solvent related compounds appear to be originating at the Joan's Site and are comprised of PCE and derivative chlorinated products such as TCE and cis-1,2-dichloroethene. The spatial distribution of the groundwater analytical exceedances from the groundwater screening phase of the investigation shows one large "Main Plume" of CVOC contaminated groundwater emanating from the Joan's Site and flowing northeast, towards the Bear Swamp River headwaters. In addition, there is a secondary "Branch Plume" flowing east towards Carranza Road. The results of the monitoring well sampling indicate a similar spatial distribution, however the presence of CVOCs in MW15 does not support that there are two disparate plumes; rather a single large plume with varying concentrations of CVOCs, particularly away from the main spine of the plume which exhibits the highest concentrations.

The flow direction of the plume appears to coincide with the overall northeast groundwater flow direction. The presence of the varying concentrations may be due to the effect of historic variations in groundwater flow possibly due to local groundwater withdrawals east of the investigation area by commercial or agricultural wells screened in the Cohansey aquifer.

Based on data generated during the groundwater investigation, the horizontal extent of groundwater contamination has been successfully characterized and delineated. The following sample locations provide adequate horizontal delineation for the purpose of establishing a CEA and to serve as the baseline for anticipated long term monitoring at the Site:

- To the north, monitoring wells MW03, MW04 and MW05 along with screening locations GW109, GW122 and GW148;
- To the west and south, monitoring wells MW01 and MW10 along with groundwater screening locations GW103, GW118, GW119, GW136 and GW144;
- To the southeast, monitoring well MW09 and screening location GW205; and
- To the east, monitoring wells MW08 and MW06 along with screening locations GW204, and GW203.

Vertical delineation of the chlorinated solvent exceedances was achieved at all deep groundwater screening locations with the exception of GW202. At this location a low level of 1,1-dichloroethylene (0.28 ug/l) was detected at the maximum depth interval sampled (150 to 151

feet bgs). However, this concentration is below the Class IIA GWQS. A clay confining layer was also encountered immediately beneath this sampling interval.

The initial sampling of MW07, located on the property of the Seneca High School, exhibited PCE concentrations at the Class IIA GWQS of 1 ug/l at a depth of approximately 135 feet bgs. The second round of sampling revealed that PCE had decreased below the Class IIA GWQS to a concentration of 0.53 ug/l.

The NJDEP has filed an interim indeterminate-duration Classification Exception Area/Well Restriction Area (CEA/WRA) on the entire investigation area. That document is provided as Appendix J.

## 4.3 POTENTIAL HUMAN AND ECOLOGICAL RECEPTORS

There are approximately 234 potable wells within the down-gradient investigation area and 110 within the NJDEP's CEA extent. Of those properties, based on previous reports, only 70 wells were sampled and only 30 have a POET system to provide clean drinking water. These wells were sampled in 2006, and the contaminant distribution in groundwater may be different today than in was six years ago. Considering this, there may be current potential impact to human health through the use of potable wells within the CEA area.

Within the residential neighborhood, a clean water lens of greater than 10 feet exists between surface structures and groundwater contamination present at depth and therefore no VI investigations are warranted in the neighborhood. However, a concentration of PCE from onsite monitoring well MW02, which bridges the water table, was detected above the GWSL and further vapor intrusion assessments are required within 100 feet of the well.

Potential ecological receptors associated with the Site include wetland habitat to the southeast and northwest of the Site, surface waters associated with the Bear Swamp, located approximately 3,800 feet northeast of the Site, and Bread and Cheese Run located approximately 2,500 feet southwest of the Site. The only potential contaminant migration pathways from Site contaminants to environmentally sensitive areas would be in the form of the recharging of down-gradient surface water features by Site-contaminated groundwater. However, based on the results of the groundwater investigation, the contaminant plume is observed to be fairly deep with the majority of exceedances appearing to range from 40 to 63 feet bgs with the highest frequency of exceedances occurring between 60-63 feet bgs. Horizontally, no exceedances were identified in the monitoring wells and groundwater screening locations immediately west of the Bear Swamp River.

No other pathways to environmentally sensitive areas, such as seeps or discharges, were identified. There was no evidence of stressed or dead vegetation within, adjacent to, or down-gradient of the Site. No discolored soil, sediment, or surface water was observed within, adjacent to, or down-gradient of the Site. Based on the results of receptor evaluation, LBG does not recommend further ecological sampling or evaluation pursuant to N.J.A.C. 7:26E-4.7 at this time.

## 4.4 RECOMMENDATIONS

A summary of the recommendations associated with the RI is presented below for soil, groundwater and potential receptors.

### 4.4.1 Soil

Based on the findings of the soil investigation, no site related contamination was observed to be present onsite. As such, no additional soil investigation or remedial action is proposed.

### 4.4.2 Groundwater

Chlorinated solvent related contamination in association with the former Joan's Cleaners facility has been horizontally and vertically delineated using a combination of groundwater screening results along with permanent monitoring wells. Due to the documented presence of contamination in groundwater at concentrations above the Class IIA and Class I-PL GWQS, a CEA has been established for the entire investigation area. LBG recommends updating the NJDEP's CEA with data presented in this RIR and the use of monitored natural attenuation (MNA) as the remedial action. Additional sampling data will be necessary to determine if conditions are viable for MNA, calculate degradation of the PCE contamination, and conduct the Mann-Whitney U test for trend analysis.

### 4.4.3 Receptor Evaluation

The last time residential wells were sampled was 2006; since then, groundwater and the contaminants within the groundwater have migrated to the east-northeast. Therefore, LBG recommends reassessing domestic wells that are within the CEA extent and not currently utilizing POET systems to determine if contamination is currently present in the potable wells.

Furthermore, a vapor intrusion assessment in accordance with NJAC 7:26E-1.12 and the NJDEP Vapor Intrusion Technical Guidance document is recommended for the Haas Plaza building due to the presence of PCE in shallow groundwater within 100 feet of the building.

# 5.0 REFERENCES

# 5.0 REFERENCES

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# TABLES

**Table 1**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| SB01 | SB01 | JA51830-4 | 17.5-18.0 | VOC+10, MTBE, TBA, TOC | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB02 | SB02 | JA51830-5 | 18.0-18.5 | VOC+10, MTBE, TBA | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB03 | SB03 | JA51915-5 | 17.5-18.0 | VOC+10, TBA, MTBE (%SOLIDS) | Acetate sleeve, Bowl and Spoon | 7/20/2010 |
| SB04 | SB04 | JA51915-4 | 16.5-17.0 | VOC+10, TBA, MTBE (%SOLIDS) | Acetate sleeve, Bowl and Spoon | 7/20/2010 |
| SB05 | SB05 | JA51915-3 | 16.9-17.4 | VOC+10, TBA, MTBE (%SOLIDS) | Acetate sleeve, Bowl and Spoon | 7/20/2010 |
| SB06 | SB06 | JA51915-1 | 16.5-17.0 | VOC+10, TBA, MTBE (%SOLIDS) | Acetate sleeve, Bowl and Spoon | 7/20/2010 |
| SB07 | SB07 | JA51830-1 | 16.5-17.0 | VOC+10, MTBE, TBA | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB08 | SB08 | JA51830-2 | 17.0-17.5 | VOC+10, MTBE, TBA, TOC | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB09 | SB09 | JA51830-3 | 17.0-17.5 | VOC+10, MTBE, TBA | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB10 | SB10 | JA51830-6 | 16.0-17.0 | VOC+10, MTBE, TBA | Acetate sleeve, Bowl and Spoon | 7/19/2010 |
| SB11 | SB11 | JA78413-1 | 17.7 - 18.2 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB12 | SB12 | JA78413-2 | 18.0 - 18.5 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB13 | SB13 | JA78413-3 | 18.0 - 18.5 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB14 | SB14 | JA78413-4 | 18.3 - 18.8 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB15 | SB15 | JA78413-5 | 20.0 - 20.5 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB16 | SB16 | JA78413-6 | 18.0 - 18.5 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |

**Notes:**
- ft bgs = feet below ground surface
- NA = Not Analyzed
- VOC+10 = Volatile Organic Compounds +10 (search for 10 non-target tentatively identified compounds (TICs)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol
- TOC = Total Organic Carbon
- TOC and Grain Size are contingent analyses.

**Table 1**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| SB17 | SB17 | JA78413-7 | 17.5 - 18.0 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB18 | SB18 | JA78413-8 | 18.0 - 18.5 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| SB19A | SB19A | JA98559-1 | 20.5-21.0 | TCL VOC+10, % Solid | Acetate sleeve | 2/2/2012 |
| SB19B | SB19B | JA98559-2 | 38.7-39.3 | TCL VOC+10, % Solid | Acetate sleeve | 2/2/2012 |
| SB20A | SB20A | JA98559-3 | 17.0-17.5 | TCL VOC+10, % Solid | Acetate sleeve | 2/2/2012 |
| SB20B | SB20B | JA98559-4 | 36.5-37.0 | TCL VOC+10, % Solid | Acetate sleeve | 2/2/2012 |
| SB21A | SB21A | JA98613-1 | 17-17.5 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB21B | SB21B | JA98613-2 | 38.5-39.0 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB22A | SB22A | JA98613-3 | 17.4-17.9 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB22B | SB22B | JA98613-4 | 38.6-39.1 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB23A | SB23A | JA98613-5 | 17.7-18.2 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB23B | SB23B | JA98613-6 | 23.8-24.3 | TCL VOC+10, % Solid | Acetate sleeve | 2/3/2012 |
| SB24A | SB24A | JB5629-1 | 17.5-18.0 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB24AE | SB24AE | JB5629-2 | 17.5-18.0 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB25A | SB25A | JB5629-3 | 18.5-19.0 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB25AE | SB25AE | JB5629-4 | 18.5-19.0 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |

**Notes:**
- ft bgs = feet below ground surface
- NA = Not Analyzed
- VOC+10 = Volatile Organic Compounds +10 (search for 10 non-target tentatively identified compounds (TICs)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol
- TOC = Total Organic Carbon
- TOC and Grain Size are contingent analyses.

**Table 1**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| SB26A | SB26A | JB5629-5 | 18-18.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB26AE | SB26AE | JB5629-6 | 18-18.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB27A | SB27A | JB5629-7 | 18-18.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB27AE | SB27AE | JB5629-8 | 18-18.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB28A | SB28A | JB5629-9 | 15.0-15.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB28AE | SB28AE | JB5629-10 | 15.0-15.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB29A | SB29A | JB5629-11 | 15.0-15.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB29AE | SB29AE | JB5629-12 | 15.0-15.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB30A | SB30A | JB5629-13 | 17.0-17.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| SB30AE | SB30AE | JB5629-14 | 17.0-17.5 | TCL VOC+10, % Solid | Acetate sleeve | 5/3/2012 |
| **QA/QC** | | | | | | |
| SB14 | DUP01 | JA78413-9 | 18.3 - 18.8 | TCL VOC+10, MTBE, TBA | Acetate Sleeve, Bowl and Spoon | 6/13/2011 |
| Trip Blank | TB01 | JA51915-7 | NA | TCL VOC+10 | NA | 7/20/2010 |
| Trip Blank | Trip Blank | JA78413-10 | NA | TCL VOC+10 | NA | **6/9/2011** |
| Trip Blank | TB01 | JA98559-5 | NA | TCL VOC+10 | NA | **2/1/2012** |

**Notes:**
- ft bgs = feet below ground surface
- NA = Not Analyzed
- VOC+10 = Volatile Organic Compounds +10 (search for 10 non-target tentatively identified compounds (TICs)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol
- TOC = Total Organic Carbon
- TOC and Grain Size are contingent analyses.

**Table 2**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sampling Results Table**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID** | SB01 | SB02 | SB03 | SB04 | SB05 | SB06 | SB07 | SB08 | SB09 | SB10 |
| | | | **Sample ID** | SB01 | SB02 | SB03 | SB04 | SB05 | SB06 | SB07 | SB08 | SB09 | SB10 |
| | | | **Lab ID** | JA51830-4 | JA51830-5 | JA51915-5 | JA51915-4 | JA51915-2 | JA51915-1 | JA51830-1 | JA51830-2 | JA51830-3 | JA51830-6 |
| | | | **Sample Date** | 7/19/2010 | 7/19/2010 | 7/20/2010 | 7/20/2010 | 7/20/2010 | 7/20/2010 | 7/19/2010 | 7/19/2010 | 7/19/2010 | 7/19/2010 |
| | | | **Sample Interval (ft bgs)** | 17.5 - 18.0 | 18.0 - 18.5 | 17.5 - 18.0 | 16.5 - 17.0 | 16.9 - 17.4 | 16.5 - 17.0 | 16.5 - 17.0 | 17.0 - 17.5 | 17.0 - 17.5 | 16.5 - 17.0 |
| **VOC** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | | | | | | | | | |
| Acetone | NC | 70000 | 12 | 0.015 U | 0.011 U | 0.015 U | 0.014 U | 0.013 U | 0.013 U | **0.0498** | 0.014 U | 0.01 U | 0.0096 U |
| Methyl tert-butyl ether | 320 | 110 | 0.2 | 0.0015 U | 0.0011 U | 0.0015 U | 0.0014 U | 0.0013 U | 0.0013 U | 0.0011 U | 0.0014 U | 0.001 U | 0.00096 U |
| Methylene Chloride | 97 | 34 | 0.007 | 0.0075 U | 0.0053 U | 0.0075 U | 0.0068 U | 0.0066 U | 0.0063 U | 0.0053 U | 0.0068 U | 0.0051 U | 0.0048 U |
| Tetrachloroethene | 5 | 2 | 0.005 | 0.0075 U | 0.0053 U | 0.0075 U | 0.0068 U | 0.0066 U | 0.0063 U | 0.0053 U | 0.0068 U | 0.0051 U | 0.0048 U |
| **TOC** | | | | | | | | | | | | | |
| Total Organic Carbon | NC | NC | NC | 130 U | N/A | N/A | N/A | N/A | N/A | N/A | **401** | N/A | N/A |

**Notes:**
- All results are dry weight and are reported in parts per million (mg/kg)
- NRDCSRS = Non Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- NC = No Criteria
- U = Not detected above the quantitation limit; the value presented is the sample quantitation limit
- N/A = Not Analyzed
- **Bold = Positive Detection**

**Table 2**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sampling Results Table**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID** | SB11 | SB12 | SB13 | SB14 | | SB15 | SB16 | SB17 | SB18 |
| | | | **Sample ID** | SB11 | SB12 | SB13 | SB14 | DUP01 | SB15 | SB16 | SB17 | SB18 |
| | | | **Lab ID** | JA78413-1 | JA78413-2 | JA78413-3 | JA78413-4 | JA78413-9 | JA78413-5 | JA78413-6 | JA78413-7 | JA78413-8 |
| | | | **Sample Date** | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 | 6/13/2011 |
| | | | **Sample Interval (ft bgs)** | 17.7 - 18.2 | 18.0 - 18.5 | 18.0 - 18.5 | 18.3 - 18.8 | 18.3 - 18.8 | 20.0 - 20.5 | 18.0 - 18.5 | 17.5 - 18.0 | 18.0 - 18.5 |
| **VOC** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | | | | | | | | |
| Acetone | NC | 70000 | 12 | 0.012 U | 0.014 U | 0.014 U | 0.012 U | 0.016 U | 0.012 U | 0.015 U | 0.012 U | 0.012 U |
| Methyl tert-butyl ether | 320 | 110 | 0.2 | 0.0012 U | 0.0014 U | 0.0014 U | 0.0012 U | 0.0016 U | 0.0012 U | 0.0015 U | 0.0012 U | 0.0012 U |
| Methylene Chloride | 97 | 34 | 0.007 | 0.0058 U | 0.0068 U | 0.0068 U | 0.006 U | 0.0078 U | 0.006 U | 0.0074 U | 0.0058 U | 0.006 U |
| Tetrachloroethene | 5 | 2 | 0.005 | 0.0058 U | 0.0068 U | 0.0068 U | 0.006 U | 0.0078 U | 0.006 U | 0.0074 U | 0.0058 U | 0.006 U |
| **TOC** | | | | | | | | | | | | |
| Total Organic Carbon | NC | NC | NC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Notes:**
- All results are dry weight and are reported in parts per million (mg/kg)
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- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- NC = No Criteria
- U = Not detected above the quantitation limit; the value presented is the sample quantitation limit
- N/A = Not Analyzed
- **Bold = Positive Detection**

**Table 2**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sampling Results Table**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID** | SB19 | | SB20 | | SB21 | | SB22 | | SB23 | |
| | | | **Sample ID** | SB19A | SB19B | SB20A | SB20B | SB21A | SB21B | SB22A | SB22B | SB23A | SB23B |
| | | | **Lab ID** | JA98559-1 | JA98559-2 | JA98559-3 | JA98559-4 | JA98613-1 | JA98613-2 | JA98613-3 | JA98613-4 | JA98613-5 | JA98613-6 |
| | | | **Sample Date** | 2/2/2012 | 2/2/2012 | 2/2/2012 | 2/2/2012 | 2/3/2012 | 2/3/2012 | 2/3/2012 | 2/3/2012 | 2/3/2012 | 2/3/2012 |
| | | | **Sample Interval (ft bgs)** | 20.5 - 21.0 | 38.7 -39.3 | 17.0 - 17.5 | 36.5 - 37.0 | 17.0 - 17.5 | 38.5 - 39.0 | 17.4 - 17.9 | 38.6 - 39.1 | 17.7 - 18.2 | 23.8 - 24.3 |
| **VOC** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | | | | | | | | | |
| Acetone | NC | 70000 | 12 | **0.0255** | 0.011 U | 0.013 U | 0.011 U | 0.013 U | 0.015 U | 0.012 U | 0.011 U | 0.01 U | 0.01 U |
| Methyl tert-butyl ether | 320 | 110 | 0.2 | 0.0011 U | 0.0011 U | 0.0013 U | 0.0011 U | 0.0013 U | 0.0015 U | 0.0012 U | 0.0011 U | 0.001 U | 0.001 U |
| Methylene Chloride | 97 | 34 | 0.007 | 0.0053 U | 0.0055 U | 0.0064 U | 0.0054 U | 0.0067 U | 0.0076 U | 0.0058 U | 0.0053 U | 0.0051 U | 0.0052 U |
| Tetrachloroethene | 5 | 2 | 0.005 | 0.0053 U | 0.0055 U | 0.0064 U | 0.0054 U | 0.0067 U | 0.0076 U | 0.0058 U | 0.0053 U | 0.0051 U | 0.0052 U |
| **TOC** | | | | | | | | | | | | | |
| Total Organic Carbon | NC | NC | NC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Notes:**
- All results are dry weight and are reported in parts per million (mg/kg)
- NRDCSRS = Non Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- NC = No Criteria
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- N/A = Not Analyzed
- **Bold = Positive Detection**

**Table 2**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sampling Results Table**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID** | SB24 | | SB25 | | SB26 | | SB27 | | SB28 | |
| | | | **Sample ID** | SB24A | SB24AE | SB25A | SB25AE | SB26A | SB26AE | SB27A | SB27AE | SB28A | SB28AE |
| | | | **Lab ID** | JB5629-1 | JB5629-2 | JB5629-3 | JB5629-4 | JB5629-5 | JB5629-6 | JB5629-7 | JB5629-8 | JB5629-9 | JB5629-10 |
| | | | **Sample Date** | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 |
| | | | **Sample Interval (ft bgs)** | 17.5 - 18.0 | 17.5 - 18.0 | 18.5 - 19.0 | 18.5 - 19.0 | 18.0 - 18.5 | 18.0 - 18.5 | 18.0 - 18.5 | 18.0 - 18.5 | 15.0 - 15.5 | 15.0 - 15.5 |
| **VOC** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | | | | | | | | | |
| Acetone | NC | 70000 | 12 | 0.0098 U | 0.01 U | 0.011 U | 0.011 U | 0.01 U | 0.01 U | 0.011 U | 0.0098 U | 0.012 U | 0.011 U |
| Methyl tert-butyl ether | 320 | 110 | 0.2 | 0.00098 U | 0.001 U | 0.0011 U | 0.0011 U | 0.001 U | 0.001 U | 0.0011 U | 0.00098 U | 0.0012 U | 0.0011 U |
| Methylene Chloride | 97 | 34 | 0.007 | 0.0049 U | 0.005 U | **0.002 J** | **0.0015 J** | **0.0023 J** | **0.0014 J** | **0.0029 J** | **0.0016 J** | **0.0026 J** | 0.0054 U |
| Tetrachloroethene | 5 | 2 | 0.005 | 0.0049 U | 0.005 U | **0.00059 J** | 0.0057 U | **0.00059 J** | **0.00038 J** | **0.00074 J** | **0.00047 J** | 0.0059 U | 0.0054 U |
| **TOC** | | | | | | | | | | | | | |
| Total Organic Carbon | NC | NC | NC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Notes:**
- All results are dry weight and are reported in parts per million (mg/kg)
- NRDCSRS = Non Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- NC = No Criteria
- U = Not detected above the quantitation limit; the value presented is the sample quantitation limit
- N/A = Not Analyzed
- **Bold = Positive Detection**

**Table 2**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Soil Sampling Results Table**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID** | SB29 | | SB30 | | TRIP BLANK | | |
| | | | **Sample ID** | SB29A | SB29AE | SB30A | SB30AE | TB01 | TRIP BLANK | TB |
| | | | **Lab ID** | JB5629-11 | JB5629-12 | JB5629-13 | JB5629-14 | JA51915-7 | JA78413-10 | JA98559-5 |
| | | | **Sample Date** | 5/3/2012 | 5/3/2012 | 5/3/2012 | 5/3/2012 | 7/20/2010 | 6/13/2011 | 2/2/2012 |
| | | | **Sample Interval (ft bgs)** | 15.0 - 15.5 | 15.0 - 15.5 | 17.0 - 17.5 | 17.0 - 17.5 | -- | -- | -- |
| **VOC** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | | | | | | |
| Acetone | NC | 70000 | 12 | 0.011 U | 0.012 U | 0.012 U | 0.011 U | 0.01 U | 0.01 U | 0.01 U |
| Methyl tert-butyl ether | 320 | 110 | 0.2 | 0.0011 U | 0.0012 U | 0.0012 U | 0.0011 U | 0.001 U | 0.001 U | 0.001 U |
| Methylene Chloride | 97 | 34 | 0.007 | **0.0019 J** | **0.0018 J** | **0.0034 J** | 0.0053 U | 0.002 U | 0.002 U | 0.002 U |
| Tetrachloroethene | 5 | 2 | 0.005 | 0.0054 U | 0.0061 U | **0.002 J** | **0.0017 J** | 0.001 U | 0.001 U | 0.001 U |
| **TOC** | | | | | | | | | | |
| Total Organic Carbon | NC | NC | NC | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Notes:**
- All results are dry weight and are reported in parts per million (mg/kg)
- NRDCSRS = Non Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- NC = No Criteria
- U = Not detected above the quantitation limit; the value presented is the sample quantitation limit
- N/A = Not Analyzed
- **Bold = Positive Detection**

**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW101 | GW101 | JA52001-1 | 16.0 - 19.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101A | JA52001-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101B | JA52001-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101C | JA52001-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101D | JA52001-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101E | JA52001-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| | GW101F | JA52001-7 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/21/2010 |
| GW102 | GW102 | JA52179-1 | 16.0 - 19.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102A | JA52179-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102B | JA52179-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102C | JA52179-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102D | JA52179-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102E | JA52179-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| | GW102F | JA52179-9 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/22/2010 |
| GW103 | GW103AP | JA57487-1 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103BP | JA57487-2 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103CU | JA57487-12 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103DU | JA57487-13 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103EP | JA57487-5 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103FU | JA57487-15 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/28/2010 |
| | GW103DUPP | JA57487-9 | | | | |
| GW105 | GW105 | JA52577-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| | GW105A | JA52577-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| | GW105B | JA52577-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| | GW105C | JA52577-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| | GW105D | JA52577-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| | GW105E | JA52577-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/24/2010 |
| GW106 | GW106AP | JA58277-10 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/7/2010 |
| | GW106BU | JA58277-21 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/7/2010 |
| | GW106CU | JA58277-22 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/7/2010 |
| | GW106DUPP | JA58277-27 | | | | |
| | GW106DU | JA58277-23 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/7/2010 |
| | GW106EP | JA58277-26 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/7/2010 |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs).
- NA= Not Applicable
- VOC = Volatile Organic Compounds (VOCs)+10 (search for 10 non-target tentatively identified compounds (TICS))
- MTBE = Methyl Tert Butyl Ether
- TBA =Tertiary Butyl Alcohol

**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW107 | GW107A | JA52208-1 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| | GW107B | JA52208-2 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| | GW107C | JA52208-3 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| | GW107D | JA52208-4 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| | GW107E | JA52208-5 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| | GW107F | JA52208-6 | 76.0 - 79.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/23/2010 |
| GW108 | GW108AAP | JA58277-1 | 23.0 - 26.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108AU | JA58277-14 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108BP | JA58277-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108CP | JA58277-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108DP | JA58277-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108EP | JA58277-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| | GW108FU | JA58277-19 | 76.0 - 79.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/6/2010 |
| GW109 | GW109AAP | JA58104-1 | 23.0 - 26.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109AP | JA58104-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109BP | JA58104-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109CP | JA58104-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109DUPP | JA58104-17 | | | | |
| | GW109DP | JA58104-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109EU | JA58104-15 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| | GW109FU | JA58104-16 | 76.0 - 79.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/5/2010 |
| GW110 | GW110AAP | JA57961-1 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110AP | JA57961-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110BU | JA57961-12 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110CP | JA57961-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110DU | JA57961-14 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110EP | JA57961-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |
| | GW110FU | JA57961-16 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/4/2010 |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs).
- NA= Not Applicable
- VOC = Volatile Organic Compounds (VOCs)+10 (search for 10 non-target tentatively identified compounds (TICS))
- MTBE = Methyl Tert Butyl Ether
- TBA =Tertiary Butyl Alcohol

**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW111 | GW111AAP | JA57758-1 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| | GW111AU | JA57758-10 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| | GW111BU | JA57758-11 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| | GW111CP | JA57758-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| | GW111DU | JA57758-13 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| | GW111EU | JA57758-14 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 10/1/2010 |
| GW112 | GW112AP | JA55343-1 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| | GW112BP | JA55343-2 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| | GW112CP | JA55343-3 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| | GW112DUPP | JA55343-9 | | | | |
| | GW112DP | JA55343-4 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| | GW112EP | JA55343-5 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| | GW112FP | JA55343-6 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/30/2010 |
| GW115 | GW115P | JA55107-12 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW115AAP | JA55107-24 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW115AP | JA55107-25 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW115BP | JA55107-26 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW115CP | JA55107-27 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW115DU | JA55107-33 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| GW116 | GW116AAP | JA57429-1 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| | GW116AP | JA57429-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| | GW116BU | JA57429-11 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| | GW116CU | JA57429-12 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| | GW116DP | JA57429-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| | GW116EU | JA57429-14 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/27/2010 |
| GW118 | GW118P | JA57091-1 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118AAU | JA57091-12 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118AP | JA57091-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118BP | JA57091-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118CU | JA57091-15 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118DUPU | JA57091-18 | | | | |
| | GW118DU | JA57091-16 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |
| | GW118EP | JA57091-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/22/2010 |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs).
- NA= Not Applicable
- VOC = Volatile Organic Compounds (VOCs)+10 (search for 10 non-target tentatively identified compounds (TICS))
- MTBE = Methyl Tert Butyl Ether
- TBA =Tertiary Butyl Alcohol

**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW119 | GW119P | JA56687-10 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119AAP | JA56687-11 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119AU | JA56687-22 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119BP | JA56687-25 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119CU | JA56687-24 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119DU | JA56687-30 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| | GW119EU | JA56687-31 | 68.0 - 71.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/17/2010 |
| GW120 | GW120P | JA53742-16 | 8.0 - 11.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120AAP | JA53742-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120AP | JA53742-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120BP | JA53742-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120CP | JA53742-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120DU | JA53742-16 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| | GW120EP | JA53742-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/10/2010 |
| GW122 | GW122AAP | JA53742-10 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| | GW122AP | JA54003-30 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| | GW122BU | JA54003-31 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| | GW122CP | JA54003-34 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| | GW122DU | JA54003-35 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| GW123 | GW123P | JA54003-2 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW123AAP | JA54003-4 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW123AP | JA54003-6 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW123DUPU | JA54003-13 | | | | |
| | GW123BP | JA54003-8 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW123CP | JA54003-10 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW123DP | JA54003-12 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| GW124 | GW124P | JA54003-17 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW124AAU | JA54003-18 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW124AP | JA54003-21 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW124BP | JA54003-23 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/12/2010 |
| | GW124CP | JA54003-26 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |
| | GW124DP | JA54003-28 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/13/2010 |

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- MTBE = Methyl Tert Butyl Ether
- TBA =Tertiary Butyl Alcohol

**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW126 | GW126P | JA54219-1 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126AAP | JA54219-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126AP | JA54219-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126BP | JA54219-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126CP | JA54219-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126DP | JA54219-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| | GW126EP | JA54219-7 | 68.0 - 71.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/17/2010 |
| GW127 | GW127P | JA54407-1 | 15.0 - 18.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| | GW127AP | JA54407-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| | GW127BP | JA54407-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| | GW127CP | JA54407-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| | GW127DP | JA54407-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| | GW127EP | JA54407-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/18/2010 |
| GW128 | GW128P | JA54548-1 | 15.0 - 18.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| | GW128AP | JA54548-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| | GW128BP | JA54548-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| | GW128CU | JA54548-12 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| | GW128DU | JA54548-13 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| | GW128EP | JA54548-6 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/19/2010 |
| GW129 | GW129P | JA54634-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129AAP | JA54634-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129AP | JA54634-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129BP | JA54634-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129DUPU | JA54634-20 | | | | |
| | GW129CU | JA54634-16 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129CP | JA54634-5 | | | | |
| | GW129DU | JA54634-17 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129EU | Not Analyzed | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |
| | GW129EP | Not Analyzed | | | | |
| | GW129FP | JA54634-8 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/23/2010 |

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- VOC = Volatile Organic Compounds (VOCs)+10 (search for 10 non-target tentatively identified compounds (TICS))
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- TBA =Tertiary Butyl Alcohol

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**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW131 | GW131P | JA54749-1 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131AAP | JA54749-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131AP | JA54749-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131BU | JA54749-13 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131CP | JA54749-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131DU | JA54749-15 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131EU | JA54749-17 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| | GW131FP | JA54749-8 | 80.0 - 83.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/24/2010 |
| GW132 | GW132AAP | JA55107-1 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW132AP | JA55107-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW132BP | JA55107-33 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW132CP | JA55107-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| GW133 | GW133P | JA56687-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133AAU | JA56687-14 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133AU | JA56687-15 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133BP | JA56687-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133CP | JA56687-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133DP | JA56687-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| | GW133EP | JA56687-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/16/2010 |
| GW135 | GW135P | JA55107-29 | 13.0 - 16.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/27/2010 |
| | GW135AAP | JA55107-7 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW135AP | JA55107-8 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW135BP | JA55107-9 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW135CP | JA55107-10 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| | GW135DU | JA55107-20 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/26/2010 |
| GW136 | GW136P | JA56177-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136AAP | JA56177-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136AU | JA56177-13 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136BP | JA56177-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136DUPU | JA56177-18 | | | | |
| | GW136CP | JA56177-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136DP | JA56177-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |
| | GW136EU | JA56177-17 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/13/2010 |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs).
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- VOC = Volatile Organic Compounds (VOCs)+10 (search for 10 non-target tentatively identified compounds (TICS))
- MTBE = Methyl Tert Butyl Ether
- TBA =Tertiary Butyl Alcohol

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*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW137 | GW137P | JA56090-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137AAP | JA56090-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137AP | JA56090-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137BP | JA56090-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137CP | JA56090-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137DP | JA56090-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| | GW137EP | JA56090-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/10/2010 |
| GW138 | GW138P | JA55790-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138AAU | JA55790-11 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138AP | JA55790-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138BP | JA55790-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138CU | JA55790-14 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138DUPP | JA55790-7 | | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| | GW138DU | JA55790-15 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/7/2010 |
| GW139 | GW139P | JA55951-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| | GW139AAP | JA55951-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| | GW139AU | JA55951-11 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| | GW139BP | JA55951-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| | GW139CP | JA55951-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| | GW139DU | JA55951-14 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/8/2010 |
| GW143 | GW143P | JA55639-1 | 10.0 - 13.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143AAU | JA55639-14 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143AU | JA55639-15 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143BP | JA55639-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143CP | JA55639-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143DP | JA55639-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| | GW143EP | JA55639-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/2/2010 |
| GW144 | GW144P | JA55639-10 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |
| | GW144AAP | JA55639-11 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |
| | GW144AP | JA55639-12 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |
| | GW144BP | JA55639-25 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |
| | GW144CU | JA55639-24 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |
| | GW144DP | JA55639-27 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/3/2010 |

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- TBA =Tertiary Butyl Alcohol

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*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW145 | GW145 | JA52764-1 | 12.0 - 15.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145AA | JA52764-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145A | JA52764-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145B | JA52764-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145C | JA52764-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145D | JA52764-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145DUP | JA52764-8 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| | GW145E | JA52764-7 | 70.0 - 73.0 | VOC+10, MTBE, TBA | Hydro-punch | 7/30/2010 |
| GW146 | GW146P | JA57240-9 | 9.0 - 12.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| | GW146AAP | JA57240-10 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| | GW146AP | JA57240-11 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| | GW146BP | JA57240-12 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| | GW146CP | JA57240-25 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| | GW146DU | JA57240-24 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/24/2010 |
| GW147 | GW147U | JA57240-13 | 9.0 - 12.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| | GW147AAU | JA57240-14 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| | GW147AP | JA57240-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| | GW147BP | JA57240-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| | GW147CP | JA57240-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| | GW147DU | JA57240-18 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 9/23/2010 |
| GW148 | GW148 | JA53433-1 | 8.0 - 11.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148AA | JA53433-2 | 20.0 - 23.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148A | JA53433-3 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148DUP | JA53433-7 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148B | JA53433-4 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148C | JA53433-5 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW148D | JA53433-6 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| GW149 | GW149 | JA53433-10 | 16.0 - 19.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW149A | JA53433-11 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW149B | JA53433-12 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW149C | JA53433-13 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/5/2010 |
| | GW149D | JA53433-14 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |

**Notes:**
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- TBA =Tertiary Butyl Alcohol

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*Joan's Cleaners*
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**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW150 | GW150 | JA53118-1 | 16.0 - 19.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| | GW150A | JA53118-2 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| | GW150B | JA53118-3 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| | GW150C | JA53118-4 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| | GW150D | JA53118-5 | 60.0 - 63.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| | GW150E | JA53118-6 | 67.0 - 70.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/3/2010 |
| GW151 | GW151 | JA53433-15 | 16.0 - 19.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |
| | GW151A | JA53433-16 | 30.0 - 33.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |
| | GW151B | JA53433-17 | 40.0 - 43.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |
| | GW151C | JA53433-18 | 50.0 - 53.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |
| | GW151D | JA53433-19 | 56.0 - 59.0 | VOC+10, MTBE, TBA | Hydro-punch | 8/6/2010 |
| SB03 | TWP02 | JA51915-6 | 10.0 - 20.0 | VOC+10, MTBE, TBA | Teflon Tubing | 7/20/2010 |
| SB05 | TWP01 | JA51915-3 | 10.0 - 20.0 | VOC+10, MTBE, TBA | Teflon Tubing | 7/20/2010 |

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**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| **QA/QC SAMPLES** | | | | | | |
| Field Blanks | FB01 | JA52001-8 | - | VOC+10, MTBE, TBA | NA | 7/21/2010 |
| | FB02 | JA52179-7 | - | VOC+10, MTBE, TBA | NA | 7/22/2010 |
| | FB03 | JA52208-7 | - | VOC+10, MTBE, TBA | NA | 7/23/2010 |
| | FB04 | JA52577-7 | - | VOC+10, MTBE, TBA | NA | 7/24/2010 |
| | FB05 | JA52764-9 | - | VOC+10, MTBE, TBA | NA | 7/30/2010 |
| | FB06 | JA53118-7 | - | VOC+10, MTBE, TBA | NA | 8/3/2010 |
| | FB07 | JA53433-8 | - | VOC+10, MTBE, TBA | NA | 8/5/2010 |
| | FB08 | JA53433-20 | - | VOC+10, MTBE, TBA | NA | 8/6/2010 |
| | FB09 | JA53742-8 | - | VOC+10, MTBE, TBA | NA | 8/10/2010 |
| | FB10 | JA54003-24 | - | VOC+10, MTBE, TBA | NA | 8/12/2010 |
| | FB11 | JA54003-36 | - | VOC+10, MTBE, TBA | NA | 8/13/2010 |
| | FB12 | JA54219-8 | - | VOC+10, MTBE, TBA | NA | 8/17/2010 |
| | FB13 | JA54407-7 | - | VOC+10, MTBE, TBA | NA | 8/18/2010 |
| | FB14 | JA54548-7 | - | VOC+10, MTBE, TBA | NA | 8/19/2010 |
| | FB15 | JA54634-9 | - | VOC+10, MTBE, TBA | NA | 8/23/2010 |
| | FB16 | JA54749-9 | - | VOC+10, MTBE, TBA | NA | 8/24/2010 |
| | FB17 | JA55107-5 | - | VOC+10, MTBE, TBA | NA | 8/26/2010 |
| | FB18 | JA55107-30 | - | VOC+10, MTBE, TBA | NA | 8/27/2010 |
| | FB19 | JA55343-7 | - | VOC+10, MTBE, TBA | NA | 8/30/2010 |
| | FB20 | JA55639-8 | - | VOC+10, MTBE, TBA | NA | 9/2/2010 |
| | FB21 | JA55639-28 | - | VOC+10, MTBE, TBA | NA | 9/3/2010 |
| | FB22 | JA55790-8 | - | VOC+10, MTBE, TBA | NA | 9/7/2010 |
| | FB23 | JA55951-7 | - | VOC+10, MTBE, TBA | NA | 9/8/2010 |
| | FB24 | JA56090-8 | - | VOC+10, MTBE, TBA | NA | 9/10/2010 |
| | FB25 | JA56177-9 | - | VOC+10, MTBE, TBA | NA | 9/17/2010 |
| | FB26 | JA56687-8 | - | VOC+10, MTBE, TBA | NA | 9/16/2010 |
| | FB27 | JA56687-29 | - | VOC+10, MTBE, TBA | NA | 9/17/2010 |
| | FB28 | JA57091-9 | - | VOC+10, MTBE, TBA | NA | 9/22/2010 |
| | FB29 | JA57240-7 | - | VOC+10, MTBE, TBA | NA | 9/23/2010 |
| | FB30 | JA57240-27 | - | VOC+10, MTBE, TBA | NA | 9/24/2010 |
| | FB31 | JA57429-7 | - | VOC+10, MTBE, TBA | NA | 9/27/2010 |
| | FB32 | JA57487-7 | - | VOC+10, MTBE, TBA | NA | 9/28/2010 |

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*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth ft bgs | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| **QA/QC SAMPLES** | | | | | | |
| Field Blanks | FB33 | JA57758-7 | - | VOC+10, MTBE, TBA | NA | 10/1/2010 |
| | FB34 | JA57961-8 | - | VOC+10, MTBE, TBA | NA | 10/4/2010 |
| | FB35 | JA58104-8 | - | VOC+10, MTBE, TBA | NA | 10/5/2010 |
| | FB36 | JA58277-8 | - | VOC+10, MTBE, TBA | NA | 10/6/2010 |
| | FB37 | JA58277-28 | - | VOC+10, MTBE, TBA | NA | 10/7/2010 |
| Trip Blanks | TB01 | JA51915-7 | - | VOC+10, MTBE, TBA | NA | 7/20/2010 |
| | TB02 | JA52001-9 | - | VOC+10, MTBE, TBA | NA | 7/21/2010 |
| | TB03 | JA52179-8 | - | VOC+10, MTBE, TBA | NA | 7/22/2010 |
| | TB04 | JA52208-8 | - | VOC+10, MTBE, TBA | NA | 7/23/2010 |
| | TB05 | JA52577-8 | - | VOC+10, MTBE, TBA | NA | 7/24/2010 |
| | TB06 | JA52764-10 | - | VOC+10, MTBE, TBA | NA | 7/27/2010 |
| | TB07 | JA53118-8 | - | VOC+10, MTBE, TBA | NA | 8/3/2010 |
| | TB08 | JA53433-9 | - | VOC+10, MTBE, TBA | NA | 7/27/2010 |
| | TB09 | JA53742-9 | - | VOC+10, MTBE, TBA | NA | 8/10/2010 |
| | TB10 | JA54003-15 | - | VOC+10, MTBE, TBA | NA | 8/12/2010 |
| | TB11 | JA54219-9 | - | VOC+10, MTBE, TBA | NA | 8/17/2010 |
| | TB12 | JA54407-8 | - | VOC+10, MTBE, TBA | NA | 8/18/2010 |
| | TB13 | JA54548-8 | - | VOC+10, MTBE, TBA | NA | 8/19/2010 |
| | TB14 | JA54634-10 | - | VOC+10, MTBE, TBA | NA | 8/23/2010 |
| | TB15 | JA54749-10 | - | VOC+10, MTBE, TBA | NA | 8/24/2010 |
| | TB16 | JA55107-6 | - | VOC+10, MTBE, TBA | NA | 8/26/2010 |
| | TB17 | JA55343-8 | - | VOC+10, MTBE, TBA | NA | 8/30/2010 |
| | TB18 | JA55639-9 | - | VOC+10, MTBE, TBA | NA | 9/3/2010 |
| | TB19 | JA55790-9 | - | VOC+10, MTBE, TBA | NA | 9/7/2010 |
| | TB20 | JA55951-8 | - | VOC+10, MTBE, TBA | NA | 9/8/2010 |
| | TB21 | JA56090-9 | - | VOC+10, MTBE, TBA | NA | 9/10/2010 |
| | TB22 | JA56177-10 | - | VOC+10, MTBE, TBA | NA | 9/13/2010 |
| | TB23 | JA56687-9 | - | VOC+10, MTBE, TBA | NA | 9/17/2010 |
| | TB24 | JA57091-10 | - | VOC+10, MTBE, TBA | NA | 9/22/2010 |
| | TB25 | JA57240-8 | - | VOC+10, MTBE, TBA | NA | 9/24/2010 |
| | TB26 | JA57429-8 | - | VOC+10, MTBE, TBA | NA | 9/27/2010 |
| | TB27 | JA57487-8 | - | VOC+10, MTBE, TBA | NA | 9/28/2010 |

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**Table 3**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sample Summary Table**

| Location | Sample ID | Lab ID | Sample Depth | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| **QA/QC SAMPLES** | | | | | | |
| Trip Blanks | TB28 | JA57758-8 | - | VOC+10, MTBE, TBA | NA | 10/1/2010 |
| | TB29 | JA57961-9 | - | VOC+10, MTBE, TBA | NA | 10/4/2010 |
| | TB30 | JA58104-9 | - | VOC+10, MTBE, TBA | NA | 10/5/2010 |
| | TB31 | JA58277-9 | - | VOC+10, MTBE, TBA | NA | 10/7/2010 |

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**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| | *Location ID* | **SB05** | **SB03** | **GW101** | | | | | | | **GW102** | | | | | | | **GW103** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Sample ID* | TWP01 | TWP02 | GW101 | GW101A | GW101B | GW101C | GW101D | GW101E | GW101F | GW102 | GW102A | GW102B | GW102C | GW102D | GW102E | GW102F | GW103AP | GW103BP | GW103CU | GW103DU | GW103EP | GW103FU | GW103DUPP |
| | *Lab ID* | JA51915-3 | JA51915-6 | JA52001-1 | JA52001-2 | JA52001-3 | JA52001-4 | JA52001-5 | JA52001-6 | JA52001-7 | JA52179-1 | JA52179-2 | JA52179-3 | JA52179-4 | JA52179-5 | JA52179-6 | JA52179-9 | JA57487-1 | JA57487-2 | JA57487-12 | JA57487-13 | JA57487-5 | JA57487-15 | JA57487-9 |
| | *Sample Date* | 7/20/2010 | 7/20/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 9/28/2010 | 9/28/2010 | 9/28/2010 | 9/28/2010 | 9/28/2010 | 9/28/2010 | 9/28/2010 |
| | *Sample Interval (ft)* | 10-20 | 10-20 | 16-19 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 80-83 | 16-19 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 80-83 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 80-83 | |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **10.1** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.27 J** | 1 U | **0.35 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | **0.65 J** | 1 U | 1 U | **0.51 J** | **0.36 J** | **0.66 J** | 1 U | 1 U | 1 U | **0.43 J** | **0.44 J** | **3.4** | **0.28 J** | **0.4 J** | 1 U | 1 U | **0.34 J** | **1** | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.34 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.95 J** | 1 U | 1 U | 1 U | 1 U | **0.29 J** | 1 U | **0.28 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.29 J** | **0.29 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | **0.61 J** | **0.7 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **47.2** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** | **0.3 J** | **0.39 J** | 1 U | 1 U | 1 U | 1 U | **0.55 J** | **0.51 J** | **0.7 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **0.33 J** | **0.39 J** |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.25 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.2** | 1 U | 1 U | 1 U | 1 U | **0.29 J** | 1 U | **0.28 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| | *Location ID* | **GW105** | | | | | | **GW106** | | | | | | **GW107** | | | | | | **GW108** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Sample ID* | GW105 | GW105A | GW105B | GW105C | GW105D | GW105E | GW106AP | GW106BU | GW106CU | GW106DUPP | GW106DU | GW106EP | GW107A | GW107B | GW107C | GW107D | GW107E | GW107F | GW108AAP | GW108AU | GW108BP | GW108CP | GW108DP | GW108EP | GW108FU |
| | *Lab ID* | JA52577-1 | JA52577-2 | JA52577-3 | JA52577-4 | JA52577-5 | JA52577-6 | JA58277-10 | JA58277-21 | JA58277-22 | JA58277-27 | JA58277-23 | JA58277-26 | JA52208-1 | JA52208-2 | JA52208-3 | JA52208-4 | JA52208-5 | JA52208-6 | JA58277-1 | JA58277-14 | JA58277-3 | JA58277-4 | JA58277-5 | JA58277-6 | JA58277-19 |
| | *Sample Date* | 7/28/2010 | 7/28/2010 | 7/28/2010 | 7/28/2010 | 7/28/2010 | 7/28/2010 | 10/7/2010 | 10/7/2010 | 10/7/2010 | 10/7/2010 | 10/7/2010 | 10/7/2010 | 7/23/2010 | 7/23/2010 | 7/23/2010 | 7/23/2010 | 7/23/2010 | 7/23/2010 | 10/6/2010 | 10/6/2010 | 10/6/2010 | 10/6/2010 | 10/6/2010 | 10/6/2010 | 10/6/2010 |
| | *Sample Interval (ft)* | 12-15 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 30-33 | 40-43 | 50-53 | | 60-63 | 70-73 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 76-79 | 23-26 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 76-79 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.36 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** | 1 U | **0.31 J** | **0.35 J** | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | **0.8 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.34 J** | **0.36 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **0.51 J** | 1 U | **0.35 J** | 1 U | 1 U | 1 U | **0.31 J** | **0.31 J** |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| *Location ID* | | **GW109** | | | | | | | | **GW110** | | | | | | | **GW111** | | | | | | **GW112** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | GW109AAP | GW109AP | GW109BP | GW109CP | GW109DUPP | GW109DP | GW109EU | GW109FU | GW110AA | GW110AP | GW110BU | GW110CP | GW110DU | GW110EP | GW110FU | GW111AA | GW111AU | GW111BU | GW111CP | GW111DU | GW111EU | GW112AP | GW112BP | GW112CP | GW112DUP | GW112DP |
| *Lab ID* | | JA58104-1 | JA58104-2 | JA58104-3 | JA58104-4 | JA58104-17 | JA58104-5 | JA58104-15 | JA58104-16 | JA57961-1 | JA57961-2 | JA57961-12 | JA57961-4 | JA57961-14 | JA57961-6 | JA57961-16 | JA57758-1 | JA57758-10 | JA57758-11 | JA57758-4 | JA57758-13 | JA57758-14 | JA55343-1 | JA55343-2 | JA55343-3 | JA55343-9 | JA55343-4 |
| *Sample Date* | | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/5/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/1/2010 | 10/1/2010 | 10/1/2010 | 10/1/2010 | 10/1/2010 | 10/1/2010 | 8/30/2010 | 8/30/2010 | 8/30/2010 | 8/30/2010 | 8/30/2010 |
| *Sample Interval (ft)* | | 23-26 | 30-33 | 40-43 | 50-53 | | 60-63 | 70-73 | 76-79 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 80-83 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 30-33 | 40-43 | 50-53 | | 60-63 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.26 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | **0.33 J** | 1 U | 1 U | **0.59 J** | **0.55 J** | **0.68 J** | 1 U | 1 U | **1.1** | 1 U | **0.25 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.88 J** | 1 U | 1 U | **0.28 J** | 1 U | **0.66 J** |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.56 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.52 J** | **0.78 J** | **0.71 J** | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **4.4** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.41 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.34 J** | **0.51 J** | 1 U | **0.72 J** | **0.64 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.56 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| *Location ID* | | **GW112EP** | | **GW115** | | | | | | **GW116** | | | | | | | **GW118** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | GW112EP | GW112FP | GW115P | GW115AAP | GW115AP | GW115BP | GW115CP | GW115DU | GW116AA | GW116AP | GW116BU | GW116CU | GW116DP | GW116EU | GW118P | GW118AAU | GW118AP | GW118BP | GW118CU | GW118DUPU | GW118DU | GW118EP |
| *Lab ID* | | JA55343-5 | JA55343-6 | JA55107-12 | JA55107-24 | JA55107-25 | JA55107-26 | JA55107-27 | JA55107-33 | JA57429-1 | JA57429-2 | JA57429-11 | JA57429-12 | JA57429-5 | JA57429-14 | JA57091-1 | JA57091-12 | JA57091-3 | JA57091-4 | JA57091-15 | JA57091-18 | JA57091-16 | JA57091-7 |
| *Sample Date* | | 8/30/2010 | 8/30/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 | 9/22/2010 |
| *Sample Interval (ft)* | | 70-73 | 80-83 | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | | 60-63 | 70-73 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | **0.30 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | **0.35 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **1.2** | 1 U | 1 U | 1 U | **1.3** | **1.8** | 1 U | 1 U | 1 U | 1 U | 1 U | **1.3** | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.46 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3.6** | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.9** | **0.64** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | **0.44 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of Concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **GW119** | | | | | | | **GW120** | | | | | | | | **GW122** | | | | | **GW123** | | | | | | |
| *Sample ID* | | GW119P | GW119AAP | GW119AU | GW119BP | GW119CU | GW119DU | GW119EU | GW120P | GW120AAP | GW120AP | GW120BP | GW120CP | GW120DU | GW120EP | GW122AAP | GW122AP | GW122BU | GW122CP | GW122DU | GW123P | GW123AAP | GW123AP | GW123DUPU | GW123BP | GW123CP | GW123DP |
| *Lab ID* | | JA56687-10 | JA56687-11 | JA56687-22 | JA56687-25 | JA56687-24 | JA56687-30 | JA56687-31 | JA53742-1 | JA53742-2 | JA53742-3 | JA53742-4 | JA53742-5 | JA53742-16 | JA53742-7 | JA53742-10 | JA54003-30 | JA54003-31 | JA54003-34 | JA54003-35 | JA54003-2 | JA54003-4 | JA54003-6 | JA54003-13 | JA54003-8 | JA54003-10 | JA54003-12 |
| *Sample Date* | | 9/17/2010 | 9/17/2010 | 9/17/2010 | 9/17/2010 | 9/17/2010 | 9/17/2010 | 9/17/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/10/2010 | 8/13/2010 | 8/13/2010 | 8/13/2010 | 8/13/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 |
| *Sample Interval (ft)* | | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 68-71 | 8-11 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 13-16 | 20-23 | 30-33 | | 40-43 | 50-53 | 60-63 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **9.8 J** | 10 U | 10 U | 10 U | 10 U | **16.6** | 10 U | 10 U | 10 U | 10 U | **8.6 J** | 10 U | **4.6 J** | 10 U | 10 U | 10 U | 10 U | **4.8 J** |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.30 J** |
| Chloroform | 70 | 1 U | 1 U | 1 U | **1.5** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.64 J** | 1 U | 1 U | **0.57 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.71 J** | **0.28 J** |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | **3.2** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3.8** | 1 U | 1 U | **0.52 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.49 J** |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.44 J** | 1 U | 1 U | 1 U | 1 U | **0.37 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.54 J** |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **GW124** | | | | | | **GW126** | | | | | | | **GW127** | | | | | | **GW128** | | | | | | |
| *Sample ID* | | GW124P | GW124AAU | GW124AP | GW124BP | GW124CP | GW124DP | GW126P | GW126AAP | GW126AP | GW126BP | GW126CP | GW126DP | GW126EP | GW127P | GW127AP | GW127BP | GW127CP | GW127DP | GW127EP | GW128P | GW128AP | GW128BP | GW128CU | GW128DU | GW128EP | |
| *Lab ID* | | JA54003-17 | JA54003-18 | JA54003-21 | JA54003-23 | JA54003-26 | JA54003-28 | JA54219-1 | JA54219-2 | JA54219-3 | JA54219-4 | JA54219-5 | JA54219-6 | JA54219-7 | JA54407-1 | JA54407-2 | JA54407-3 | JA54407-4 | JA54407-5 | JA54407-6 | JA54548-1 | JA54548-2 | JA54548-3 | JA54548-12 | JA54548-13 | JA54548-6 | | |
| *Sample Date* | | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/13/2010 | 8/13/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | |
| *Sample Interval (ft)* | | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 68-71 | 15-18 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 15-18 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | | |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.29 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.38 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | **0.77 J** | 1 U | 1 U | 1 U | **0.50 J** | 1 U | 1 U | **0.31 J** | 1 U | **0.75 J** | 1 U | 1 U | 1 U | **0.28 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **2.7** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1** | **0.59 J** | 1 U | 1 U | 1 U | 1 U | **0.57 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **4.1** | 1 U | **0.26 J** | | |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | | |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | | |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **4.6** | 1 U | 1 U | 1 U | **1.6** | **2.5** | **11.7** | **1.1** | 1 U | 1 U | **13.6** | **35.9** | **3.2** | **0.40 J** | 1 U | **0.80 J** | **10.7** | **12** | 1 U | 1 U | |
| Toluene | 600 | 1 U | 1 U | **0.32 J** | **0.32 J** | 1 U | **0.49 J** | 1 U | 1 U | 1 U | 1 U | **0.41 J** | 1 U | **0.59 J** | 1 U | 1 U | **0.33 J** | 1 U | 1 U | **0.36 J** | 1 U | **0.31 J** | **0.40 J** | 1 U | 1 U | **0.42 J** | | |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.69 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | | |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| *Location ID* | | **GW129** | | | | | | | | | **GW131** | | | | | | | | **GW132** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | GW129P | GW129AAP | GW129AP | GW129BP | GW129DUPU | GW129CP | GW129CU | GW129DU | GW129FP | GW131P | GW131AAP | GW131AP | GW131BU | GW131CP | GW131DU | GW131EU | GW131FP | GW132AAP | GW132AP | GW132BP | GW132CP |
| *Lab ID* | | JA54634-1 | JA54634-2 | JA54634-3 | JA54634-4 | JA54634-20 | JA54634-5 | JA54634-16 | JA54634-17 | JA54634-8 | JA54749-1 | JA54749-2 | JA54749-3 | JA54749-13 | JA54749-5 | JA54749-15 | JA54749-17 | JA54749-8 | JA55107-1 | JA55107-2 | JA55107-3 | JA55107-4 |
| *Sample Date* | | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/24/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 |
| *Sample Interval (ft)* | | 12-15 | 20-23 | 30-33 | 40-43 | | 50-53 | | 60-63 | 80-83 | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 80-83 | 20-23 | 30-33 | 40-43 | 50-53 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **4.5 J** | 10 U | 10 U | 10 U | **9.5 J** | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.29 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **4.3** | **0.23 J** | 1 U | **0.26 J** | 1 U | 1 U | 1 U | 1 U | **1.1** | 1 U | **7.4** | **0.60 J** |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | **1.1** | **1.2** | **1.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.7** | **0.40 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | **0.50 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.58 J** | 1 U | 1 U | 1 U | 1 U | **0.38 J** | 1 U | 1 U | **0.32 J** | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| *Location ID* | | **GW133** | | | | | | | **GW135** | | | | | | **GW136** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | GW133P | GW133AAU | GW133AU | GW133BP | GW133CP | GW133DP | GW133EP | GW135P | GW135AAP | GW135AP | GW135BP | GW135CP | GW135DU | GW136P | GW136AA | GW136AU | GW136BP | GW136DUPU | GW136CP | GW136DP | GW136EU |
| *Lab ID* | | JA56687-1 | JA56687-14 | JA56687-15 | JA56687-4 | JA56687-5 | JA56687-6 | JA56687-7 | JA55107-29 | JA55107-7 | JA55107-8 | JA55107-9 | JA55107-10 | JA55107-20 | JA56177-1 | JA56177-2 | JA56177-13 | JA56177-4 | JA56177-18 | JA56177-5 | JA56177-6 | JA56177-17 |
| *Sample Date* | | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 8/27/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 | 9/13/2010 |
| *Sample Interval (ft)* | | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 13-16 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 12-15 | 20-23 | 30-33 | 40-43 | | 50-53 | 60-63 | 70-73 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.26 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | **0.72 J** | 1 U | 1 U | **0.59 J** | **0.32 J** | 1 U | 1 U | 1 U | **1.3** | 1 U | 1 U | **0.71 J** | 1 U | **6.1** | **0.64** | 1 U | **0.60** | **0.34** | **0.33** | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.3** | **28.4** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | **0.34 J** | **1.6** | **0.24 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | **2.6** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3.8** | **42.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.48 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **3** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| | | GW137 | | | | | | | GW138 | | | | | | | GW139 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | GW137P | GW137AAP | GW137AP | GW137BP | GW137CP | GW137DP | GW137EP | GW138P | GW138AAU | GW138AP | GW138BP | GW138CU | GW138DUPP | GW138DU | GW139P | GW139AAP | GW139AU | GW139BP | GW139CP | GW139DU |
| *Sample ID* | | JA56090-1 | JA56090-2 | JA56090-3 | JA56090-4 | JA56090-5 | JA56090-6 | JA56090-7 | JA55790-1 | JA55790-11 | JA55790-3 | JA55790-4 | JA55790-14 | JA55790-7 | JA55790-15 | JA55951-1 | JA55951-2 | JA55951-11 | JA55951-4 | JA55951-5 | JA55951-14 |
| *Lab ID* | | 9/10/2010 | 9/10/2010 | 9/10/2010 | 9/10/2010 | 9/10/2010 | 9/10/2010 | 9/10/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 |
| *Sample Date* | | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | | 60-63 | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 |
| *Sample Interval (ft)* | | | | | | | | | | | | | | | | | | | | | |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | **0.35 J** | **0.63 J** | 1 U | 1 U | 1 U | **0.26 J** | **0.75 J** | **0.52 J** | 1 U | 1 U | 1 U | **0.30 J** | **0.89 J** | **0.47 J** | 1 U | **3.7** | **0.34 J** | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **4** | **6.7** |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.3** | **3.1** | **60** | **62.2** | **7.8** | 1 U | 1 U | 1 U | 1 U | **35.9** | **196** |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.42 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.79 J** | **2.6** |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| | | GW143 | | | | | | | GW144 | | | | | | GW145 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | GW143P | GW143AAU | GW143AU | GW143BP | GW143CP | GW143DP | GW143EP | GW144P | GW144AAP | GW144AP | GW144BP | GW144CU | GW144DP | GW145 | GW145AA | GW145A | GW145B | GW145C | GW145D | GW145DUP | GW145E |
| *Sample ID* | | JA55639-1 | JA55639-14 | JA55639-15 | JA55639-4 | JA55639-5 | JA55639-6 | JA55639-7 | JA55639-10 | JA55639-11 | JA55639-12 | JA55639-25 | JA55639-24 | JA55639-27 | JA52764-1 | JA52764-2 | JA52764-3 | JA52764-4 | JA52764-5 | JA52764-6 | JA52764-8 | JA52764-7 |
| *Lab ID* | | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/3/2010 | 9/3/2010 | 9/3/2010 | 9/3/2010 | 9/3/2010 | 9/3/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 |
| *Sample Date* | | 10-13 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 70-73 | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 12-15 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | | 70-73 |
| *Sample Interval (ft)* | | | | | | | | | | | | | | | | | | | | | | |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | **1.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | **0.71 J** | 1 U | 1 U | **0.33 J** | 1 U | **0.92 J** | **0.86 J** | **0.73 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.57 J** | 1 U | **0.45 J** | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | **0.91 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.51 J** | **0.43 J** | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | **0.59 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | **0.28 J** | **1.2** | **0.78 J** | 1 U | 1 U | 1 U | 1 U | **0.57 J** | 1 U | **0.49 J** | 1 U | 1 U | 1 U | 1 U | **7.6** | **1.2** | 1 U | **1.2** | **1.1** | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.45 J** | **10.2** | **8.6** | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | **0.33 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **0.33 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.38 J** | **0.41 J** | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | **6.3** | **0.83 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | **0.59 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **GW146** | | | | | | **GW147** | | | | | | **GW148** | | | | | | | **GW149** | | | | |
| *Sample ID* | | GW146P | GW146AAP | GW146AP | GW146BP | GW146CP | GW146DU | GW147U | GW147AAU | GW147AP | GW147BP | GW147CP | GW147DU | GW148 | GW148AA | GW148A | GW148DUP | GW148B | GW148C | GW148D | GW149 | GW149A | GW149B | GW149C | GW149D |
| *Lab ID* | | JA57240-9 | JA57240-10 | JA57240-11 | JA57240-12 | JA57240-25 | JA57240-24 | JA57240-13 | JA57240-14 | JA57240-3 | JA57240-4 | JA57240-5 | JA57240-18 | JA53433-1 | JA53433-2 | JA53433-3 | JA53433-7 | JA53433-4 | JA53433-5 | JA53433-6 | JA53433-10 | JA53433-11 | JA53433-12 | JA53433-13 | JA53433-14 |
| *Sample Date* | | 9/23/2010 | 9/23/2010 | 9/24/2010 | 9/24/2010 | 9/24/2010 | 9/24/2010 | 9/23/2010 | 9/23/2010 | 9/23/2010 | 9/23/2010 | 9/23/2010 | 9/23/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/6/2010 |
| *Sample Interval (ft)* | | 9-12 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 9-12 | 20-23 | 30-33 | 40-43 | 50-53 | 60-63 | 8-11 | 20-23 | 30-33 | | 40-43 | 50-53 | 60-63 | 16-19 | 30-33 | 40-43 | 50-53 | 60-63 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **8.2 J** | 10 U | **5.0 J** | 10 U | **6.9 J** | **4.8 J** |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.29 J** | 1 U | 1 U | 1 U | **0.28 J** | 1 U |
| Chloroform | 70 | 1 U | **1.5** | **1.1** | **0.71 J** | 1 U | 1 U | **1.1** | **2.8** | 1 U | 1 U | 1 U | 1 U | 1 U | **0.40 J** | **1.5** | **1.5** | **0.99 J** | **0.28 J** | 1 U | **0.58 J** | 1 U | **0.56 J** | **1.2** | **0.40 J** |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | **1.6** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **2.1** | **0.82 J** | **0.56 J** | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.94 J** | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.39 J** | **0.54 J** | 1 U | **0.30 J** | 1 U | **0.49 J** | **0.35 J** |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **GW150** | | | | | | **GW151** | | | | | **Field Blanks** | | | | | | | | | | | | |
| *Sample ID* | | GW150 | GW150A | GW150B | GW150C | GW150D | GW150E | GW151 | GW151A | GW151B | GW151C | GW151D | FB01 | FB02 | FB03 | FB04 | FB05 | FB06 | FB07 | FB08 | FB09 | FB10 | FB11 | FB12 | FB13 |
| *Lab ID* | | JA53118-1 | JA53118-2 | JA53118-3 | JA53118-4 | JA53118-5 | JA53118-6 | JA53433-15 | JA53433-16 | JA53433-17 | JA53433-18 | JA53433-19 | JA52001-8 | JA52179-7 | JA52208-7 | JA52577-7 | JA52764-9 | JA53118-7 | JA53433-8 | JA53433-20 | JA53742-8 | JA54003-24 | JA54003-36 | JA54219-8 | JA54407-7 |
| *Sample Date* | | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/6/2010 | 8/6/2010 | 8/6/2010 | 8/6/2010 | 8/6/2010 | 7/21/2010 | 7/22/2010 | 7/23/2010 | 7/28/2010 | 7/30/2010 | 8/3/2010 | 8/5/2010 | 8/6/2010 | 8/10/2010 | 8/12/2010 | 8/13/2010 | 8/17/2010 | 8/18/2010 |
| *Sample Interval (ft)* | | 16-19 | 30-33 | 40-43 | 50-53 | 60-63 | 67-70 | 16-19 | 30-33 | 40-43 | 50-53 | 56-59 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | **11.7** | 10 U | **4.9 J** | **3.0 J** | **3.8 J** | **8.2 J** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.38 J** | 1 U | 1 U | 1 U | 1 U | **0.27 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.41 J** | **0.38 J** | **0.71 J** | **0.38 J** | **0.31 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.77 J** | **0.27 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | **0.38 J** | 2 U | 2 U | **0.48 J** | **0.59 J** | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | **0.38 J** | **0.64 J** | 1 U | **0.35 J** | 1 U | 1 U | **0.42 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | **0.89 J** | **2.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 4**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Shallow Groundwater Screening Sampling Results Table**

| *Location ID* | | **Field Blanks** | | | | | | | | | | | | | | | | | | | | | | | | | **Trip Blanks** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | FB12 | FB13 | FB14 | FB15 | FB16 | FB17 | FB18 | FB19 | FB20 | FB21 | FB22 | FB23 | FB24 | FB25 | FB25 | FB26 | FB28 | FB29 | FB30 | FB31 | FB32 | FB33 | FB34 | FB35 | FB36 | FB37 | TB01 | TB02 | TB03 |
| *Lab ID* | | JA54219-8 | JA54407-7 | JA54548-7 | JA54634-9 | JA54749-9 | JA55107-5 | JA55107-30 | JA55343-7 | JA55639-8 | JA55639-28 | JA55790-8 | JA55951-7 | JA56090-8 | JA56177-9 | JA56687-29 | JA56687-8 | JA57091-9 | JA57240-7 | JA57240-27 | JA57429-7 | JA57487-7 | JA57758-7 | JA57961-8 | JA58104-8 | JA58277-8 | JA58277-28 | JA51915-7 | JA52001-9 | JA52179-8 |
| *Sample Date* | | 8/17/2010 | 8/18/2010 | 8/19/2010 | 8/23/2010 | 8/24/2010 | 8/26/2010 | 8/27/2010 | 8/30/2010 | 9/2/2010 | 9/3/2010 | 9/7/2010 | 9/8/2010 | 9/10/2010 | 9/13/2010 | 9/17/2010 | 9/16/2010 | 9/22/2010 | 9/23/2010 | 9/24/2010 | 9/27/2010 | 9/28/2010 | 10/1/2010 | 10/4/2010 | 10/5/2010 | 10/6/2010 | 10/7/2010 | 7/20/2010 | 7/21/2010 | 7/22/2010 |
| *Sample Interval (ft)* | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| *Location ID* | | **Trip Blanks** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | TB04 | TB05 | TB06 | TB07 | TB08 | TB09 | TB10 | TB11 | TB12 | TB13 | TB14 | TB15 | TB16 | TB17 | TB18 | TB19 | TB20 | TB21 | TB22 | TB23 | TB24 | TB25 | TB26 | TB27 | TB28 | TB29 | TB30 | TB31 | |
| *Lab ID* | | JA52208-8 | JA52577-8 | JA52764-10 | JA53118-8 | JA53433-9 | JA53742-9 | JA54003-15 | JA54219-9 | JA54407-8 | JA54548-8 | JA54634-10 | JA54749-10 | JA55107-6 | JA55343-8 | JA55639-9 | JA55790-9 | JA55951-8 | JA56090-9 | JA56177-10 | JA56687-9 | JA57091-10 | JA57240-8 | JA57429-8 | JA57487-8 | JA57758-8 | JA57961-9 | JA58104-9 | JA58277-9 | | |
| *Sample Date* | | 7/23/2010 | 7/28/2010 | 7/30/2010 | 8/3/2010 | 8/6/2010 | 8/10/2010 | 8/13/2010 | 8/17/2010 | 8/18/2010 | 8/19/2010 | 8/23/2010 | 8/24/2010 | 8/27/2010 | 8/30/2010 | 9/3/2010 | 9/7/2010 | 9/8/2010 | 9/10/2010 | 9/13/2010 | 9/17/2010 | 9/22/2010 | 9/24/2010 | 9/27/2010 | 9/28/2010 | 10/1/2010 | 10/4/2010 | 10/5/2010 | 10/7/2010 | | |
| *Sample Interval (ft)* | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Methyl Tert Butyl Ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Methylene chloride | 3 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | |
| Tert Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Vinyl chloride | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Xylene (total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminent of concern above detection limit.**
**Concentration exceeds GWQS**

**Table 5**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW201 | GW201AA | JA79452-13 | 20.5 - 21.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW201A | JA79452-14 | 32.5 - 33.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW201B | JA79452-15 | 42.5 - 43.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW201C | JA79452-21 | 52.5 - 53.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW201D | JA79452-16 | 62.5 - 63.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW201E | JA79452-17 | 72.5 - 73.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW201F | JA79452-18 | 82.5 - 83.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW201H | JA79452-19 | 102.5 - 103.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| GW202 | GW202E | JA79452-5 | 71.0 - 72.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/22/11 |
| | GW202F | JA79452-6 | 81.0 - 82.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/22/11 |
| | GW202G | JA79452-7 | 91.0 - 92.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW202H | JA79452-8 | 100.0 - 101.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW202I | JA79452-9 | 110.0 - 111.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW202J | JA79452-10 | 120.0 - 121.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/23/11 |
| | GW202K | JA79452-11 | 129.0 - 130.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW202L | JA79452-12 | 140.0 - 141.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| | GW202M | JA79452-20 | 105.0 - 151.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/24/11 |
| GW203 | GW203B | JA78573-12 | 39.0 - 40.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/16/11 |
| | GW203C | JA78573-13 | 49.0 - 50.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/16/11 |
| | GW203D | JA78573-14 | 62.0 - 63.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/17/11 |
| | GW203E | JA78573-15 | 69.5 - 70.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/17/11 |
| | GW203F | JA78573-16 | 81.5 - 82.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/17/11 |
| | GW203G | JA78573-17 | 90.0 - 91.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/17/11 |
| | GW203H | JA78573-20 | 99.0 - 100.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/20/11 |
| | GW203I | JA78573-21 | 109.0 - 110.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/20/11 |
| | GW203J | JA78573-22 | 119.0 - 120.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/20/11 |
| | GW203K | JA78573-23 | 129.0 - 130.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/21/11 |
| | GW203L | No Recovery | 139.0 - 140.0 | No Recovery | | |
| | GW203M | No Recovery | 149.0 - 150.0 | No Recovery | | |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs)
- TCL VOC+10 = Target compound list volatile organic compounds with a library search for 10 tentatively identified compounds (TICS)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol

**Table 5**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| GW204 | GW204B | JA79637-19 | 39.5 - 40.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/30/11 |
| | DUP03 | JA79637-18 | 39.5 - 40.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/30/11 |
| | GW204C | JA79637-20 | 49.5 - 50.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/30/11 |
| | GW204D | JA79637-21 | 59.5 - 60.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/30/11 |
| | GW204E | JA79637-22 | 69.5 - 70.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/30/11 |
| | GW204F | JA79637-23 | 79.5 - 80.5 | TCL VOC+10, MTBE, TBA | Hydropunch | 7/1/11 |
| GW205 | GW205B | JA78573-4 | 39.0 - 40.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/14/11 |
| | GW205C | JA78573-5 | 49.0 - 50.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/14/11 |
| | GW205D | JA78573-6 | 59.0 - 60.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/15/11 |
| | GW205E | JA78573-7 | 69.0 - 70.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/15/11 |
| | GW205F | JA78573-8 | 79.0 - 80.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/15/11 |
| GW206 | GW206B | JA79637-1 | 39.0 - 40.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/27/11 |
| | GW206C | JA79637-2 | 49.0 - 50.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/27/11 |
| | GW206D | JA79637-3 | 59.0 - 60.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/27/11 |
| | GW206E | JA79637-4 | 69.0 - 70.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/28/11 |
| | DUP01 | JA79637-10 | 69.0 - 70.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/28/11 |
| | GW206F | JA79637-5 | 79.0 - 80.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/28/11 |
| | GW206G | JA79637-6 | 89.0 - 90.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/28/11 |
| | GW206H | No Recovery | 109.0 - 100.0 | No Recovery | | |
| | GW206I | JA79637-15 | 109.0 - 110.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/29/11 |
| | DUP02 | JA79637-17 | 109.0 - 110.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/29/11 |
| | GW206J | No Recovery | 119.0 - 120.0 | No Recovery | | |
| | GW206K | JA79637-16 | 129.0 - 130.0 | TCL VOC+10, MTBE, TBA | Hydropunch | 6/29/11 |
| | GW206L | No Recovery | 139.0 - 140.0 | No Recovery | | |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs)
- TCL VOC+10 = Target compound list volatile organic compounds with a library search for 10 tentatively identified compounds (TICS)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol

**Table 5**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| QA/QC SAMPLES | | | | | | |
| Field Blank | FB01 | JA78573-1 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/14/11 |
| Field Blank | FB02 | JA78573-2 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/15/11 |
| Field Blank | FB03 | JA78573-9 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/16/11 |
| Field Blank | FB04 | JA78573-10 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/17/11 |
| Field Blank | FB05 | JA78573-18 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/20/11 |
| Field Blank | FB06 | JA78573-24 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/21/11 |
| Field Blank | FB07 | JA79452-1 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/22/11 |
| Field Blank | FB08 | JA79452-2 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/23/11 |
| Field Blank | FB09 | JA79452-3 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/24/11 |
| Field Blank | FB10 | JA79637-8 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/27/11 |
| Field Blank | FB11 | JA79637-9 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/28/11 |
| Field Blank | FB12 | JA79637-12 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/29/11 |
| Field Blank | FB13 | JA79637-13 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/30/11 |
| Field Blank | FB14 | JA79637-14 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 7/1/11 |
| Trip Blank | Trip Blank | JA78573-3 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/9/11 |
| Trip Blank | Trip Blank | JA78573-11 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/9/11 |
| Trip Blank | Trip Blank | JA78573-19 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/14/11 |
| Trip Blank | Trip Blank | JA79452-4 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/24/11 |
| Trip Blank | Trip Blank | JA79637-7 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 6/28/11 |
| Trip Blank | Trip Blank | JA79637-11 | - | TCL VOC+10, MTBE, TBA | Grab Sample | 7/1/11 |

**Notes:**
- Sample depth is reported in feet below ground surface (ft bgs)
- TCL VOC+10 = Target compound list volatile organic compounds with a library search for 10 tentatively identified compounds (TICS)
- MTBE = Methyl tert-butyl ether
- TBA = Tertiary-Butyl Alcohol

**Table 6**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sampling Results Table**

| *Location ID* | | **GW201** | | | | | | | | **GW202** | | | | | | | | | **GW203** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | GW201AA | GW201A | GW201B | GW201C | GW201D | GW201E | GW201F | GW201H | GW202E | GW202F | GW202G | GW202H | GW202I | GW202J | GW202K | GW202L | GW202M | GW203B | GW203C | GW203D | GW203E | GW203F | GW203G | GW203H | GW203I | GW203J | GW203K |
| *Lab ID* | | JA79452-13 | JA79452-14 | JA79452-15 | JA79452-21 | JA79452-16 | JA79452-17 | JA79452-18 | JA79452-19 | JA79452-5 | JA79452-6 | JA79452-7 | JA79452-8 | JA79452-9 | JA79452-10 | JA79452-11 | JA79452-12 | JA79452-20 | JA78573-12 | JA78573-13 | JA78573-14 | JA78573-15 | JA78573-16 | JA78573-17 | JA78573-20 | JA78573-21 | JA78573-22 | JA78573-23 |
| *Sample Date* | | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/22/2011 | 6/22/2011 | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/16/2011 | 6/16/2011 | 6/17/2011 | 6/17/2011 | 6/17/2011 | 6/17/2011 | 6/20/2011 | 6/20/2011 | 6/20/2011 | 6/21/2011 |
| *Sampel Interval (ft, bgs)* | | 20.5 - 21.5 | 32.5 - 33.5 | 42.5. - 43.5 | 52.5 - 53.5 | 62.5 - 63.5 | 72.5 - 73.5 | 82.5 - 83.5 | 102.5 - 103.5 | 71 - 72 | 81 - 82 | 91 - 92 | 100 - 101 | 110 - 111 | 120 - 121 | 129 - 130 | 140 - 141 | 150 - 151 | 39 - 40 | 49 - 50 | 62 - 63 | 69.5 - 70.5 | 81.5 - 82.5 | 90 - 91 | 99 - 100 | 109 - 110 | 119 - 120 | 129 - 130 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 30 | 1 U | 1 U | 1 U | 1 U | **0.54 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethylene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.28 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone (MEK) | 300 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **11** | **60.4** | **20.5** | **30.6** | **8.6 J** |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **1.4 J** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | **13.6** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **18.4** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **11.4** | **11.2** | 10 U | 10 U |
| Benzene | 1 | **0.26 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | **0.53 J** | 2 U | **0.2 J** | **0.92 J** | **0.4 J** | 2 U | 2 U | 2 U | **0.46 J** | **0.87 J** | **0.59 J** | **0.37 J** | **0.5 J** | **0.43 J** | 2 U | **0.23 J** | **1.8 J** | **4.1** | 2 U | **0.28 J** | 2 U | 2 U | 2 U | 2 U | 2 U | **0.2 J** | **0.26 J** |
| Chloroform | 70 | 1 U | **0.63 J** | **0.26 J** | **0.4 J** | 1 U | **0.24 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **2.8** | **0.42 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.57 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | **2.6** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.28 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.98 J** | 1 U | 1 U | 1 U | 1 U | **0.36 J** | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.21 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylcylohexane | NC | 5 U | **0.18 J** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.48 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **0.95 J** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 600 | 1 U | **13.1** | **0.22 J** | 1 U | 1 U | 1 U | 1 U | 1 U | **0.58 J** | **0.47 J** | 1 U | **0.32 J** | **4.5** | **2.8** | 1 U | **0.5 J** | **6.9** | **4.5** | **5.7** | **1.8** | **2.9** | **6.6** | **16.5** | **2.4** | **4** | **5.5** | **5.3** |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.5** | 1 U | 1 U | 1 U | 1 U | **0.36 J** | **0.22 J** | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 6**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sampling Results Table**

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **GW204** | | | | | | **GW205** | | | | | **GW206** | | | | | | | | |
| *Sample ID* | | GW204B | DUP3 | GW204C | GW204D | GW204E | GW204F | GW205B | GW205C | GW205D | GW205E | GW205F | GW206B | GW206C | GW206D | GW206E | DUP01 | GW206F | GW206G | GW206I | DUP2 | GW206K |
| *Lab ID* | | JA79637-19 | JA79637-18 | JA79637-20 | JA79637-21 | JA79637-22 | JA79637-23 | JA78573-4 | JA78573-5 | JA78573-6 | JA78573-7 | JA78573-8 | JA79637-1 | JA79637-2 | JA79637-3 | JA79637-4 | JA79637-10 | JA79637-5 | JA79637-6 | JA79637-15 | JA79637-17 | JA79637-16 |
| *Sample Date* | | 6/30/2011 | 6/30/2011 | 6/30/2011 | 6/30/2011 | 6/30/2011 | 7/1/2011 | 6/14/2011 | 6/14/2011 | 6/15/2011 | 6/15/2011 | 6/15/2011 | 6/27/2011 | 6/27/2011 | 6/27/2011 | 6/28/2011 | 6/28/2011 | 6/28/2011 | 6/28/2011 | 6/29/2011 | 6/29/2011 | 6/29/2011 |
| *Sampel Interval (ft, bgs)* | | 39.5 - 40.5 | 39.5. - 40.5 | 49.5 - 50.5 | 59.5 - 60.5 | 69.5 - 70.5 | 79.5 - 80.5 | 39 - 40 | 49 - 50 | 59 - 60 | 69 - 70 | 79 - 80 | 39 - 40 | 49 - 50 | 59 - 60 | 69 - 70 | 69 - 70 | 79 - 80 | 89 - 90 | 109 - 110 | 109 - 110 | 129 - 130 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 30 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethylene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone (MEK) | 300 | **16.4** | **17.5** | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **5.4 J** | **14.1** | 10 U | 10 U | **12.5** | **33.8** | **4 J** | 10 U | **15.7** |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | **21.6** | 10 U | 10 U | **19** | **8.2 J** | **28.1** | 10 U | **12.3** | 10 U | 10 U | **7.8 J** | 10 U | 10 U | 10 U | 10 U | **7.9 J** | **8.7 J** | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | **0.57 J** | **0.44 J** | 2 U | 2 U | **0.91 J** | **0.96 J** | 2 U | **0.61 J** | 2 U | 2 U | 2 U | 2 U | 2 U | **0.46 J** | **0.97 J** | **1.1 J** | **0.42 J** | **0.88 J** | **0.45 J** | **0.4 J** | **1.3 J** |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl tert-butyl ether | 70 | **0.63 J** | **0.54 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylcylohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 600 | **2.1** | **2.3** | **0.79 J** | **1.2** | **0.73 J** | **0.52 J** | **6.1** | **10** | **38.2** | **5.4** | **4.4** | **0.84 J** | **13.9** | **2.3** | **1** | **1** | **6.7** | **6.6** | **3.2** | **3** | **3.3** |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 6**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Deep Groundwater Screening Sampling Results Table**

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Location ID* | | **FIELD BLANK** | | | | | | | | | | | | | | **TRIP BLANK** | | | | | |
| *Sample ID* | | FB01 | FB02 | FB03 | FB04 | FB05 | FB06 | FB07 | FB08 | FB09 | FB10 | FB11 | FB12 | FB13 | FB14 | TRIP BL | TRIP BL | TRIP BL | TRIP BL | TRIP BL | TRIP BL |
| *Lab ID* | | JA78573-1 | JA78573-2 | JA78573-9 | JA78573-10 | JA78573-18 | JA78573-24 | JA79452-1 | JA79452-2 | JA79452-3 | JA79637-8 | JA79637-9 | JA79637-12 | JA79637-13 | JA79637-14 | JA78573-3 | JA78573-11 | JA78573-19 | JA79452-4 | JA79637-7 | JA79637-11 |
| *Sample Date* | | 6/14/2011 | 6/15/2011 | 6/16/2011 | 6/17/2011 | 6/20/2011 | 6/21/2011 | 6/22/2011 | 6/23/2011 | 6/24/2011 | 6/27/2011 | 6/28/2011 | 6/29/2011 | 6/30/2011 | 7/1/2011 | 6/15/2011 | 6/17/2011 | 6/20/2011 | 6/24/2011 | 6/28/2011 | 7/1/2011 |
| *Sampel Interval (ft, bgs)* | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 30 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethylene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone (MEK) | 300 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **1.7 J** | **2.4** | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | 700 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m,p-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methylcylohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 7**

*Joan's Cleaners*

*Tabernacle Township,New Jersey*

**Groundwater Elevations Table**

| Well Construction Data | | | | | | March 5th, 2012 | | May 1st, 2012 | |
|---|---|---|---|---|---|---|---|---|---|
| **Well ID** | **Top of Casing Elevation (1)** | **Ground Elevation (1)** | **Screen Interval (2)** | **Top of Screen Elevation (3)** | **Bottom of Screen Elevation (3)** | **Depth to Water (4)** | **Groundwater Elevation (5)** | **Depth to Water (4)** | **Groundwater Elevation (5)** |
| MW01 | 113.48 | 113.78 | 17.77 - 27.77 | 96.01 | 86.01 | 14.64 | 98.84 | 15.25 | 98.23 |
| MW02 | 114.11 | 114.44 | 14.77 - 24.77 | 99.67 | 89.67 | 16.07 | 98.04 | 16.66 | 97.45 |
| MW03 | 112.31 | 112.77 | 57.65 - 67.65 | 55.12 | 45.12 | 16.71 | 95.60 | 17.34 | 94.97 |
| MW04 | 100.49 | 100.92 | 56.65 - 66.75 | 44.27 | 34.17 | 7.50 | 92.99 | 8.25 | 92.24 |
| MW05 | 93.30 | 93.69 | 58.25 - 68.25 | 35.44 | 25.44 | 6.11 | 87.19 | 6.46 | 86.84 |
| MW06 | 91.77 | 91.99 | 56.10 - 66.10 | 35.89 | 25.89 | 2.72 | 89.05 | 3.92 | 87.85 |
| MW07 | 94.16 | 94.43 | 128.71 - 138.71 | -34.28 | -44.28 | 5.95 | 88.21 | 6.25 | 87.91 |
| MW08 | 92.76 | 92.98 | 57.80 - 67.80 | 35.18 | 25.18 | 5.96 | 86.80 | 6.90 | 85.86 |
| MW09 | 101.24 | 101.61 | 54.16 - 64.16 | 47.45 | 37.45 | 13.99 | 87.25 | 14.60 | 86.64 |
| MW10 | 102.98 | 103.41 | 37.72 - 47.72 | 65.69 | 55.69 | 9.32 | 93.66 | 9.95 | 93.03 |
| MW11 | 108.04 | 108.24 | 24.00 - 34.00 | 84.24 | 74.24 | 11.13 | 96.91 | 11.43 | 96.61 |
| MW12 | 106.45 | 106.86 | 33.57 - 43.57 | 73.29 | 63.29 | 10.73 | 95.72 | 11.35 | 95.10 |
| MW13 | 100.37 | 100.79 | 87.96 - 97.96 | 12.83 | 2.83 | 6.94 | 93.43 | 7.40 | 92.97 |
| MW14 | 100.94 | 101.32 | 59.00 - 69.00 | 42.32 | 32.32 | 7.49 | 93.45 | 8.19 | 92.75 |
| MW15 | 95.23 | 95.52 | 51.55 - 61.55 | 43.97 | 33.97 | 4.19 | 91.04 | 4.90 | 90.33 |
| MW16 | 98.28 | 98.71 | 43.60 - 53.60 | 55.11 | 45.11 | 6.13 | 92.15 | 6.90 | 91.38 |
| HPIMW2 | 112.59 | | 5.56 - 20.56 | -5.56 | -20.56 | 14.47 | 98.12 | 15.25 | 97.34 |
| HPIMW4 | 113.69 | | 14.05 - 27.05 | -14.05 | -27.05 | 16.24 | 97.45 | 16.72 | 96.97 |
| HPIMW5 | 113.97 | | 9.60 - 24.60 | -9.60 | -24.60 | 16.45 | 97.52 | 16.90 | 97.07 |
| HPIMW6 | 113.89 | | 9.25 - 24.25 | -9.25 | -24.25 | 16.37 | 97.52 | 16.90 | 96.99 |
| HPIMW7 | 113.16 | | 9.50 - 24.50 | -9.50 | -24.50 | 15.52 | 97.64 | 16.00 | 97.16 |

**Notes:**

(1) All elevations are reported in feet above mean sea level.

(2) Screen interval measurements reported in feet below ground surface.

(3) Screen elevations derived using well survey data and well construction details.

(4) Depth to water measured in feet below the top of well casing.

(5) Groundwater elevations derived using well survey data and depth to water measurements.

*Note: HPIMW2 during initial gauging (May) had a DTW of 19.0

**Table 8**

*Joan's Cleaners*

*Tabernacle Township, New Jersey*

**Monitoring Well Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| MW01 | MW01A | JB844-41 | 20.27 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/9/2012 |
| | MW01A | JB5628-12 | 20.27 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW01B | JB844-42 | 25.27 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/9/2012 |
| MW02 | MW02 | JB844-43 | 20.07 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/9/2012 |
| | MW02 | JB5628-20 | 20.07 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/3/2012 |
| MW03 | MW03A | JB844-7 | 60.15 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW03A | JB5628-14 | 60.15 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW03B | JB844-8 | 65.15 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| MW04 | MW04A | JB844-9 | 59.25 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW04B | JB844-10 | 64.25 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW04B | JB5628-10 | 64.25 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| MW05 | MW05A | JB844-24 | 60.75 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW05B | JB844-25 | 65.75 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW05B | JB5628-5 | 65.75 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| MW06 | MW06A | JB844-21 | 60.70 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW06B | JB844-22 | 65.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | DUP01 | JB844-23 | 65.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW06B | JB5628-3 | 65.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| MW07 | MW07A | JB844-3 | 132.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/5/2012 |
| | MW07A | JB5628-1 | 131.21 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| | MW07B | JB844-4 | 136.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/5/2012 |
| MW08 | MW08A | JB844-1 | 62.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/5/2012 |
| | MW08A | JB5628-2 | 60.30 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| | MW08B | JB844-2 | 65.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/5/2012 |
| MW09 | MW09A | JB844-26 | 56.66 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW09A | JB5628-4 | 56.66 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| | DUP01 | JB5628-6 | 56.66 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/1/2012 |
| | MW09B | JB844-27 | 61.66 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| MW10 | MW10A | JB844-11 | 40.22 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW10A | JB5628-9 | 40.22 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW10B | JB844-12 | 45.22 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| MW11 | MW11A | JB844-13 | 26.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW11B | JB844-14 | 31.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/6/2012 |
| | MW11B | JB5628-8 | 31.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| MW12 | MW12A | JB844-30 | 36.07 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| | MW12A | JB5628-13 | 36.07 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW12B | JB844-31 | 41.07 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| MW13 | MW13A | JB844-32 | 90.46 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| | MW13A | JB5628-11 | 90.46 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW13B | JB844-33 | 95.46 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| | DUP02 | JB844-39 | 95.46 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |

**Notes:**

-MTBE = Methyl Tertiary Butyl Ether

-TBA = Tertiary Butyl Alcohol

-VOC+10 = Volatile Organic Compounds +10 (search for 10 non-target tentatively identified compounds (TICs))

-NA = Not Applicable

**Table 8**

*Joan's Cleaners*

*Tabernacle Township, New Jersey*

**Monitoring Well Sample Summary Table**

| Location ID | Sample ID | Lab ID | Sample Depth (ft bgs) | Analytical Parameters | Sampling Method | Date |
|---|---|---|---|---|---|---|
| MW14 | MW14A | JB844-34 | 61.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| | MW14A | JB5628-19 | 61.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/3/2012 |
| | MW14B | JB844-35 | 66.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| MW15 | MW15A | JB844-36 | 54.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| | MW15A | JB5628-15 | 54.10 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| | MW15B | JB844-37 | 59.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/8/2012 |
| MW16 | MW16A | JB844-19 | 46.10 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW16B | JB844-20 | 51.10 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | MW16B | JB5628-16 | 51.10 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/2/2012 |
| HPIMW2 | HPIMW2 | JB844-18 | 18.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | HPIMW2 | JB5628-17 | 18.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/3/2012 |
| HPIMW4 | HPIMW4A | JB844-16 | 19.00 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| HPIMW4 | HPIMW4B | JB844-17 | 24.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 3/7/2012 |
| | HPIMW4B | JB5628-18 | 24.50 | MTBE, TBA, TCL VOC+10 | Bladder Pump | 5/3/2012 |
| **QA/QC SAMPLES** | | | | | | |
| Field Blanks | FB01 | JB844-5 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 3/5/2012 |
| | | JB5628-7 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 5/1/2012 |
| | FB02 | JB844-15 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 3/6/2012 |
| | | JB5628-22 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 5/2/2012 |
| | FB03 | JB844-28 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 3/7/2012 |
| | | JB5628-21 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 5/3/2012 |
| | FB04 | JB844-38 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 3/8/2012 |
| | FB05 | JB844-44 | NA | MTBE, TBA, TCL VOC+10 | Teflon Tubing | 3/9/2012 |
| Trip Blanks | Trip Blank | JB844-6 | NA | TCL VOC+10 | NA | 3/5/2012 |
| | Trip Blank | JB844-29 | NA | TCL VOC+10 | NA | 3/7/2012 |
| | Trip Blank | JB844-40 | NA | TCL VOC+10 | NA | 3/8/2012 |
| | Trip Blank | JB5628-23 | NA | TCL VOC+10 | NA | 5/3/2012 |

**Notes:**

-MTBE = Methyl Tertiary Butyl Ether

-TBA = Tertiary Butyl Alcohol

-VOC+10 = Volatile Organic Compounds +10 (search for 10 non-target tentatively identified compounds (TICs))

-NA = Not Applicable

**Table 9**

*Joan's Cleaners*

*Tabernacle Township, New Jersey*

**Monitoring Well Sampling Results Summary Table**

| *Location ID* | | **MW01** | | | **MW02** | | **MW03** | | | **MW04** | | | **MW05** | | | **MW06** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | MW01A | MW01A | MW01B | MW02 | MW02 | MW03A | MW03A | MW03B | MW04A | MW04B | MW04B | MW05A | MW05B | MW05B | MW06A | MW06B | DUP01 | MW06B |
| *Lab ID* | | JB844-41 | JB5628-12 | JB844-42 | JB844-43 | JB5628-20 | JB844-7 | JB5628-14 | JB844-8 | JB844-9 | JB844-10 | JB5628-10 | JB844-24 | JB844-25 | JB5628-5 | JB844-21 | JB844-22 | JB844-23 | JB5628-3 |
| *Sample Date* | | 3/9/2012 | 5/2/2012 | 3/9/2012 | 3/9/2012 | 5/3/2012 | 3/6/2012 | 5/2/2012 | 3/6/2012 | 3/6/2012 | 3/6/2012 | 5/2/2012 | 3/7/2012 | 3/7/2012 | 5/1/2012 | 3/7/2012 | 3/7/2012 | 3/7/2012 | 5/1/2012 |
| *Sample Depth (ft bgs)* | | 20.27 | 20.27 | 25.27 | 20.07 | 20.07 | 60.15 | 60.15 | 65.15 | 59.25 | 64.25 | 64.25 | 60.75 | 65.75 | 65.75 | 60.70 | 65.70 | 65.70 | 65.00 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **0.27 J** | **0.39 J** | **0.37 J** | 2 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.57 J** | **0.79 J** | **0.56 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.43 J** | **0.38 J** | **0.68 J** | **0.93 J** | **1.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tert-Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | **51.6** | **53.3** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | 100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**

All results are presented in ug/l (ppb)

GWQS = NJDEP Ground Water Quality Standards, November 2009

NC= No Criteria

J = Estimated Value

U = Non Detection

**Bold** = Concentration above the method detection limit

**Contaminant of Concern (COC) above detection limit**

**Concentration Exceeds Class IIA GWQS**

**Table 9**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Monitoring Well Sampling Results Summary Table**

| *Location ID* | | **MW07** | | | **MW08** | | | **MW09** | | | | **MW10** | | | **MW11** | | | **MW12** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | MW07A | MW07A | MW07B | MW08A | MW08A | MW08B | MW09A | MW09A | DUP01 | MW09B | MW10A | MW10A | MW10B | MW11A | MW11B | MW11B | MW12A | MW12A | MW12B |
| *Lab ID* | | JB844-3 | JB5628-1 | JB844-4 | JB844-1 | JB5628-2 | JB844-2 | JB844-26 | JB5628-4 | JB5628-6 | JB844-27 | JB844-11 | JB5628-9 | JB844-12 | JB844-13 | JB844-14 | JB5628-8 | JB844-30 | JB5628-13 | JB844-31 |
| *Sample Date* | | 3/5/2012 | 5/1/2012 | 3/5/2012 | 3/5/2012 | 5/1/2012 | 3/5/2012 | 3/7/2012 | 5/1/2012 | 5/1/2012 | 3/7/2012 | 3/6/2012 | 5/2/2012 | 3/6/2012 | 3/6/2012 | 3/6/2012 | 5/2/2012 | 3/8/2012 | 5/2/2012 | 3/8/2012 |
| *Sample Depth (ft bgs)* | | 132.50 | 131.21 | 136.50 | 62.50 | 60.30 | 65.50 | 56.66 | 56.66 | 51.10 | 61.66 | 40.22 | 40.22 | 45.22 | 26.50 | 31.50 | 31.50 | 36.07 | 36.07 | 41.07 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **0.4 J** | 2 U | 2 U | **0.25 J** | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.91 J** | **0.96 J** | **0.81 J** | 1 U | **0.35 J** | **0.44 J** | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.25 J** | **0.34 J** | **0.23 J** |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tert-Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | **1** | **0.53 J** | **0.42 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **11.5** | **9.8** | **11.3** |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | 100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, November 2009
NC= No Criteria
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 9**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Monitoring Well Sampling Results Summary Table**

| *Location ID* | | **MW13** | | | | **MW14** | | | **MW15** | | | **MW16** | | | **HPIMW2** | | **HPIMW4** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | MW13A | MW13A | MW13B | DUP02 | MW14A | MW14A | MW14B | MW15A | MW15A | MW15B | MW16A | MW16B | MW16B | HPIMW2 | HPIMW2 | HPIMW4A | HPIMW4B | HPIMW4B |
| *Lab ID* | | JB844-32 | JB5628-11 | JB844-33 | JB844-39 | JB844-34 | JB5628-19 | JB844-35 | JB844-36 | JB5628-15 | JB844-37 | JB844-19 | JB844-20 | JB5628-16 | JB844-18 | JB5628-17 | JB844-16 | JB844-17 | JB5628-18 |
| *Sample Date* | | 3/8/2012 | 5/2/2012 | 3/8/2012 | 3/8/2012 | 3/8/2012 | 5/3/2012 | 3/8/2012 | 3/8/2012 | 5/2/2012 | 3/8/2012 | 3/7/2012 | 3/7/2012 | 5/2/2012 | 3/7/2012 | 5/3/2012 | 3/7/2012 | 3/7/2012 | 5/3/2012 |
| *Sample Depth (ft bgs)* | | 90.46 | 90.46 | 95.46 | 95.46 | 61.50 | 61.50 | 66.50 | 54.00 | 54.10 | 59.00 | 46.10 | 51.10 | 51.10 | 18.00 | 18.00 | 19.00 | 24.50 | 24.50 |
| *Analyte* | *GWQS* | | | | | | | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.43 J** | **0.31 J** | **0.66 J** | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.5** | **2** | **1.3** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **4.1 J** | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | **5.6 J** | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **11.5** | **12.3** | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **0.25 J** | 2 U | 2 U | **0.26 J** | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.57 J** | **0.45 J** | **0.73 J** | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | **13.9** | **13.4** | **15.3** | 1 U | 1 U | 1 U | 1 U | **0.52 J** | **0.58 J** | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **1.9 J** | **3.8 J** | 5 U | 5 U | 5 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.6 J** | **0.59 J** | **1** | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** | 1 U | 1 U | 1 U | 1 U |
| Tert-Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | **111** | **137** | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | **268** | **241** | **221** | **0.64 J** | **0.63 J** | **0.43 J** | 1 U | 1 U | 1 U | 1 U | **0.36 J** | **1.6** | **2.2** | **1.1** |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.66 J** | **0.82 J** | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | 100 | 1 U | 1 U | 1 U | 1 U | **0.33 J** | **0.57 J** | **0.32 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | **4.4** | **4.2** | **4** | 1 U | 1 U | 1 U | **2.4** | **4** | **3.4** | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, November 2009
NC= No Criteria
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 9**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Monitoring Well Sampling Results Summary Table**

| *Location ID* | | **FIELD BLANK** | | | | | | | | **TRIP BLANK** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sample ID* | | FB01 | FB02 | FB03 | FB04 | FB05 | FB01 | FB02 | FB03 | TRIP BL | TB | TB | TRIP BL |
| *Lab ID* | | JB844-5 | JB844-15 | JB844-28 | JB844-38 | JB844-44 | JB5628-7 | JB5628-22 | JB5628-21 | JB844-6 | JB844-29 | JB844-40 | JB5628-23 |
| *Sample Date* | | 3/5/2012 | 3/6/2012 | 3/7/2012 | 3/8/2012 | 3/9/2012 | 5/1/2012 | 5/2/2012 | 5/3/2012 | 3/5/2012 | 3/7/2012 | 3/8/2012 | 5/3/2012 |
| *Sample Depth (ft bgs)* | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *Analyte* | *GWQS* | | | | | | | | | | | | |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 4-Methyl-2-Pentanone(MIBK) | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Acetone | 6000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Carbon Disulfide | 700 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Chloroform | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | NC | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methyl tert-butyl ether | 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | NC | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tert-Butyl Alcohol | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| Tetrachloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | 600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | 100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Xylene (Total) | 1000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, November 2009
NC= No Criteria
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit
**Contaminant of Concern (COC) above detection limit**
**Concentration Exceeds Class IIA GWQS**

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 1 | 901 Old Indian Mills Rd | 39º51'13.812″ | 74º44'14.419″ | 203 | 7.02 | Tabernacle, NJ | 08088 |
| 2 | 903 Old Indian Mills Rd | 39º51'12.165″ | 74º44'13.986″ | 203 | 27 | Tabernacle, NJ | 08088 |
| 3 | 905 Old Indian Mills Rd | 39º51'10.807″ | 74º44'13.554″ | 203 | 26 | Tabernacle, NJ | 08088 |
| 4 | 907 Old Indian Mills Rd | 39º51'9.6129″ | 74º44'13.549″ | 203 | 25 | Tabernacle, NJ | 08088 |
| 5 | 911 Old Indian Mills Rd | 39º51'7.5607″ | 74º44'13.276″ | 203 | 23 | Tabernacle, NJ | 08088 |
| 6 | 913 Old Indian Mills Rd | 39º51'6.3611″ | 74º44'12.523″ | 203 | 22 | Tabernacle, NJ | 08088 |
| 7 | 915 Old Indian Mills Rd | 39º51'5.3731″ | 74º44'12.306″ | 203 | 7.01 | Tabernacle, NJ | 08088 |
| 8 | 1573 Rt 206 | 39º51'34.76″ | 74º44'2.4667″ | 317 | 12 | Tabernacle, NJ | 08088 |
| 9 | 1571 Rt 206 | 39º51'33.685″ | 74º44'2.4661″ | 317 | 13 | Tabernacle, NJ | 08088 |
| 10 | 1561 Rt 206 | 39º51'28.828″ | 74º44'2.9276″ | 317 | 16 | Tabernacle, NJ | 08088 |
| 11 | 1559 Rt 206 | 39º51'27.963″ | 74º44'2.4972″ | 317 | 17 | Tabernacle, NJ | 08088 |
| 12 | 798 Old Indian Mills Rd | 39º51'24.915″ | 74º44'11.200″ | 319 | 1 | Tabernacle, NJ | 08088 |
| 13 | 802 Old Indian Mills Rd | 39º51'23.160″ | 74º44'15.039″ | 319 | 2 | Tabernacle, NJ | 08088 |
| 14 | 804 Old Indian Mills Rd | 39º51'22.172″ | 74º44'14.768″ | 319 | 3.01 | Tabernacle, NJ | 08088 |
| 15 | 806 Old Indian Mills Rd | 39º51'21.184″ | 74º44'14.498″ | 319 | 3.02 | Tabernacle, NJ | 08088 |
| 16 | 808 Old Indian Mills Rd | 39º51'20.279″ | 74º44'14.334″ | 319 | 4 | Tabernacle, NJ | 08088 |
| 17 | 810 Old Indian Mills Rd | 39º51'19.414″ | 74º44'13.904″ | 319 | 5 | Tabernacle, NJ | 08088 |
| 18 | 812 Old Indian Mills Rd | 39º51'18.427″ | 74º44'13.526″ | 319 | 6 | Tabernacle, NJ | 08088 |
| 19 | 814 Old Indian Mills Rd | 39º51'17.439″ | 74º44'13.256″ | 319 | 7.03 | Tabernacle, NJ | 08088 |
| 20 | 816 Old Indian Mills Rd | 39º51'16.533″ | 74º44'13.039″ | 319 | 7.02 | Tabernacle, NJ | 08088 |
| 21 | 818 Old Indian Mills Rd | 39º51'15.504″ | 74º44'12.715″ | 319 | 7.01 | Tabernacle, NJ | 08088 |
| 22 | 822 Old Indian Mills Rd | 39º51'13.823″ | 74º44'8.9153″ | 319 | 9 | Tabernacle, NJ | 08088 |
| 23 | 44 Hill Rd | 39º51'25.355″ | 74º44'9.2218″ | 319 | 10 | Tabernacle, NJ | 08088 |
| 24 | 1555 Rt 206 | 39º51'25.463″ | 74º44'5.0835″ | 319 | 11 | Tabernacle, NJ | 08088 |
| 25 | 1543 Rt 206 | 39º51'20.565″ | 74º44'3.1907″ | 319 | 15 | Tabernacle, NJ | 08088 |
| 26 | 1541 Rt 206 | 39º51'18.888″ | 74º44'3.2601″ | 319 | 16 | Tabernacle, NJ | 08088 |
| 27 | 1537 Rt 206 | 39º51'17.442″ | 74º44'3.2552″ | 319 | 17 | Tabernacle, NJ | 08088 |
| 28 | 1531 Rt 206 | 39º51'13.567″ | 74º44'3.2420″ | 319 | 20 | Tabernacle, NJ | 08088 |
| 29 | 900 Old Indian Mills Rd | 39º51'11.927″ | 74º44'9.3897″ | 320 | 1.01 | Tabernacle, NJ | 08088 |

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 30 | 904 Old Indian Mills Rd | 39º51'9.8279″ | 74º44'9.0619″ | 320 | 1.02 | Tabernacle, NJ | 08088 |
| 31 | 906 Old Indian Mills Rd | 39º51'8.2639″ | 74º44'8.7768″ | 320 | 2.02 | Tabernacle, NJ | 08088 |
| 32 | 1517 Rt 206 | 39º51'6.1318″ | 74º44'3.7058″ | 320 | 3 | Tabernacle, NJ | 08088 |
| 33 | 1511 Rt 206 | 39º51'3.0826″ | 74º44'4.3367″ | 320 | 4 | Tabernacle, NJ | 08088 |
| 34 | 1523 Rt 206 | 39º51'9.2001″ | 74º44'3.4148″ | 320 | 7 | Tabernacle, NJ | 08088 |
| 35 | 1521 Rt 206 | 39º51'8.1301″ | 74º44'3.4112″ | 320 | 2.03 | Tabernacle, NJ | 08088 |
| 36 | 1519 Rt 206 | 39º51'7.1943″ | 74º44'7.8774″ | 320 | 2.01 | Tabernacle, NJ | 08088 |
| 37 | 1513 Rt 206 | 39º51'4.1962″ | 74º44'3.8481″ | 320 | 9 | Tabernacle, NJ | 08088 |
| 38 | 920 Old Indian Mills Rd | 39º51'2.2894″ | 74º44'9.6240″ | 204 | 1.01 | Tabernacle, NJ | 08088 |
| 39 | 1501 Rt 206 | 39º50'59.003″ | 74º44'5.1243″ | 204 | 2 | Tabernacle, NJ | 08088 |
| 40 | 1497 Rt 206 | 39º50'56.586″ | 74º44'5.7732″ | 204 | 3 | Tabernacle, NJ | 08088 |
| 41 | 82 Hawkin Rd | 39º51'37.309″ | 74º43'52.908″ | 322 | 22 | Tabernacle, NJ | 08088 |
| 42 | 25 Richter Rd | 39º51'36.181″ | 74º43'49.835″ | 322 | 23 | Tabernacle, NJ | 08088 |
| 43 | 1570 Rt 206 | 39º51'33.712″ | 74º44'0.2169″ | 323 | 4 | Tabernacle, NJ | 08088 |
| 44 | 1568 Rt 206 | 39º51'32.723″ | 74º44'0.1601″ | 323 | 5 | Tabernacle, NJ | 08088 |
| 45 | 1566 Rt 206 | 39º51'31.776″ | 74º44'0.2638″ | 323 | 6 | Tabernacle, NJ | 08088 |
| 46 | 83 Hawkin Rd | 39º51'36.195″ | 74º43'53.813″ | 323 | 11 | Tabernacle, NJ | 08088 |
| 47 | 85 Hawkin Rd | 39º51'35.458″ | 74º43'51.993″ | 323 | 12.01 | Tabernacle, NJ | 08088 |
| 48 | 31 Richter Rd | 39º51'33.421″ | 74º43'50.387″ | 323 | 12.02 | Tabernacle, NJ | 08088 |
| 49 | 35 Richter Rd | 39º51'31.960″ | 74º43'50.379″ | 323 | 14 | Tabernacle, NJ | 08088 |
| 50 | 37 Richter Rd | 39º51'30.477″ | 74º43'50.908″ | 323 | 15.01 | Tabernacle, NJ | 08088 |
| 51 | 39 Richter Rd | 39º51'29.566″ | 74º43'52.378″ | 323 | 15.02 | Tabernacle, NJ | 08088 |
| 52 | 21 Hill Rd | 39º51'28.676″ | 74º43'54.379″ | 323 | 16.03 | Tabernacle, NJ | 08088 |
| 53 | 19 Hill Rd | 39º51'28.621″ | 74º43'52.398″ | 323 | 16.02 | Tabernacle, NJ | 08088 |
| 54 | 17 Hill Road | 39º51'27.760″ | 74º43'50.311″ | 323 | 16.01 | Tabernacle, NJ | 08088 |
| 55 | 49 Richter Rd | 39º51'25.244″ | 74º43'50.975″ | 324 | 1.02 | Tabernacle, NJ | 08088 |
| 56 | 51 Richter Rd | 39º51'24.173″ | 74º43'51.024″ | 324 | 1.03 | Tabernacle, NJ | 08088 |
| 57 | 1544 Rt 206 | 39º51'23.393″ | 74º44'0.2938″ | 324 | 4.01 | Tabernacle, NJ | 08088 |
| 58 | 1542 Rt 206 | 39º51'21.809″ | 74º44'0.4438″ | 324 | 4.02 | Tabernacle, NJ | 08088 |

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 59 | 1550 Rt 206 | 39º51'20.513″ | 74º44'0.4891″ | 324 | 2 | Tabernacle, NJ | 08088 |
| 60 | 1548 Rt 206 | 39º51'19.240″ | 74º44'0.4848″ | 324 | 3 | Tabernacle, NJ | 08088 |
| 61 | 1540 Rt 206 | 39º51'18.391″ | 74º44'0.5926″ | 324 | 5 | Tabernacle, NJ | 08088 |
| 62 | 1538 Rt 206 | 39º51'17.447″ | 74º44'0.5913″ | 324 | 6 | Tabernacle, NJ | 08088 |
| 63 | 1534 Rt 206 | 39º51'14.490″ | 74º44'0.7447″ | 324 | 8.01 | Tabernacle, NJ | 08088 |
| 64 | 53 Richter Rd | 39º51'23.205″ | 74º43'50.941″ | 324 | 1.04 | Tabernacle, NJ | 08088 |
| 65 | 55 Richter Rd | 39º51'22.196″ | 74º43'50.991″ | 324 | 9 | Tabernacle, NJ | 08088 |
| 66 | 57 Richter Rd | 39º51'21.249″ | 74º43'50.961″ | 324 | 10 | Tabernacle, NJ | 08088 |
| 67 | 59 Richter Rd | 39º51'20.281″ | 74º43'50.878″ | 324 | 11 | Tabernacle, NJ | 08088 |
| 68 | 61 Richter Rd | 39º51'19.292″ | 74º43'50.981″ | 324 | 12 | Tabernacle, NJ | 08088 |
| 69 | 63 Richter Rd | 39º51'18.345″ | 74º43'50.925″ | 324 | 13 | Tabernacle, NJ | 08088 |
| 70 | 65 Richter Rd | 39º51'17.134″ | 74º43'50.650″ | 324 | 14 | Tabernacle, NJ | 08088 |
| 71 | 71 Richter Rd | 39º51'14.199″ | 74º43'50.862″ | 324 | 16 | Tabernacle, NJ | 08088 |
| 72 | 25 Cramer Rd | 39º51'13.360″ | 74º43'50.860″ | 324 | 17 | Tabernacle, NJ | 08088 |
| 73 | 1524 Rt 206 | 39º51'11.143″ | 74º44'0.7201″ | 325 | 2.01 | Tabernacle, NJ | 08088 |
| 74 | 1520 Rt 206 | 39º51'8.0319″ | 74º44'0.9870″ | 325 | 4 | Tabernacle, NJ | 08088 |
| 75 | 1516 Rt 206 | 39º51'5.5311″ | 74º44'1.5640″ | 325 | 6 | Tabernacle, NJ | 08088 |
| 76 | 1512 Rt 206 | 39º51'4.0763″ | 74º44'1.7751″ | 325 | 7 | Tabernacle, NJ | 08088 |
| 77 | 1510 Rt 206 | 39º51'3.1016″ | 74º44'1.7059″ | 325 | 8 | Tabernacle, NJ | 08088 |
| 78 | 26 Cramer Rd | 39º51'11.914″ | 74º43'51.042″ | 325 | 9 | Tabernacle, NJ | 08088 |
| 79 | 79 Richter Rd | 39º51'10.844″ | 74º43'51.114″ | 325 | 10 | Tabernacle, NJ | 08088 |
| 80 | 81 Richter Rd | 39º51'9.8896″ | 74º43'51.186″ | 325 | 11 | Tabernacle, NJ | 08088 |
| 81 | 83 Richter Rd | 39º51'8.9351″ | 74º43'51.257″ | 325 | 12 | Tabernacle, NJ | 08088 |
| 82 | 85 Richter Rd | 39º51'7.8866″ | 74º43'51.207″ | 325 | 12.01 | Tabernacle, NJ | 08088 |
| 83 | 87 Richter Rd | 39º51'6.8570″ | 74º43'51.150″ | 325 | 13 | Tabernacle, NJ | 08088 |
| 84 | 89 Richter Rd | 39º51'5.8266″ | 74º43'51.521″ | 325 | 14 | Tabernacle, NJ | 08088 |
| 85 | 93 Richter Rd | 39º51'4.2611″ | 74º43'51.676″ | 325 | 15.01 | Tabernacle, NJ | 08088 |
| 86 | 95 Richter Rd | 39º51'2.9426″ | 74º43'51.939″ | 325 | 15.02 | Tabernacle, NJ | 08088 |
| 87 | 1508 Rt 206 | 39º51'2.0270″ | 74º44'1.8684″ | 903 | 16.02 | Tabernacle, NJ | 08088 |

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 88 | 1506 Rt 206 | 39º51'0.8833″ | 74º44'2.2252″ | 903 | 16.03 | Tabernacle, NJ | 08088 |
| 89 | 97 Richter Rd | 39º51'1.8613″ | 74º43'51.969″ | 903 | 15.03 | Tabernacle, NJ | 08088 |
| 90 | 96 Richter Rd | 39º51'1.7418″ | 74º43'49.924″ | 903 | 15.02 | Tabernacle, NJ | 08088 |
| 91 | 84 Hawkin Rd | 39º51'35.357″ | 74º43'46.750″ | 326 | 13 | Tabernacle, NJ | 08088 |
| 92 | 86 Hawkin Rd | 39º51'35.205″ | 74º43'45.667″ | 326 | 14 | Tabernacle, NJ | 08088 |
| 93 | 88 Hawkin Rd | 39º51'35.293″ | 74º43'47.711″ | 326 | 15 | Tabernacle, NJ | 08088 |
| 94 | 90 Hawkin Rd | 39º51'33.990″ | 74º43'43.789″ | 326 | 16 | Tabernacle, NJ | 08088 |
| 95 | 94 Hawkin Rd | 39º51'33.790″ | 74º43'42.215″ | 326 | 17 | Tabernacle, NJ | 08088 |
| 96 | 96 Hawkin Rd | 39º51'32.987″ | 74º43'40.286″ | 326 | 18 | Tabernacle, NJ | 08088 |
| 97 | 98 Hawkin Rd | 39º51'31.359″ | 74º43'37.798″ | 326 | 19 | Tabernacle, NJ | 08088 |
| 98 | 34 Richter Rd | 39º51'33.796″ | 74º43'47.877″ | 327 | 1.01 | Tabernacle, NJ | 08088 |
| 99 | 91 Richter Rd | 39º51'33.058″ | 74º43'46.057″ | 327 | 1.02 | Tabernacle, NJ | 08088 |
| 100 | 93 Hawkin Rd | 39º51'32.567″ | 74º43'44.559″ | 327 | 2 | Tabernacle, NJ | 08088 |
| 101 | 36 Richter Rd | 39º51'30.603″ | 74º43'48.454″ | 327 | 5 | Tabernacle, NJ | 08088 |
| 102 | 38 Richter Rd | 39º51'29.731″ | 74º43'48.615″ | 327 | 6.01 | Tabernacle, NJ | 08088 |
| 103 | 40 Richter Rd | 39º51'29.058″ | 74º43'48.556″ | 327 | 6.02 | Tabernacle, NJ | 08088 |
| 104 | 42 Richter Rd | 39º51'27.617″ | 74º43'48.498″ | 327 | 7.01 | Tabernacle, NJ | 08088 |
| 105 | 44 Richter Rd | 39º51'26.608″ | 74º43'48.521″ | 327 | 7.02 | Tabernacle, NJ | 08088 |
| 106 | 97 Hawkin Rd | 39º51'31.030″ | 74º43'40.867″ | 327 | 4 | Tabernacle, NJ | 08088 |
| 107 | 99 Hawkin Rd | 39º51'30.061″ | 74º43'38.726″ | 327 | 9 | Tabernacle, NJ | 08088 |
| 108 | 48 Richter Rd | 39º51'24.487″ | 74º43'48.434″ | 328 | 1 | Tabernacle, NJ | 08088 |
| 109 | 52 Richter Rd | 39º51'23.107″ | 74º43'48.616″ | 328 | 2 | Tabernacle, NJ | 08088 |
| 110 | 54 Richter Rd | 39º51'21.315″ | 74º43'48.583″ | 328 | 3 | Tabernacle, NJ | 08088 |
| 111 | 58 Richter Rd | 39º51'20.285″ | 74º43'48.633″ | 328 | 4 | Tabernacle, NJ | 08088 |
| 112 | 60 Richter Rd | 39º51'19.235″ | 74º43'48.683″ | 328 | 5 | Tabernacle, NJ | 08088 |
| 113 | 62 Richter Rd | 39º51'18.082″ | 74º43'48.760″ | 328 | 6.01 | Tabernacle, NJ | 08088 |
| 114 | 64 Richter Rd | 39º51'17.123″ | 74º43'48.846″ | 328 | 6.02 | Tabernacle, NJ | 08088 |
| 115 | 66 Richter Rd | 39º51'16.123″ | 74º43'49.010″ | 328 | 7 | Tabernacle, NJ | 08088 |
| 116 | 68 Richter Rd | 39º51'15.186″ | 74º43'48.915″ | 328 | 8 | Tabernacle, NJ | 08088 |

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**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 117 | 70 Richter Rd | 39º51'14.289″ | 74º43'48.987″ | 328 | 9 | Tabernacle, NJ | 08088 |
| 118 | 17 Cramer Rd | 39º51'13.335″ | 74º43'49.059″ | 328 | 10 | Tabernacle, NJ | 08088 |
| 119 | 14 Hill Rd | 39º51'23.817″ | 74º43'43.301″ | 328 | 11.02 | Tabernacle, NJ | 08088 |
| 120 | 12 Hill Rd | 39º51'22.314″ | 74º43'43.190″ | 328 | 11.01 | Tabernacle, NJ | 08088 |
| 121 | 10 Hill Rd | 39º51'24.606″ | 74º43'40.151″ | 328 | 12 | Tabernacle, NJ | 08088 |
| 122 | 5 Wynn Rd | 39º51'21.025″ | 74º43'38.884″ | 328 | 14.01 | Tabernacle, NJ | 08088 |
| 123 | 7 Wynn Rd | 39º51'20.140″ | 74º43'38.988″ | 328 | 14.02 | Tabernacle, NJ | 08088 |
| 124 | 11 Wynn Rd | 39º51'18.595″ | 74º43'39.009″ | 328 | 15 | Tabernacle, NJ | 08088 |
| 125 | 13 Wynn Rd | 39º51'16.968″ | 74º43'39.057″ | 328 | 16 | Tabernacle, NJ | 08088 |
| 126 | 15 Wynn Rd | 39º51'16.021″ | 74º43'39.108″ | 328 | 17 | Tabernacle, NJ | 08088 |
| 127 | 17 Wynn Rd | 39º51'15.061″ | 74º43'39.229″ | 328 | 18 | Tabernacle, NJ | 08088 |
| 128 | 19 Wynn Rd | 39º51'14.085″ | 74º43'39.128″ | 328 | 19 | Tabernacle, NJ | 08088 |
| 129 | 13 Cramer Rd | 39º51'13.009″ | 74º43'39.151″ | 328 | 20 | Tabernacle, NJ | 08088 |
| 130 | 76 Richter Rd | 39º51'11.844″ | 74º43'49.076″ | 329 | 1 | Tabernacle, NJ | 08088 |
| 131 | 78 Richard Rd | 39º51'10.819″ | 74º43'49.125″ | 329 | 2 | Tabernacle, NJ | 08088 |
| 132 | 80 Richter Rd | 39º51'9.8356″ | 74º43'49.234″ | 329 | 3 | Tabernacle, NJ | 08088 |
| 133 | 82 Richter Rd | 39º51'8.7946″ | 74º43'49.193″ | 329 | 4 | Tabernacle, NJ | 08088 |
| 134 | 84 Richter Rd | 39º51'7.7976″ | 74º43'49.343″ | 329 | 5 | Tabernacle, NJ | 08088 |
| 135 | 86 Richter Rd | 39º51'6.7472″ | 74º43'49.380″ | 329 | 6 | Tabernacle, NJ | 08088 |
| 136 | 88 Richter Rd | 39º51'5.8514″ | 74º43'49.377″ | 329 | 7 | Tabernacle, NJ | 08088 |
| 137 | 90 Richter Rd | 39º51'4.2760″ | 74º43'49.372″ | 329 | 8 | Tabernacle, NJ | 08088 |
| 138 | 94 Richter Rd | 39º51'2.7003″ | 74º43'49.487″ | 329 | 9 | Tabernacle, NJ | 08088 |
| 139 | 14 Cramer Rd | 39º51'11.250″ | 74º43'39.199″ | 329 | 11 | Tabernacle, NJ | 08088 |
| 140 | 27 Wynn Rd | 39º51'9.1285″ | 74º43'39.245″ | 329 | 12 | Tabernacle, NJ | 08088 |
| 141 | 29 Wynn Rd | 39º51'6.5196″ | 74º43'39.440″ | 329 | 13 | Tabernacle, NJ | 08088 |
| 142 | 33 Wynn Rd | 39º51'4.6658″ | 74º43'39.634″ | 329 | 14 | Tabernacle, NJ | 08088 |
| 143 | 35 Wynn Rd | 39º51'3.6461″ | 74º43'39.751″ | 329 | 15.01 | Tabernacle, NJ | 08088 |
| 144 | 37 Wynn Rd | 39º51'2.4102″ | 74º43'39.907″ | 329 | 15.02 | Tabernacle, NJ | 08088 |
| 145 | 75 Carranza Rd | 39º51'37.718″ | 74º43'32.526″ | 904 | 1.07 | Tabernacle, NJ | 08088 |

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*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 146 | 77 Carranza Rd | 39º51'36.279″ | 74º43'31.158″ | 904 | 1.08 | Tabernacle, NJ | 08088 |
| 147 | 100 Hawkin Rd | 39º51'32.661″ | 74º43'35.077″ | 904 | 1.09 | Tabernacle, NJ | 08088 |
| 148 | 89 Carranza Rd | 39º51'26.877″ | 74º43'22.874″ | 904 | 2.01 | Tabernacle, NJ | 08088 |
| 149 | 114 Hawkin Rd | 39º51'25.991″ | 74º43'21.902″ | 904 | 2.02 | Tabernacle, NJ | 08088 |
| 150 | 104 Hawkin Rd | 39º51'32.300″ | 74º43'33.603″ | 904 | 3 | Tabernacle, NJ | 08088 |
| 151 | 106 Hawkin Rd | 39º51'31.502″ | 74º43'31.089″ | 904 | 4 | Tabernacle, NJ | 08088 |
| 152 | 110 Hawkin Rd | 39º51'27.144″ | 74º43'27.174″ | 904 | 5 | Tabernacle, NJ | 08088 |
| 153 | 101 Hawkin Rd | 39º51'26.035″ | 74º43'35.908″ | 330 | 1.01 | Tabernacle, NJ | 08088 |
| 154 | 4 Worrell Rd | 39º51'25.957″ | 74º43'33.663″ | 330 | 1.02 | Tabernacle, NJ | 08088 |
| 155 | 2 Worrell Rd | 39º51'24.713″ | 74º43'37.934″ | 330 | 2 | Tabernacle, NJ | 08088 |
| 156 | 6 Worrell Rd | 39º51'24.991″ | 74º43'32.965″ | 330 | 3 | Tabernacle, NJ | 08088 |
| 157 | 8 Worrell Rd | 39º51'24.065″ | 74º43'32.534″ | 330 | 4 | Tabernacle, NJ | 08088 |
| 158 | 10 Worrell Rd | 39º51'23.304″ | 74º43'31.864″ | 330 | 5 | Tabernacle, NJ | 08088 |
| 159 | 12 Worrell Rd | 39º51'22.399″ | 74º43'31.220″ | 330 | 6 | Tabernacle, NJ | 08088 |
| 160 | 14 Worrell Rd | 39º51'21.595″ | 74º43'30.556″ | 330 | 7 | Tabernacle, NJ | 08088 |
| 161 | 16 Worrell Rd | 39º51'20.796″ | 74º43'29.772″ | 330 | 8 | Tabernacle, NJ | 08088 |
| 162 | 18 Worrell Rd | 39º51'20.138″ | 74º43'29.155″ | 330 | 9.01 | Tabernacle, NJ | 08088 |
| 163 | 20 Worrell Rd | 39º51'19.110″ | 74º43'28.297″ | 330 | 9.02 | Tabernacle, NJ | 08088 |
| 164 | 22 Worrell Rd | 39º51'18.329″ | 74º43'27.600″ | 330 | 9.03 | Tabernacle, NJ | 08088 |
| 165 | 26 Worrell Rd | 39º51'16.723″ | 74º43'26.292″ | 330 | 10.01 | Tabernacle, NJ | 08088 |
| 166 | 24 Worrell Rd | 39º51'17.536″ | 74º43'26.952″ | 330 | 10.02 | Tabernacle, NJ | 08088 |
| 167 | 28 Worrell Rd | 39º51'15.644″ | 74º43'25.156″ | 330 | 11 | Tabernacle, NJ | 08088 |
| 168 | 30 Worrell Rd | 39º51'14.350″ | 74º43'23.961″ | 330 | 12.01 | Tabernacle, NJ | 08088 |
| 169 | 32 Worrell Rd | 39º51'13.547″ | 74º43'23.171″ | 330 | 12.02 | Tabernacle, NJ | 08088 |
| 170 | 34 Worrell Rd | 39º51'12.716″ | 74º43'22.473″ | 330 | 12.03 | Tabernacle, NJ | 08088 |
| 171 | 36 Worrell Rd | 39º51'11.737″ | 74º43'21.829″ | 330 | 13 | Tabernacle, NJ | 08088 |
| 172 | 105 Hawkin Rd | 39º51'26.453″ | 74º43'32.703″ | 903 | 1 | Tabernacle, NJ | 08088 |
| 173 | 109 Hawkin Rd | 39º51'25.117″ | 74º43'31.442″ | 903 | 2 | Tabernacle, NJ | 08088 |
| 174 | 111 Hawkin Rd | 39º51'24.131″ | 74º43'30.504″ | 903 | 3 | Tabernacle, NJ | 08088 |

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (RESIDENTIAL)**

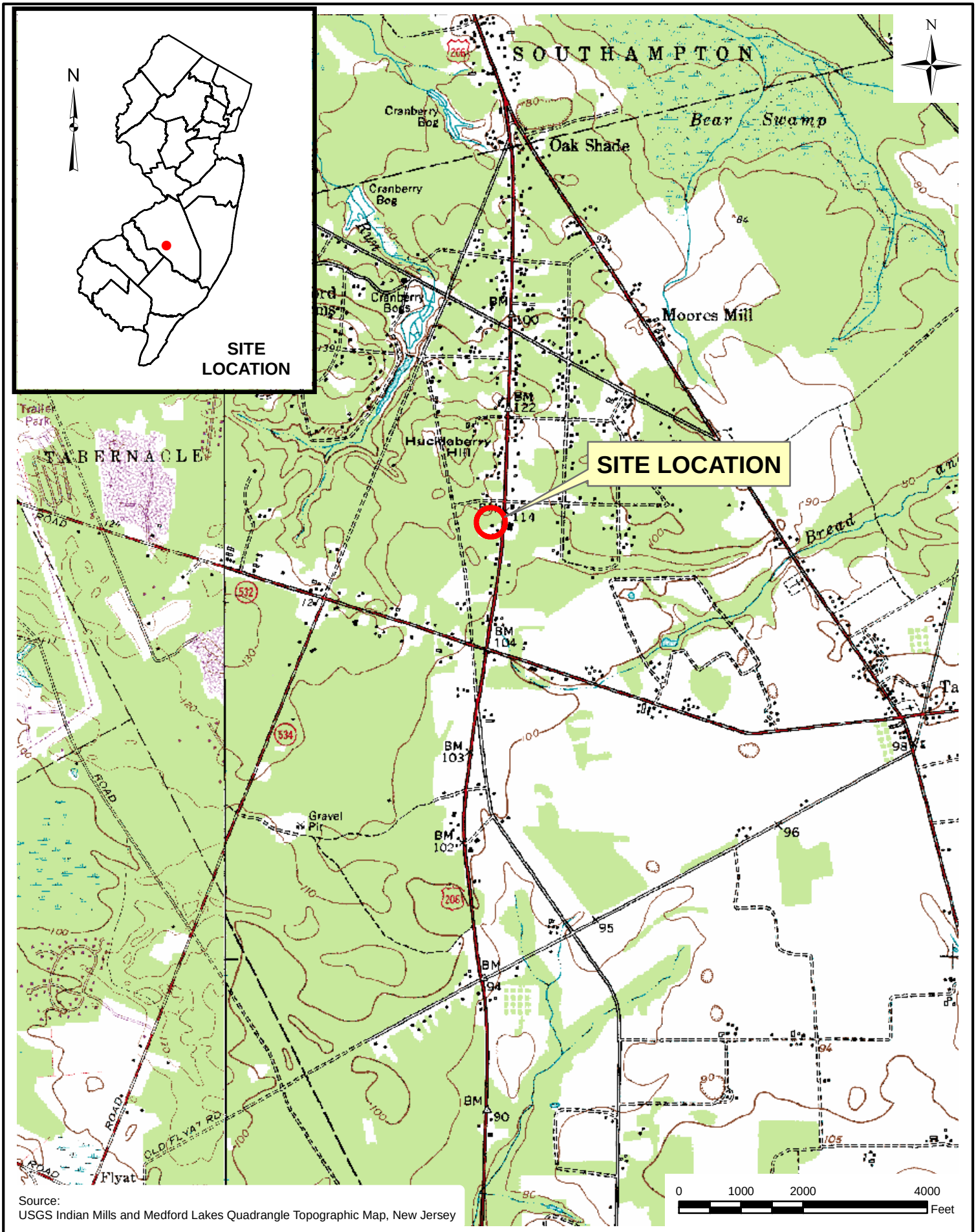
| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 175 | 3 Riedel Dr | 39º51'22.465″ | 74º43'29.002″ | 903 | 4 | Tabernacle, NJ | 08088 |
| 176 | 5 Riedel Dr | 39º51'21.167″ | 74º43'28.030″ | 903 | 5 | Tabernacle, NJ | 08088 |
| 177 | 7 Riedel Dr | 39º51'19.718″ | 74º43'26.983″ | 903 | 6 | Tabernacle, NJ | 08088 |
| 178 | 4 Riedel Dr | 39º51'22.391″ | 74º43'24.674″ | 903 | 7.01 | Tabernacle, NJ | 08088 |
| 179 | 117 Hawkin Rd | 39º51'25.063″ | 74º43'25.919″ | 903 | 7.02 | Tabernacle, NJ | 08088 |
| 180 | 6 Riedel Dr | 39º51'20.673″ | 74º43'23.435″ | 903 | 8 | Tabernacle, NJ | 08088 |
| 181 | 119 Hawkin Rd | 39º51'19.736″ | 74º43'17.246″ | 903 | 9.01 | Tabernacle, NJ | 08088 |
| 182 | 9 Riedel Rd | 39º51'17.226″ | 74º43'21.726″ | 903 | 9.02 | Tabernacle, NJ | 08088 |
| 183 | 9 Worrell Rd | 39º51'21.441″ | 74º43'36.988″ | 331 | 1.01 | Tabernacle, NJ | 08088 |
| 184 | 12 Wynn Rd | 39º51'19.258″ | 74º43'37.008″ | 331 | 1.02 | Tabernacle, NJ | 08088 |
| 185 | 14 Wynn Rd | 39º51'16.440″ | 74º43'37.108″ | 331 | 2.01 | Tabernacle, NJ | 08088 |
| 186 | 16 Wynn Rd | 39º51'14.954″ | 74º43'37.047″ | 331 | 2.02 | Tabernacle, NJ | 08088 |
| 187 | 18 Wynn Rd | 39º51'13.814″ | 74º43'37.180″ | 331 | 3.01 | Tabernacle, NJ | 08088 |
| 188 | 11 Cramer Rd | 39º51'12.908″ | 74º43'33.966″ | 331 | 3.02 | Tabernacle, NJ | 08088 |
| 189 | 5 Cramer Rd | 39º51'12.977″ | 74º43'30.358″ | 331 | 4 | Tabernacle, NJ | 08088 |
| 190 | 12 Cramer Rd | 39º51'11.684″ | 74º43'36.531″ | 332 | 1.01 | Tabernacle, NJ | 08088 |
| 191 | 10 Cramer Rd | 39º51'11.713″ | 74º43'33.989″ | 332 | 1.02 | Tabernacle, NJ | 08088 |
| 192 | 8 Cramer Rd | 39º51'11.631″ | 74º43'31.722″ | 332 | 1.03 | Tabernacle, NJ | 08088 |
| 193 | 4 Cramer Rd | 39º51'9.7682″ | 74º43'36.846″ | 332 | 1.04 | Tabernacle, NJ | 08088 |
| 194 | 26 Wynn Rd | 39º51'9.3048″ | 74º43'36.884″ | 332 | 2 | Tabernacle, NJ | 08088 |
| 195 | 28 Wynn Rd | 39º51'8.1308″ | 74º43'36.961″ | 332 | 3 | Tabernacle, NJ | 08088 |
| 196 | 30 Wynn Rd | 39º51'5.6904″ | 74º43'36.953″ | 332 | 4 | Tabernacle, NJ | 08088 |
| 197 | 34 Wynn Rd | 39º51'11.389″ | 74º43'29.036″ | 332 | 6 | Tabernacle, NJ | 08088 |
| 198 | 31 Worrell Rd | 39º51'9.3544″ | 74º43'27.186″ | 332 | 7.01 | Tabernacle, NJ | 08088 |
| 199 | 33 Worrell Rd | 39º51'8.3614″ | 74º43'29.125″ | 332 | 7.02 | Tabernacle, NJ | 08088 |
| 200 | 80 Carranza Rd | 39º51'35.673″ | 74º43'27.271″ | 401 | 8.02 | Tabernacle, NJ | 08088 |

**Table 10**
*Joan's Cleaners*
*Tabernacle Township, New Jersey*
**Potable Well Receptor Table**

**POTABLE WELLS (NON-RESIDENTIAL)**

| INDEX | ADDRESS | LATITUDE | LONGITUDE | BLOCK | LOT | CITY AND STATE | ZIP CODE |
|---|---|---|---|---|---|---|---|
| 201 | Oak Shade Rd | 39º51'16.815″ | 74º44'15.979″ | 203 | 1 | Tabernacle, NJ | 08088 |
| 202 | 909 Old Indian Mills Rd | 39º51'8.5835″ | 74º44'13.386″ | 203 | 24 | Tabernacle, NJ | 08088 |
| 203 | 1565 Rt 206 | 39º51'31.959″ | 74º44'2.2969″ | 317 | 14 | Tabernacle, NJ | 08088 |
| 204 | 1563 Rt 206 | 39º51'29.775″ | 74º44'2.7705″ | 317 | 15 | Tabernacle, NJ | 08088 |
| 205 | 1557 Rt 206 | 39º51'26.810″ | 74º44'2.4398″ | 317 | 18 | Tabernacle, NJ | 08088 |
| 206 | 1553 Rt 206 | 39º51'25.532″ | 74º44'3.2371″ | 319 | 12 | Tabernacle, NJ | 08088 |
| 207 | 1545 Rt 206 | 39º51'21.414″ | 74º44'2.8491″ | 319 | 14 | Tabernacle, NJ | 08088 |
| 208 | 1535 Rt 206 | 39º51'16.471″ | 74º44'2.8858″ | 319 | 18 | Tabernacle, NJ | 08088 |
| 209 | 820 Old Indian Mills Rd | 39º51'15.175″ | 74º44'8.8379″ | 319 | 8 | Tabernacle, NJ | 08088 |
| 210 | 1533 Rt 206 | 39º51'14.984″ | 74º44'3.1718″ | 319 | 19 | Tabernacle, NJ | 08088 |
| 211 | 1529 Rt 206 | 39º51'11.570″ | 74º44'2.9761″ | 320 | 5 | Tabernacle, NJ | 08088 |
| 212 | 1525 Rt 206 | 39º51'10.183″ | 74º44'3.3807″ | 320 | 6 | Tabernacle, NJ | 08088 |
| 213 | 1507 Rt 206 | 39º51'1.7643″ | 74º44'4.4925″ | 204 | 1.02 | Tabernacle, NJ | 08088 |
| 214 | 1576 Rt 206 | 39º51'36.718″ | 74º44'0.2270″ | 323 | 2 | Tabernacle, NJ | 08088 |
| 215 | 81 Hawkin Rd | 39º51'37.344″ | 74º43'56.114″ | 323 | 1 | Tabernacle, NJ | 08088 |
| 216 | 1572 Rt 206 | 39º51'34.700″ | 74º44'0.2202″ | 323 | 3 | Tabernacle, NJ | 08088 |
| 217 | N/A | 39º51'30.747″ | 74º44'0.1534″ | 323 | 7 | Tabernacle, NJ | 08088 |
| 218 | 1562 Rt 206 | 39º51'29.183″ | 74º43'59.720″ | 323 | 8 | Tabernacle, NJ | 08088 |
| 219 | 1558 Rt 206 | 39º51'27.74″ | 74º44'0.5173″ | 323 | 9 | Tabernacle, NJ | 08088 |
| 220 | N/A | 39º51'26.792″ | 74º44'0.4607″ | 323 | 10 | Tabernacle, NJ | 08088 |
| 221 | 1554 Rt 206 | 39º51'25.019″ | 74º44'0.4061″ | 324 | 1.01 | Tabernacle, NJ | 08088 |
| 222 | 1536 Rt 206 | 39º51'16.414″ | 74º44'0.6928″ | 324 | 7 | Tabernacle, NJ | 08088 |
| 223 | 1530 Rt 206 | 39º51'13.407″ | 74º44'0.7895″ | 324 | 8.02 | Tabernacle, NJ | 08088 |
| 224 | 1528 Rt 206 | 39º51'12.108″ | 74º44'1.3214″ | 325 | 1.01 | Tabernacle, NJ | 08088 |
| 225 | 32 Cramer Rd | 39º51'12.276″ | 74º43'59.718″ | 325 | 1.02 | Tabernacle, NJ | 08088 |
| 226 | 30 Cramer Rd | 39º51'12.241″ | 74º43'56.619″ | 325 | 1.03 | Tabernacle, NJ | 08088 |
| 227 | N/A | 39º51'10.923″ | 74º43'56.828″ | 325 | 2.02 | Tabernacle, NJ | 08088 |
| 228 | 1522 Rt 206 | 39º51'8.9789″ | 74º44'1.1505″ | 325 | 3 | Tabernacle, NJ | 08088 |
| 229 | 1500 Rt 206 | 39º50'57.080″ | 74º44'3.7352″ | 903 | 16.01 | Tabernacle, NJ | 08088 |
| 230 | 13 Hill Rd | 39º51'27.240″ | 74º43'42.955″ | 327 | 8 | Tabernacle, NJ | 08088 |
| 231 | 78 Carranza Rd | 39º51'39.312″ | 74º43'30.169″ | 401 | 11 | Tabernacle, NJ | 08088 |
| 232 | 79 Carranza Rd | 39º51'34.943″ | 74º43'30.112″ | 904 | 1.10 | Tabernacle, NJ | 08088 |
| 233 | 86 Carranza Rd | 39º51'35.571″ | 74º43'15.767″ | 401 | 12.05 | Tabernacle, NJ | 08088 |
| 234 | Carranza Rd | 39º51'23.508″ | 74º42'58.626″ | 401 | 12.01 | Tabernacle, NJ | 08088 |

# FIGURES




Source:
USGS Indian Mills and Medford Lakes Quadrangle Topographic Map, New Jersey

N.J. Department of Environmental Protection

JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

**SITE LOCATION MAP**

NJDEP CONTRACT No. A-73073

The Louis Berger Group, Inc.
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 1**

I:\GIS_SERVICES\NJNJDEP\JOAN'S CLEANERS

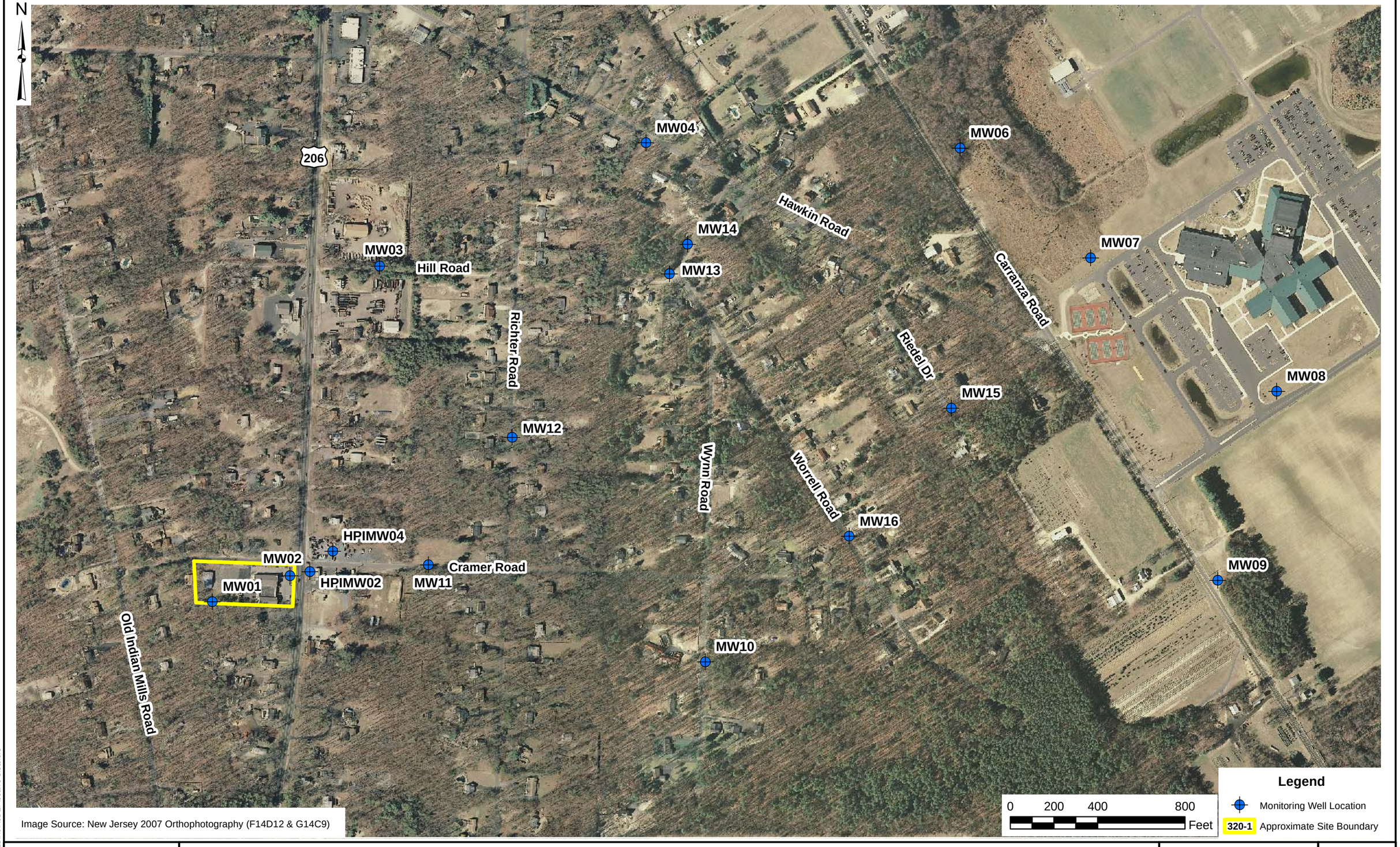



Image Source: New Jersey 2007 Orthophotography (F14D12 & G14C9)

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**N.J. Department of Environmental Protection**

JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

# SITE PLAN

NJDEP CONTRACT No.A-60243

**The Louis Berger Group, Inc.**
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 2**

N

## Legend

- Streams
- Approximate Groundwater Contaminated Area
- Approximate Site Boundary
- NJ DEP Wetlands

MODAg - Modified Wetlands, Agricultural Lands
PEM1E - Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated
PFO1B - Palustrine, Forested, Broad-Leaved Deciduous, Saturated
PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
PFO1E - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
PFO4B - Palustrine, Forested, Needle-Leaved Evergreen, Saturated
PFO4/1B - Palustrine, Forested, Needle-Leaved Evergreen/Broad-Leaved Deciduous, Saturated
PFO8B - Palustrine, Forested, Atlantic White Cedar, Saturated
PSS1B - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Saturated
PSS1Cx - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded, Excavated

PSS1Cx
Bear Swamp River
PFO1B
PSS1B
PEM1E
PFO1B
Cold Water Run
206
Hill Road
Hawkin Road
Carranza Road
Riedel Dr
Richter Road
Worrell Road
Cramer Road
Old Indian Mills Road
Wynn Road
PFO1/4B
PFO1B
Bread and Cheese Run
PFO4B
PFO4/1B
PFO1E
PFO1B
PFO8B
PFO1C
MODAg
PFO1E
PFO1B
PEM1B

0 200 400 800 1200 1600
Feet

Image Source: New Jersey 2007 Orthophotography (F14D12 & G14C9)

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**N.J. Department of Environmental Protection**

JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

# WETLANDS DELINEATION MAP

NJDEP CONTRACT No.A-60243

**The Louis Berger Group, Inc.**
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 3**

**Notes:**

- All results are dry weight and are reported in parts per million (mg/kg)
- NRDCSRS = Non Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- RDCSRS = Residential Direct Contact Soil Remediation Standards, NJDEP, June 2008
- IGWSRS = Default Impact to Ground Water Soil Remediation Standard is from the NJDEP's "Soil-Water Partition Equation Guidance Document" dated June 2008 (revised December 2008)
- U = Not detected above the quantitation limit; the value presented is the sample quantitation limit
- J = Estimated value. Concentration above the MDL but below the RL
- **Bold = Positive Detection**

| Location ID | | | | SB27 | |
|---|---|---|---|---|---|
| Sample ID | | | | SB27A | SB27AE |
| Lab ID | | | | JB5629-7 | JB5629-8 |
| Sample Date | | | | 5/3/2012 | 5/3/2012 |
| Sample Interval (ft bgs) | | | | 18.0 - 18.5 | 18.0 - 18.5 |
| **VOCs** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | |
| Tetrachloroethene | 5 | 2 | 0.005 | **0.00074 J** | **0.00047 J** |

| Location ID | | | | SB30 | |
|---|---|---|---|---|---|
| Sample ID | | | | SB30A | SB30AE |
| Lab ID | | | | JB5629-13 | JB5629-14 |
| Sample Date | | | | 5/3/2012 | 5/3/2012 |
| Sample Interval (ft bgs) | | | | 17.0 - 17.5 | 17.0 - 17.5 |
| **VOCs** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | |
| Tetrachloroethene | 5 | 2 | 0.005 | **0.002 J** | **0.0017 J** |

| Location ID | | | | SB25 | |
|---|---|---|---|---|---|
| Sample ID | | | | SB25A | SB25AE |
| Lab ID | | | | JB5629-3 | JB5629-4 |
| Sample Date | | | | 5/3/2012 | 5/3/2012 |
| Sample Interval (ft bgs) | | | | 18.5 - 19.0 | 18.5 - 19.0 |
| **VOCs** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | |
| Tetrachloroethene | 5 | 2 | 0.005 | **0.00059 J** | 0.0057 U |

| Location ID | | | | SB26 | |
|---|---|---|---|---|---|
| Sample ID | | | | SB26A | SB26AE |
| Lab ID | | | | JB5629-5 | JB5629-6 |
| Sample Date | | | | 5/3/2012 | 5/3/2012 |
| Sample Interval (ft bgs) | | | | 18.0 - 18.5 | 18.0 - 18.5 |
| **VOCs** | **NRDCSRS** | **RDCSRS** | **IGWSRS** | | |
| Tetrachloroethene | 5 | 2 | 0.005 | **0.00059 J** | **0.00038 J** |

## LEGEND

- SOIL BORING LOCATION
- GROUNDWATER SCREENING LOCATION
- MONITORING WELL LOCATION

| EXISTING | | EXISTING | |
|---|---|---|---|
| CONCRETE CURB | | ROOF LEADER W/C.O. | |
| I.D. SIGN | | WATER MAIN | W |
| SIGN | | GAS MAIN | G |
| ENTER AND EXIT SIGNS | | SANITARY LATERAL | S |
| POLE MOUNTED LIGHT | | ELECTRIC | E |
| UTILITY POLE | | TELEPHONE | T |
| TRANSFORMER | | UNDER GROUND FIBER OPTIC LINE | FO |
| CHAIN FENCE | x x | WATER VALVE | WV |
| BOARD-ON-BOARD FENCE | | GAS VALVE | GV |
| WALL | | UNMARKED MANHOLE | |
| BUILDING ENTRANCE | | | |
| FIRE HYDRANT | | | |

30 0 30 60

SCALE IN FEET
(1"=30')

N.J. Department of Environmental Protection

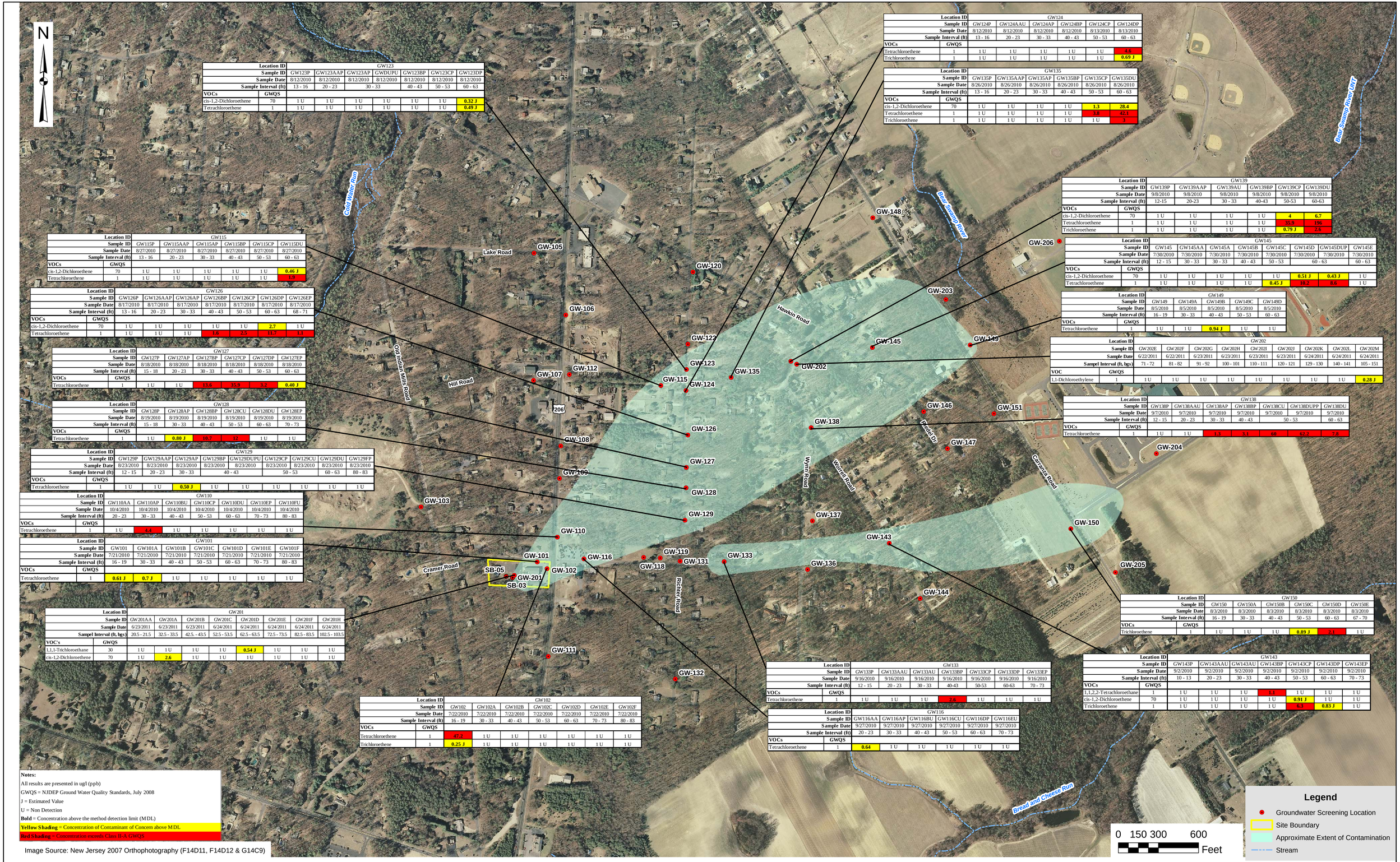
JOAN'S CLEANERS, TABERNACLE, NEW JERSEY

# SOIL SAMPLE LOCATIONS AND ANALYTICAL EXCEEDANCE MAP

NJDEP CONTRACT No. A-73073

The Louis Berger Group, Inc.
412 Mt. Kemble Ave.
Morristown, NJ 07960

FIGURE 4




| Location ID | GW123 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW123P | GW123AAP | GW123AP | GWDUPU | GW123BP | GW123CP | GW123DP |
| Sample Date | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 |
| Sample Interval (ft) | 13 - 16 | 20 - 23 | 30 - 33 | | 40 - 43 | 50 - 53 | 60 - 63 |
| VOCs / GWQS | | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.32 J** |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.49 J** |

| Location ID | GW124 | | | | | |
|---|---|---|---|---|---|---|
| Sample ID | GW124P | GW124AAU | GW124AP | GW124BP | GW124CP | GW124DP |
| Sample Date | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/12/2010 | 8/13/2010 | 8/13/2010 |
| Sample Interval (ft) | 13 - 16 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 |
| VOCs / GWQS | | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **4.6** |
| Trichloroethene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.69 J** |

| Location ID | GW135 | | | | | |
|---|---|---|---|---|---|---|
| Sample ID | GW135P | GW135AAP | GW135AP | GW135BP | GW135CP | GW135DU |
| Sample Date | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 | 8/26/2010 |
| Sample Interval (ft) | 13 - 16 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 |
| VOCs / GWQS | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | **1.3** | **28.4** |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | **3.8** | **42.1** |
| Trichloroethene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **3** |

| Location ID | GW139 | | | | | |
|---|---|---|---|---|---|---|
| Sample ID | GW139P | GW139AAP | GW139AU | GW139BP | GW139CP | GW139DU |
| Sample Date | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 | 9/8/2010 |
| Sample Interval (ft) | 12-15 | 20-23 | 30 - 33 | 40-43 | 50-53 | 60-63 |
| VOCs / GWQS | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | **4** | **6.7** |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | **35.9** | **196** |
| Trichloroethene 1 | 1 U | 1 U | 1 U | 1 U | **0.79 J** | **2.6** |

| Location ID | GW115 | | | | | |
|---|---|---|---|---|---|---|
| Sample ID | GW115P | GW115AAP | GW115AP | GW115BP | GW115CP | GW115DU |
| Sample Date | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 | 8/27/2010 |
| Sample Interval (ft) | 13 - 16 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 |
| VOCs / GWQS | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.46 J** |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | **1.9** |

| Location ID | GW145 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW145 | GW145AA | GW145A | GW145B | GW145C | GW145D | GW145DUP | GW145E |
| Sample Date | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 | 7/30/2010 |
| Sample Interval (ft) | 12 - 15 | 30 - 33 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | | 60 - 63 |
| VOCs / GWQS | | | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | 1 U | **0.51 J** | **0.43 J** | 1 U |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | 1 U | **0.45 J** | **10.2** | **8.6** | 1 U |

| Location ID | GW126 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW126P | GW126AAP | GW126AP | GW126BP | GW126CP | GW126DP | GW126EP |
| Sample Date | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 | 8/17/2010 |
| Sample Interval (ft) | 13 - 16 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 68 - 71 |
| VOCs / GWQS | | | | | | | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | 1 U | **2.7** | 1 U |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | **1.6** | **2.5** | **11.7** | **1.1** |

| Location ID | GW149 | | | | |
|---|---|---|---|---|---|
| Sample ID | GW149 | GW149A | GW149B | GW149C | GW149D |
| Sample Date | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 | 8/5/2010 |
| Sample Interval (ft) | 16 - 19 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 |
| VOCs / GWQS | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | **0.94 J** | 1 U | 1 U |

| Location ID | GW127 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW127P | GW127AP | GW127BP | GW127CP | GW127DP | GW127EP | |
| Sample Date | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | 8/18/2010 | |
| Sample Interval (ft) | 15 - 18 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | |
| VOCs / GWQS | | | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | **13.6** | **35.9** | **3.2** | **0.40 J** | |

| Location ID | GW202 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | GW202E | GW202F | GW202G | GW202H | GW202I | GW202J | GW202K | GW202L | GW202M | |
| Sample Date | 6/22/2011 | 6/22/2011 | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | |
| Sampel Interval (ft, bgs) | 71 - 72 | 81 - 82 | 91 - 92 | 100 - 101 | 110 - 111 | 120 - 121 | 129 - 130 | 140 - 141 | 105 - 151 | |
| VOC / GWQS | | | | | | | | | | |
| 1,1-Dichloroethylene 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **0.28 J** | |

| Location ID | GW128 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW128P | GW128AP | GW128BP | GW128CU | GW128DU | GW128EP | |
| Sample Date | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | 8/19/2010 | |
| Sample Interval (ft) | 15 - 18 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | |
| VOCs / GWQS | | | | | | | |
| Tetrachloroethene 1 | 1 U | **0.80 J** | **10.7** | **12** | 1 U | 1 U | |

| Location ID | GW138 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW138P | GW138AAU | GW138AP | GW138BP | GW138CU | GW138DUPP | GW138DU | |
| Sample Date | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | 9/7/2010 | |
| Sample Interval (ft) | 12 - 15 | 20 - 23 | 30 - 33 | 40 - 43 | | 50 - 53 | 60 - 63 | |
| VOCs / GWQS | | | | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | **1.3** | **3.1** | **60** | **62.2** | **7.8** | |

| Location ID | GW129 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID | GW129P | GW129AAP | GW129AP | GW129BP | GW129DUPU | GW129CP | GW129CU | GW129DU | GW129FP |
| Sample Date | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 | 8/23/2010 |
| Sample Interval (ft) | 12 - 15 | 20 - 23 | 30 - 33 | 40 - 43 | | 50 - 53 | | 60 - 63 | 80 - 83 |
| VOCs / GWQS | | | | | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | **0.50 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Location ID | GW110 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW110AA | GW110AP | GW110BU | GW110CP | GW110DU | GW110EP | GW110FU | |
| Sample Date | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | 10/4/2010 | |
| Sample Interval (ft) | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | 80 - 83 | |
| VOCs / GWQS | | | | | | | | |
| Tetrachloroethene 1 | 1 U | **4.4** | 1 U | 1 U | 1 U | 1 U | 1 U | |

| Location ID | GW101 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW101 | GW101A | GW101B | GW101C | GW101D | GW101E | GW101F | |
| Sample Date | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | 7/21/2010 | |
| Sample Interval (ft) | 16 - 19 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | 80 - 83 | |
| VOCs / GWQS | | | | | | | | |
| Tetrachloroethene 1 | **0.61 J** | **0.7 J** | 1 U | 1 U | 1 U | 1 U | 1 U | |

| Location ID | GW150 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW150 | GW150A | GW150B | GW150C | GW150D | GW150E | |
| Sample Date | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | 8/3/2010 | |
| Sample Interval (ft) | 16 - 19 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 67 - 70 | |
| VOCs / GWQS | | | | | | | |
| Trichloroethene 1 | 1 U | 1 U | 1 U | **0.89 J** | **2.1** | 1 U | |

| Location ID | GW201 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID | GW201AA | GW201A | GW201B | GW201C | GW201D | GW201E | GW201F | GW201H | |
| Sample Date | 6/23/2011 | 6/23/2011 | 6/23/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | 6/24/2011 | |
| Sampel Interval (ft, bgs) | 20.5 - 21.5 | 32.5 - 33.5 | 42.5. - 43.5 | 52.5 - 53.5 | 62.5 - 63.5 | 72.5 - 73.5 | 82.5 - 83.5 | 102.5 - 103.5 | |
| VOC's / GWQS | | | | | | | | | |
| 1,1,1-Trichloroethane 30 | 1 U | 1 U | 1 U | 1 U | **0.54 J** | 1 U | 1 U | 1 U | |
| cis-1,2-Dichloroethene 70 | 1 U | **2.6** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |

| Location ID | GW102 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW102 | GW102A | GW102B | GW102C | GW102D | GW102E | GW102F | |
| Sample Date | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | 7/22/2010 | |
| Sample Interval (ft) | 16 - 19 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | 80 - 83 | |
| VOCs / GWQS | | | | | | | | |
| Tetrachloroethene 1 | **47.2** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |
| Trichloroethene 1 | **0.25 J** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | |

| Location ID | GW133 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW133P | GW133AAU | GW133AU | GW133BP | GW133CP | GW133DP | GW133EP |
| Sample Date | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 | 9/16/2010 |
| Sample Interval (ft) | 12 - 15 | 20 - 23 | 30 - 33 | 40-43 | 50-53 | 60-63 | 70 - 73 |
| VOCs / GWQS | | | | | | | |
| Tetrachloroethene 1 | 1 U | 1 U | 1 U | **2.6** | 1 U | 1 U | 1 U |

| Location ID | GW116 | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | GW116AA | GW116AP | GW116BU | GW116CU | GW116DP | GW116EU | |
| Sample Date | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | 9/27/2010 | |
| Sample Interval (ft) | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | |
| VOCs / GWQS | | | | | | | |
| Tetrachloroethene 1 | **0.64** | 1 U | 1 U | 1 U | 1 U | 1 U | |

| Location ID | GW143 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID | GW143P | GW143AAU | GW143AU | GW143BP | GW143CP | GW143DP | GW143EP | |
| Sample Date | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | 9/2/2010 | |
| Sample Interval (ft) | 10 - 13 | 20 - 23 | 30 - 33 | 40 - 43 | 50 - 53 | 60 - 63 | 70 - 73 | |
| VOCs / GWQS | | | | | | | | |
| 1,1,2,2-Tetrachloroethane 1 | 1 U | 1 U | 1 U | **1.1** | 1 U | 1 U | 1 U | |
| cis-1,2-Dichloroethene 70 | 1 U | 1 U | 1 U | 1 U | **0.91 J** | 1 U | 1 U | |
| Trichloroethene 1 | 1 U | 1 U | 1 U | 1 U | **6.3** | **0.83 J** | 1 U | |

**Notes:**
All results are presented in ug/l (ppb)
GWQS = NJDEP Ground Water Quality Standards, July 2008
J = Estimated Value
U = Non Detection
**Bold** = Concentration above the method detection limit (MDL)
**Yellow Shading** = Concentration of Contaminant of Concern above MDL
**Red Shading** = Concentration exceeds Class II-A GWQS

Image Source: New Jersey 2007 Orthophotography (F14D11, F14D12 & G14C9)

**Legend**
- Groundwater Screening Location
- Site Boundary
- Approximate Extent of Contamination
- Stream

0 150 300 600 Feet

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**N.J. Department of Environmental Protection**

JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

# GROUNDWATER SCREENING LOCATIONS AND CVOC ANALYTICAL DETECTIONS MAP

NJDEP CONTRACT No.A-73073

**The Louis Berger Group, Inc.**
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 5**


Image Source: New Jersey 2007 Orthophotography (F14D11, F14D12 & G14C9)

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JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

**GROUNDWATER CONTOUR MAP - MARCH 2012**

NJDEP CONTRACT No. A-73073

**The Louis Berger Group, Inc.**
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 6**


**Legend**

- Monitoring Well Location
- Proposed Monitoring Well Location
- (92.99) Groundwater Elevation (ft, amsl)
- Groundwater Contour (ft, amsl)
- Groundwater Flow Direction
- Approximate Site Boundary
- Stream Centerline

Image Source: New Jersey 2007 Orthophotography (F14D11, F14D12 & G14C9)

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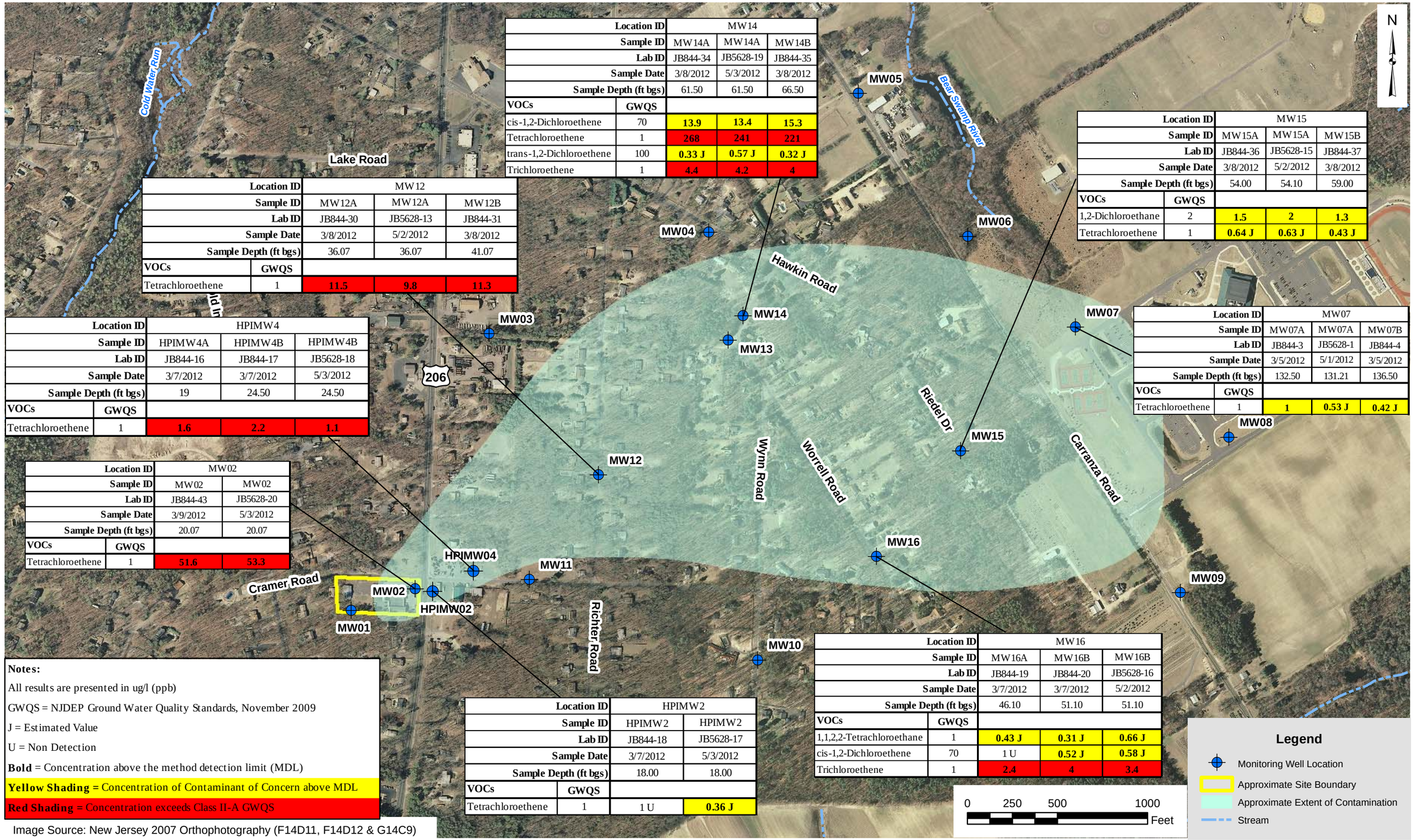
JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

**GROUNDWATER CONTOUR MAP - MAY 2012**

NJDEP CONTRACT No. A-73073

**The Louis Berger Group, Inc.**
412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 7**




| Location ID | | MW14 | | |
|---|---|---|---|---|
| Sample ID | | MW14A | MW14A | MW14B |
| Lab ID | | JB844-34 | JB5628-19 | JB844-35 |
| Sample Date | | 3/8/2012 | 5/3/2012 | 3/8/2012 |
| Sample Depth (ft bgs) | | 61.50 | 61.50 | 66.50 |
| VOCs | GWQS | | | |
| cis-1,2-Dichloroethene | 70 | **13.9** | **13.4** | **15.3** |
| Tetrachloroethene | 1 | **268** | **241** | **221** |
| trans-1,2-Dichloroethene | 100 | **0.33 J** | **0.57 J** | **0.32 J** |
| Trichloroethene | 1 | **4.4** | **4.2** | **4** |

| Location ID | | MW12 | | |
|---|---|---|---|---|
| Sample ID | | MW12A | MW12A | MW12B |
| Lab ID | | JB844-30 | JB5628-13 | JB844-31 |
| Sample Date | | 3/8/2012 | 5/2/2012 | 3/8/2012 |
| Sample Depth (ft bgs) | | 36.07 | 36.07 | 41.07 |
| VOCs | GWQS | | | |
| Tetrachloroethene | 1 | **11.5** | **9.8** | **11.3** |

| Location ID | | MW15 | | |
|---|---|---|---|---|
| Sample ID | | MW15A | MW15A | MW15B |
| Lab ID | | JB844-36 | JB5628-15 | JB844-37 |
| Sample Date | | 3/8/2012 | 5/2/2012 | 3/8/2012 |
| Sample Depth (ft bgs) | | 54.00 | 54.10 | 59.00 |
| VOCs | GWQS | | | |
| 1,2-Dichloroethane | 2 | **1.5** | **2** | **1.3** |
| Tetrachloroethene | 1 | **0.64 J** | **0.63 J** | **0.43 J** |

| Location ID | | HPIMW4 | | |
|---|---|---|---|---|
| Sample ID | | HPIMW4A | HPIMW4B | HPIMW4B |
| Lab ID | | JB844-16 | JB844-17 | JB5628-18 |
| Sample Date | | 3/7/2012 | 3/7/2012 | 5/3/2012 |
| Sample Depth (ft bgs) | | 19 | 24.50 | 24.50 |
| VOCs | GWQS | | | |
| Tetrachloroethene | 1 | **1.6** | **2.2** | **1.1** |

| Location ID | | MW07 | | |
|---|---|---|---|---|
| Sample ID | | MW07A | MW07A | MW07B |
| Lab ID | | JB844-3 | JB5628-1 | JB844-4 |
| Sample Date | | 3/5/2012 | 5/1/2012 | 3/5/2012 |
| Sample Depth (ft bgs) | | 132.50 | 131.21 | 136.50 |
| VOCs | GWQS | | | |
| Tetrachloroethene | 1 | **1** | **0.53 J** | **0.42 J** |

| Location ID | | MW02 | |
|---|---|---|---|
| Sample ID | | MW02 | MW02 |
| Lab ID | | JB844-43 | JB5628-20 |
| Sample Date | | 3/9/2012 | 5/3/2012 |
| Sample Depth (ft bgs) | | 20.07 | 20.07 |
| VOCs | GWQS | | |
| Tetrachloroethene | 1 | **51.6** | **53.3** |

| Location ID | | HPIMW2 | |
|---|---|---|---|
| Sample ID | | HPIMW2 | HPIMW2 |
| Lab ID | | JB844-18 | JB5628-17 |
| Sample Date | | 3/7/2012 | 5/3/2012 |
| Sample Depth (ft bgs) | | 18.00 | 18.00 |
| VOCs | GWQS | | |
| Tetrachloroethene | 1 | 1 U | **0.36 J** |

| Location ID | | MW16 | | |
|---|---|---|---|---|
| Sample ID | | MW16A | MW16B | MW16B |
| Lab ID | | JB844-19 | JB844-20 | JB5628-16 |
| Sample Date | | 3/7/2012 | 3/7/2012 | 5/2/2012 |
| Sample Depth (ft bgs) | | 46.10 | 51.10 | 51.10 |
| VOCs | GWQS | | | |
| 1,1,2,2-Tetrachloroethane | 1 | **0.43 J** | **0.31 J** | **0.66 J** |
| cis-1,2-Dichloroethene | 70 | 1 U | **0.52 J** | **0.58 J** |
| Trichloroethene | 1 | **2.4** | **4** | **3.4** |

**Notes:**

All results are presented in ug/l (ppb)

GWQS = NJDEP Ground Water Quality Standards, November 2009

J = Estimated Value

U = Non Detection

**Bold** = Concentration above the method detection limit (MDL)

**Yellow Shading** = Concentration of Contaminant of Concern above MDL

**Red Shading** = Concentration exceeds Class II-A GWQS

Image Source: New Jersey 2007 Orthophotography (F14D11, F14D12 & G14C9)

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JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

# MONITORING WELL LOCATIONS AND CVOC ANALYTICAL DETECTION MAP

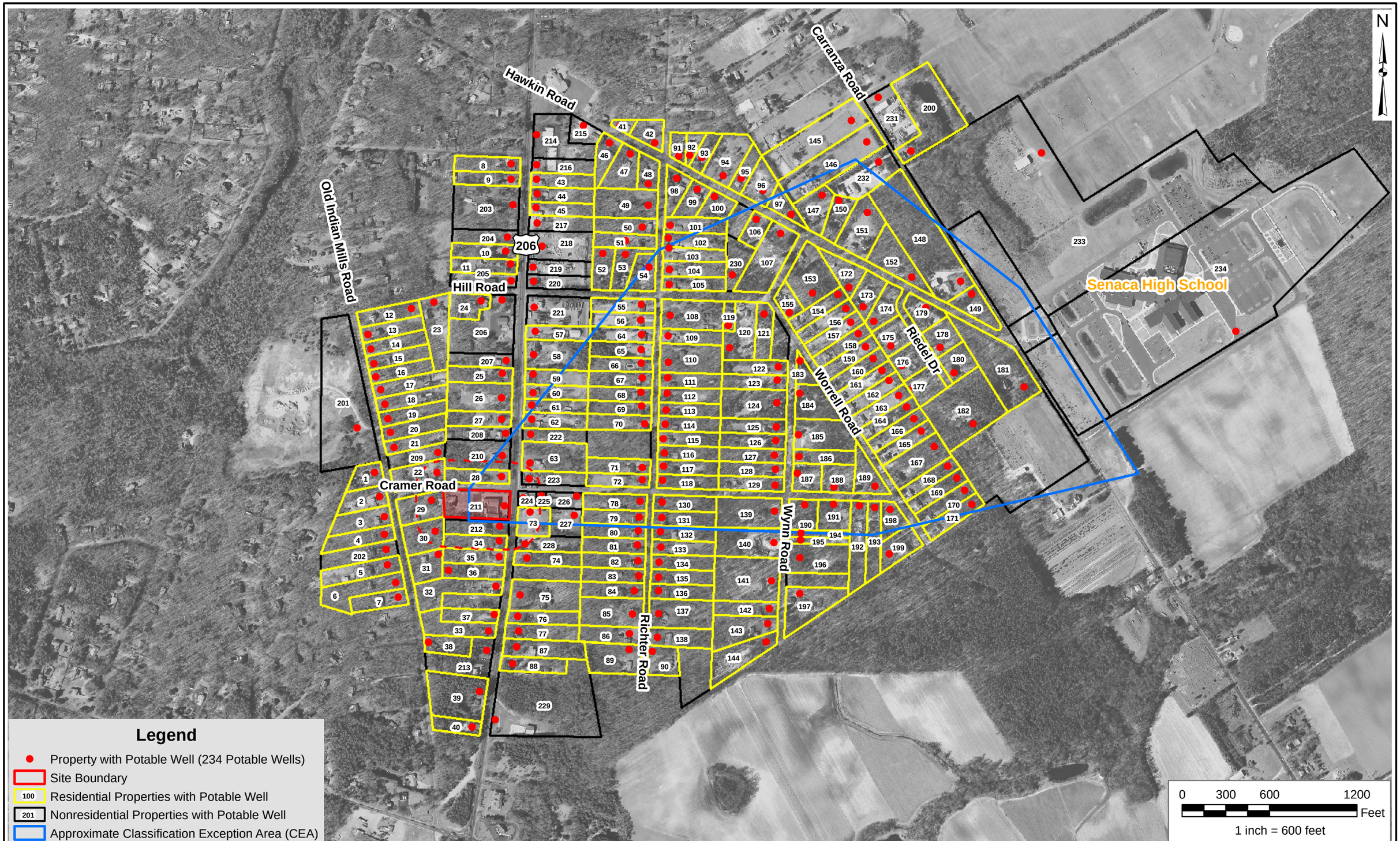
NJDEP CONTRACT No. A-73073


**The Louis Berger Group, Inc.**

412 MT KEMBLE AVE

MORRISTOWN, NJ


**FIGURE 8**




N.J. Department of Environmental Protection

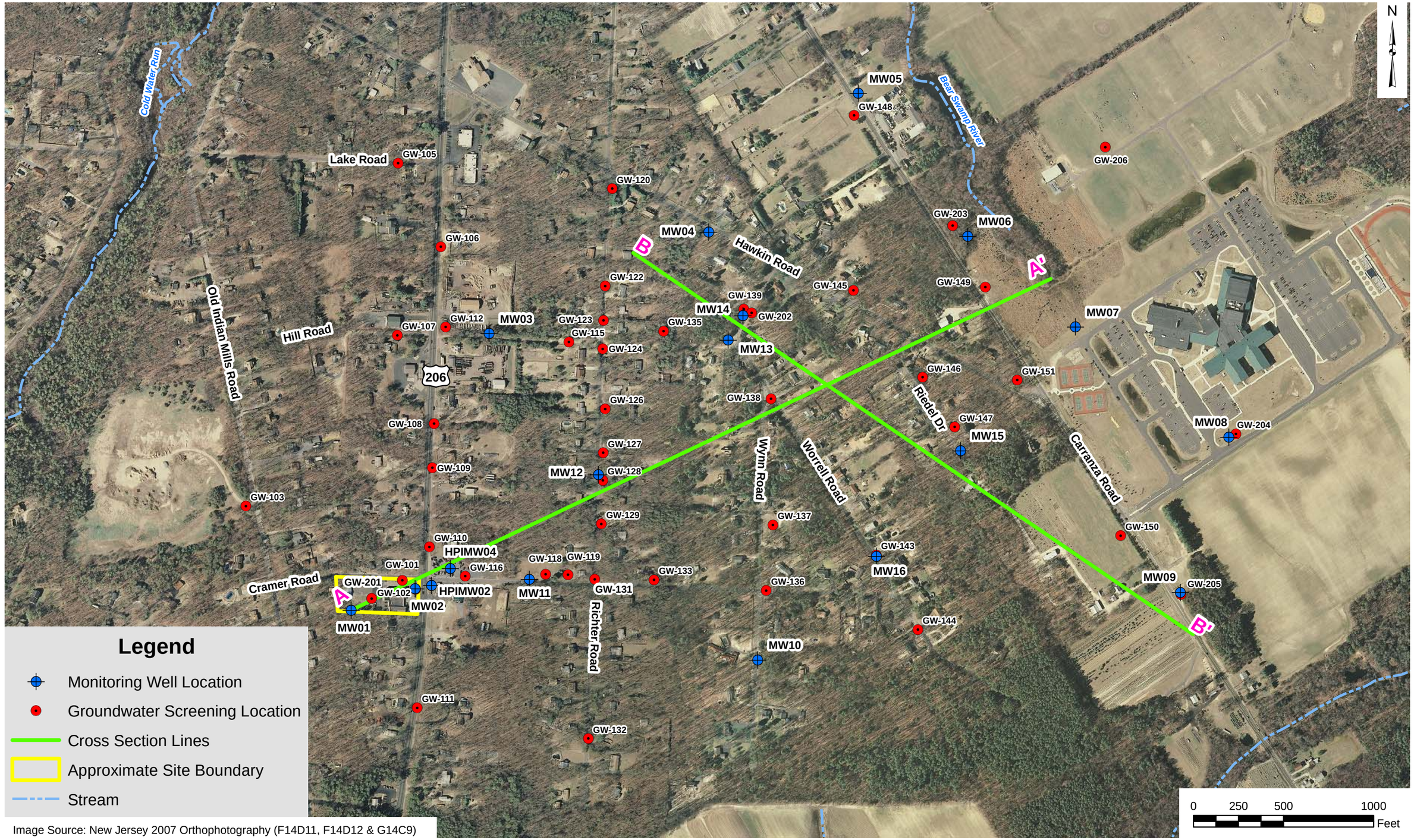
JOAN'S CLEANERS, TABERNACLE TOWNSHIP, BURLINGTON COUNTY, NEW JERSEY

# Potable Well Receptor Map

NJDEP CONTRACT No. A-73073

The Louis Berger Group, Inc.
412 MT KEMBLE AVE
MORRISTOWN, NJ

FIGURE 9




## Legend

- Monitoring Well Location
- Groundwater Screening Location
- Cross Section Lines
- Approximate Site Boundary
- Stream

Image Source: New Jersey 2007 Orthophotography (F14D11, F14D12 & G14C9)

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JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

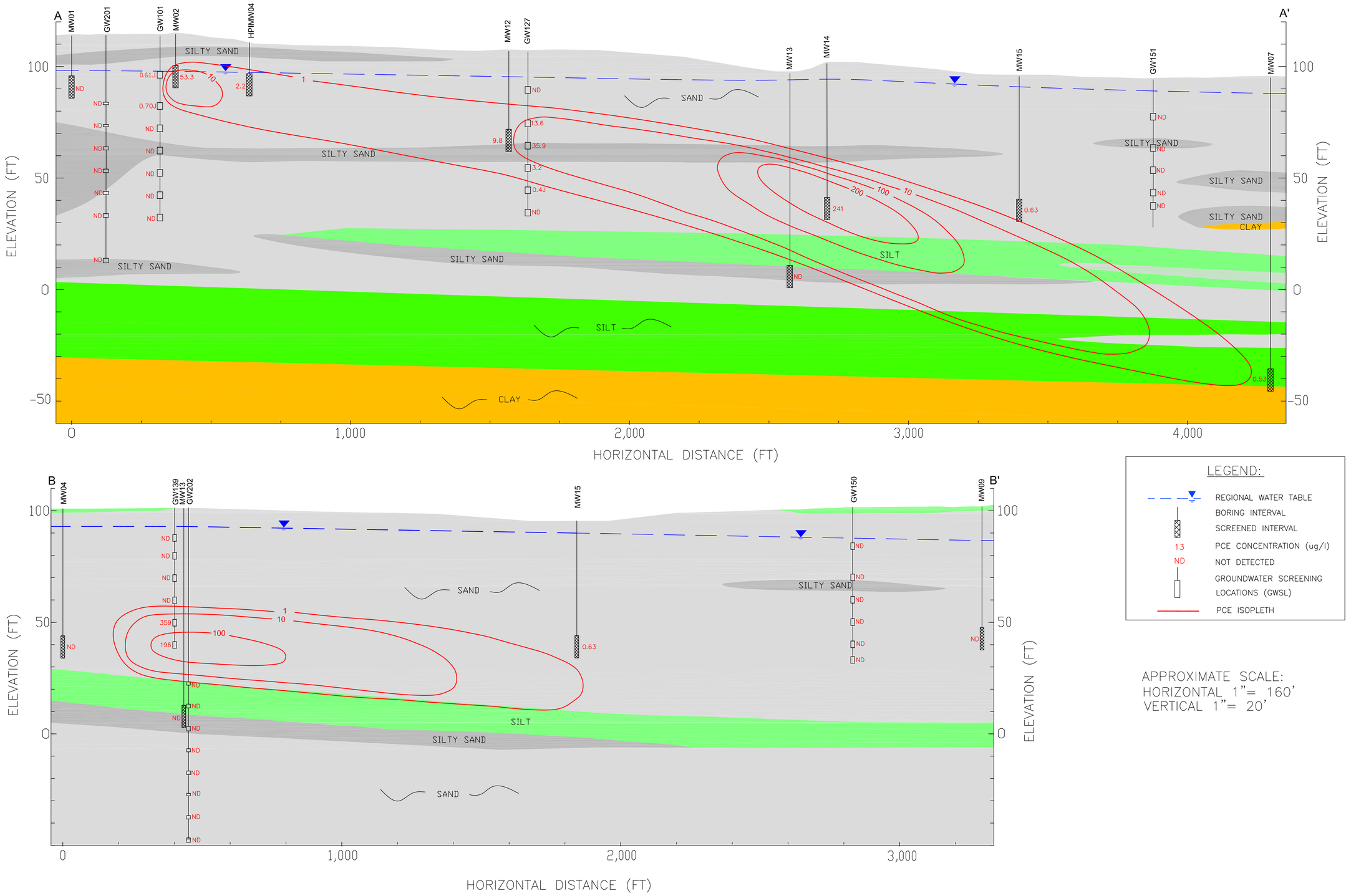
**CROSS SECTION REFERENCE MAP**

NJDEP CONTRACT No. A-73073

**The Louis Berger Group, Inc.**

412 MT KEMBLE AVE
MORRISTOWN, NJ

**FIGURE 10**

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JOAN'S CLEANERS, TABERNACLE TOWNSHIP, NEW JERSEY

# CROSS-SECTION (AA) & CROSS-SECTION (BB)

NJDEP CONTRACT No. A-73073

The Louis Berger Group, Inc.
412 Mt. Kemble Ave.
Morristown, NJ 07960

FIGURE 11

Submitted By:

THE Louis Berger Group, INC.

412 Mount Kemble Avenue
Morristown, New Jersey 07960

April 2013