

**SUPPLEMENTAL REMEDIAL INVESTIGATION  
ON-SITE GROUNDWATER STUDY REPORT**

**PRECISION CONCEPTS  
26 PRECISION DRIVE  
SHIRLEY, NEW YORK 11967**

**NYS DEC IHWDS I.D. No. 1-52-158**

1/01

**Prepared For:**

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## **1.0 INTRODUCTION**

### **1.1 Overview**

A Supplemental Remedial Investigation was conducted at the property located at 26 Precision Drive, Shirley, New York, also identified on the tax map as Section 584, Block 1, Lot 4.034, hereafter referred to as the "Site". The investigative activities were conducted by General Consolidated Industries, Inc. (GCI), and Kempey Engineering. The intent of the investigation was to characterize the groundwater quality in the vicinity of the subject property.

The Site investigation activities were initiated in order to satisfy the conditions of Order on Consent No. W1-0803-98-01, which was signed by Precision Concepts on February 10, 1999.

The work at the site was performed in accordance with the provisions of the Supplemental Remedial Investigation Work Plan, dated August 2000, which was prepared by GCI and Kempey Engineering. The location of the subject Site is depicted on a U.S.G.S. 7.5 Minute Quadrangle Topographic Map. Please refer to Figure 1 - Site Location Map.

The purpose of the Supplemental Remedial Investigation is to characterize and assess the on-site groundwater quality in the vicinity of possible sources of contamination. The investigative field activities were conducted at the site on October 23 - 26, 2000. The field work was conducted under the direction of Mr. Matthew Boeckel, Senior Hydrogeologist for GCI, as well as Mr. Eugene Kempey, President of Kempey Engineering. The investigative tasks were observed by Mr. Michael D. MacCabe, Environmental Engineer I, of the New York State Department of Environmental Conservation (NYSDEC).

### **1.2 Work Plan Approach**

The investigative activities which were conducted at the site were performed in accordance with the provisions of the Supplemental Remedial Investigation Work Plan, dated August 2000, which was prepared by GCI and Kempey Engineering.



## **2.0 SITE BACKGROUND AND SETTING**

### **2.1 Current Conditions**

The subject site is located at 26 Precision Drive, which is approximately 1,343 feet east of William Floyd Parkway, Town of Brookhaven, Suffolk County, Long Island, New York. The subject property is located in a moderately developed commercial neighborhood. The site is bordered on the north by the Long Island Expressway, to the south and west of the site are commercial buildings and to the east is vacant undeveloped land. Brookhaven National Laboratory (BNL), which has been documented as a source of groundwater contamination, is located less than one-eighth (1/8) of a mile to the north (upgradient) of the subject property.

The subject site is an irregular shaped parcel, with approximately 1,355 feet of frontage along the north side of Precision Drive. The property is approximately 900 feet deep. The total area of the Site measures approximately 636,000 square feet or 15.9 acres. The building itself occupies approximately 6% of the subject site. The majority of the site is undeveloped and is covered with natural vegetation, the remainder of the property is developed as paved parking areas and drive ways for the facility.

The Town of Brookhaven Building Department records indicated that the subject building was erected circa 1985. The subject building is constructed of concrete block with brick veneer. The building rests on a poured concrete slab foundation. Windows are comprised primarily of bronze plate glass in aluminum frames. The building space consists of office areas along the north end, reception/waiting area, conference room, lunch room, storage rooms, a research and development lab, office areas, bathrooms (office and warehouse), loading area and three warehouse/storage areas along the south end. The office section and primary entrance to the building is accessible from the north and west sides. Four (4) overhead bay doors access the warehouse/storage areas from the south side. All office areas are finished with carpeted floors, sheetrock walls and suspended acoustic ceilings. All manufacturing/storage areas remain unfinished with poured concrete floors, concrete block walls and steel corrugated ceilings/roof deck. The heat for the building is provided to the warehouse areas of the building via gas and electric fired, ceiling mounted forced hot air systems. All other areas including offices and research and development areas are heated via a gas fired, WEIL McLAIN boiler/circulating hot water baseboard system. The primary roof of the building was observed to be a flat/terraced type.

The site utilizes an on-site sanitary system, which is located on the west side of the subject building. The septic system, consists of a primary septic tank and three overflow pools. There are seven (7) storm water collection drywells located throughout the paved parking areas of the subject site. There are two (2) leaching pools located on the east side of the subject building. It was reported that the eastern leaching pools formerly received discharge of non-contact cooling water from the interior operations conducted by Precision Concepts. There are three (3) buried roof drainage drywells located on the north side of the subject building, as well as two (2) roof drainage drywells on the south side of the subject building.

## **2.2 Current Site Operations**

The site is currently occupied by Luitpold Pharmaceutical, which is a distributor of pharmaceutical products. The site is utilized for warehouse and office purposes. There is only minor use of chemicals at the site which is well documented and inventoried. The site routinely has one (1) - 55 gallon drum which is utilized for storing chemical wastes. The drum is used to store waste corrosive liquid, No. D002, which consists of hydrochloric and sulfuric acids. The current operations conducted at the facility do not pose an apparent environmental threat to the public health or the subject property. In addition, there is no record of reported spills and/or discharges at the site which were the result of the operations conducted by the current tenant at the Site.

## **2.3 Site History**

According to the Town of Brookhaven Building Department records the site is zoned for commercial / industrial uses. The Town of Brookhaven Building Department records indicated that the site was originally developed circa 1985. The site was first occupied by Precision Concepts which operated at the site from 1985 until 1993. Precision Concepts was a manufacturer of metal machine parts for use in the electronics industry.

The Site was vacant undeveloped land prior the construction of the current subject building in 1985. In May 1988, the Suffolk County Department of Health Services (SCDHS) sampled a leaching pool located on the east side of the subject building. The analytical results indicated that 1,1,1-trichloroethane (TCA) was present in the sample at a concentration of 1,200 parts per billion (ppb). No remedial action was undertaken by the SCDHS at this time. In addition, the SCDHS re-sampled the leaching pool in May 1990 and found no organic contamination.



Brookhaven National Laboratory (BNL) is a known source of groundwater contamination and is located less than one-eighth (1/8) of a mile upgradient (north) of the Site. BNL is currently listed on the United States Environmental Protection Agency (US EPA) National Priority List (NPL) and the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). The BNL site is a 5,265 acre, federally owned research facility operated by the Department of Energy, consisting of an active lab and waste disposal facility, with inactive and active landfills, "chemical holes", a sewage treatment plant and a former ash fill. At the hazardous waste management facility (HWMF), spills of VOCs and other compounds have contaminated the groundwater. In 1990, BNL discovered that traces of 1,1,1-trichloroethane (TCA) and dichloroethane (DCA) were detected in a groundwater monitoring well located along the southern boundary of the site. The most recent data regarding BNL indicates that there are seven (7) volatile organic compound (VOC) contamination plumes emanating from the site.

Based upon the presence of the contamination detected in the southern BNL groundwater monitoring well, the SCDHS performed a sampling survey of approximately ninety (90) homes located south of the expressway and south of the subject site where private drinking water wells were sampled for trace organics. Of the ninety (90) private wells tested, five (5) wells were found to be contaminated with TCA and DCA. From May to October of 1990, The SCDHS Bureau of Groundwater Resources installed twenty (20) groundwater monitoring wells in order to determine groundwater flow and the origin of the contamination. The testing of wells located along the northern side of the Long Island Expressway (L.I.E) south service road (adjacent/north of the subject site) indicated low levels of contamination (<15 ppb) at 30 to 110 feet below the water table. Testing of wells located along Precision Drive indicated levels of TCA contamination (3-9300 ppb) at 10 to 40 feet below the water table. The SCDHS estimated through additional monitoring wells that there is a plume of contamination approximately 300 feet wide by 3100 feet long. The SCDHS nominated the subject Site to be listed as a NYS DEC Inactive Hazardous Waste Disposal Site (IHWDS).

A Focused Remedial Investigation (FRI) was conducted at the subject site in June 1999, by GCI. The FRI consisted of obtaining representative soil samples from the on-site cesspool system, two (2) roof drains, two (2) storm water collection drywells, the former aboveground storage tank (AST) area, and the east side leaching pool system. Furthermore, representative samples were collected from select locations in the undeveloped areas surrounding the subject site. Representative samples were submitted for laboratory analysis of metals in order to characterize the background soil quality data, and use that data for comparative purposes during the course of the investigation. The results of the investigation revealed



that there was no on-site source of TCA contamination identified in any of the sampling areas. Based upon the results fo the investigation, there were no Interim Remedial Measures (IRM) recommended for the subject property. Furthermore, it was requested that the site be de-listed from the NYS DEC State Hazardous Waste Site (SHWS) list.

### **3.0 ENVIRONMENTAL SETTING**

#### **3.1 Hydrogeologic Setting**

The subject site is located in the Atlantic Coastal Plain physiographic province which is characterized by low hills of unconsolidated sands, gravel and silt. According to Franke (1972), regionally, the subsurface deposits consist of the Upper Glacial deposits that are characterized by southward sloping deposits of sand, gravel and silt. The Upper Glacial deposits have a maximum thickness of 600 feet. They are underlain by the Magothy, Raritan and Lloyd Formations. The Gardiners clay and the Jameco gravel separate the Upper Glacial deposits and the Magothy Formation along the south west portion of Long Island.

The subject site is in the Upper Glacial aquifer. The Upper Glacial consists of Pleistocene moraine and outwash deposits. The water table is located primarily in the glacial aquifer which underlies a majority of Long Island. In general, the upper glacial is thickest near the north shore and eastern Suffolk County. Hydraulic conductivity is greatest along the southern part of the island, where the outwash deposits consist mainly of well draining coarse sand and gravel.

According to a soil survey of Suffolk County conducted by the United States Department of Agriculture, the lithology at the subject site has been classified as Riverhead Sandy-Loam. The Riverhead series typically consists of well-drained, moderately coarse textured soils. The Riverhead series is very permeable and allows for rapid groundwater flow.

Fresh groundwater originates in the form of precipitation, which on Long Island, averages approximately 44 inches per year. This precipitation will infiltrate into the subsurface and act as the sole recharge mechanism for replenishing water in the upper glacial aquifer system. Under the present conditions of infiltration, groundwater is recharging at a rate of approximately 350 billion gallons of water per year. The Upper Glacial has been designated a sole source aquifer by the US EPA, and as such is protected by US EPA mandated remediation legislation.

According to groundwater level measurements obtained during the field investigation activities, it was determined that groundwater is approximately forty (40) feet below ground surface at the subject site. Groundwater flows in a southerly direction in the vicinity of the Site. The groundwater in the vicinity of the subject site are identified as GA. GA waters are classified as "fresh groundwater". The best usage of Class

GA waters is as a source of potable water supply, as defined in Section 701.15 of the New York State Department of Environmental Conservation (NYSDEC) Water Quality Regulations - Surface Water and Groundwater Classifications and Standards.

### **3.2 Surface Water and Drainage**

The site is nearly level throughout. The storm water runoff at the site either directly infiltrates into the subsurface soil or is directed to a series of on-site storm water collection drywells. There is no municipal sewer service available in the vicinity of the subject property.

There are no ponds, lakes, streams or other water bodies on the subject property or in the vicinity. The subject site is located in the middle of Long Island, and as such there are no major bodies of water in a close proximity. There are no NYSDEC wetlands or other protected lands located at the subject site or in the immediate vicinity.

#### **4.0 REMEDIAL INVESTIGATION**

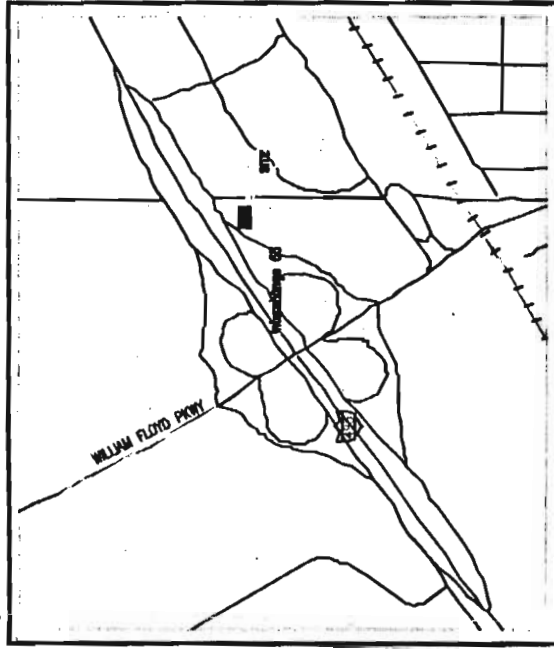
The Supplemental Remedial Investigation field activities were conducted at the site on October 23 through 26, 2000. The field work was conducted under the direction of Mr. Matthew Boeckel, Senior Hydrogeologist for GCI, as well as Mr. Eugene Kempey, President of Kempey Engineering. A majority of the investigative tasks were observed by Mr. Michael D. MacCabe, Environmental Engineer I, of the NYSDEC. The intent of the investigation was to install eleven (11) borings in strategically placed upgradient and downgradient areas throughout the subject property in order to assess the quality of the groundwater. Representative groundwater samples were obtained from each of the borings at the groundwater interface level, as well as from twenty (20) feet and forty (40) feet below the groundwater interface level.

There were no revisions which had to be made regarding the scope of work to be conducted. The following sections provide a summary of the field data collection procedures, visual observations, and quality assurance and quality control (QA/QC) measures.

#### **4.1 Groundwater Sampling**

A total of eleven (11) groundwater borings were installed at the site utilizing a Geoprobe® drill rig. The sampling locations for the eleven (11) borings are depicted on Figure 2.0 - Sample Location Map. Three (3) borings were installed at upgradient locations on the subject property (GSP-1 through GSP-3), and the remaining eight (8) borings (GSP-4 through GSP-11) were installed at downgradient locations with respect to the subject building and other possible sources of on-site groundwater contamination. The groundwater interface was determined to be at forty (40) feet below land surface (bls) in the vicinity of the subject site. Groundwater samples were collected at forty (40) feet bls, sixty (60) feet bls and eighty (80) feet bls.

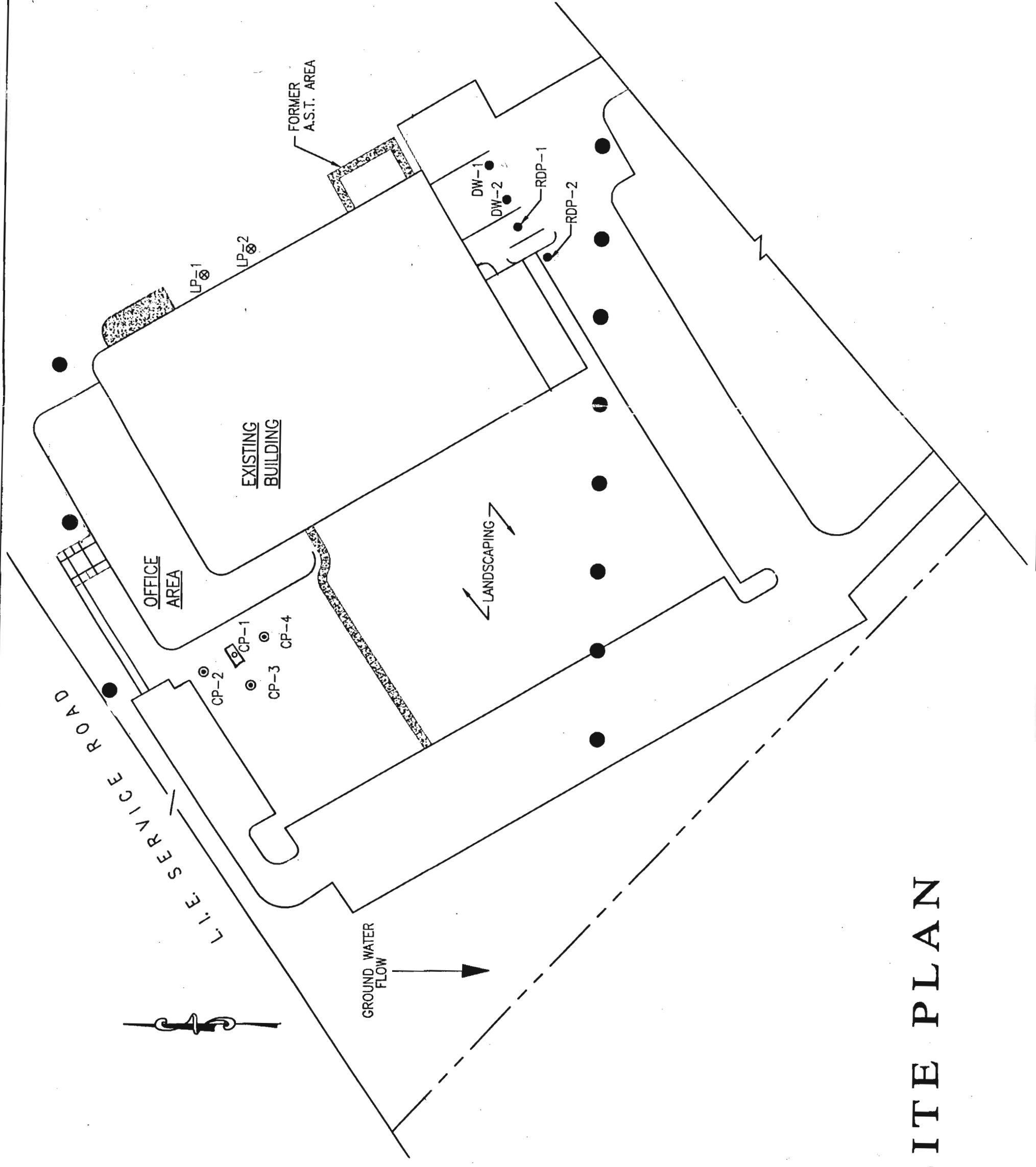
Groundwater samples were collected from each of the borings by utilizing the Geoprobe® Screen Point 15 sampling system, which is designed to obtain groundwater samples at discrete intervals in the subsurface. The groundwater sampling system utilizes a screen with a standard slot size of 0.004 inches, which is sealed inside a 1.5-inch inner diameter steel sheath. The screen is sealed inside the sheath with Neoprene O-rings which prevent infiltration of formation fluids until the desired depth is attained. Once the screen has been driven to the appropriate sampling depth, a series of extension rods are utilized to hold the screen in-place



LOCATION MAP

LEGEND

- PROPERTY LINE
- LOT LINE
- BUILDING OUTLINE
- CONCRETE WALL
- LEACHING POOL
- STORM WATER DRAIN
- ROOF DRAIN
- CESSPOOL
- SEPTIC TANK
- GROUNDWATER SAMPLING POINT



SITE PLAN

while the driving rods are retracted. A total of 41.5 inches of screen is left in contact with the surrounding formation. The groundwater samples are then extracted utilizing disposable lengths of polyethylene hose and a bottom check valve. The tubing is oscillated in an up and down manner which allows for groundwater to be drawn to the surface and placed in laboratory supplied glassware. Individual lengths of hose were discarded between sampling locations to eliminate potential cross contamination. Reusable components of the sampler were decontaminated using an Alconox and tap water wash followed by a series of distilled water rinses.

All of the groundwater samples were immediately transferred into laboratory approved glassware. Each sample container was labeled with the Site location, sample location, date and time of sampling, and the analysis to be performed. The sample containers were then placed in a laboratory supplied cooler and stored on ice. The samples were then delivered to the contract laboratory, Chemtech Consulting Group, within forty-eight (48) hours of being collected. The groundwater samples were submitted for analysis of Target Compound List (TCL) Volatiles using EPA Method 624. The analytical results from the samples will be utilized to evaluate the longitudinal, transverse, and vertical water quality throughout the subject site with respect to possible on-site and off-site sources of groundwater contamination.

#### **4.2 Quality Assurance / Quality Control Measures**

Quality Assurance / Quality Control measures were utilized during the Supplemental Remedial Investigation field work to ensure that the resulting analytical data would accurately represent the subsurface conditions at the Site. A Quality Assurance Project Plan was developed prior to the implementation of the field work and is outlined in section 3.2.3 of the Supplemental Remedial Investigation Work plan.

All non-disposable downhole equipment (i.e., extension rods, drive rods, sampling sheaths, etc.) used during the drilling and sampling were decontaminated prior to use at each location to prevent cross contamination. The decontamination procedures were conducted as follows; equipment was scrubbed in a bath of potable water and low-phosphate detergent; then a potable water rinse; followed by a second bath and then finally the equipment was rinsed with potable water and allowed to air dry.

For each day of sampling, a chain of custody sheet was completed and submitted to the laboratory. The chain of custody sheet included the project name, the sampler's signature, the sampling locations, intervals, and analysis parameters requested. The samples were stored on ice in a cooler. The cooler was secured using a custody seal to ensure that no tampering would occur. The laboratory received all of the samples within forty-eight (48) hours of being collected.

One (1) duplicate sample was obtained per cooler. The duplicate samples were analyzed for TCL Volatiles utilizing EPA Method 624. The duplicate samples which were submitted for analysis were obtained from GSP-5 at 60 feet below grade and from GSP-11 at sixty (60) feet below grade. The laboratory analytical results obtained for the primary samples was identical to the data obtained regarding the duplicate samples. There is no apparent evidence of sample cross-contamination or sample degradation.



## **5.0 ANALYTICAL RESULTS**

The following section provides a summary of the analytical data obtained from the groundwater samples. All of the collected groundwater samples were submitted for analysis of Target Compound List (TCL) Volatiles using EPA Method 624. The samples were submitted to Chemtech Consulting Group. Chemtech Consulting Group is a New York State Department of Health (NYS DOH) Environmental Laboratory Approval Program (ELAP) and US EPA Contract Laboratory Protocol (CLP) certified laboratory, which is located in Englewood, New Jersey. The ELAP CLP certification number for the laboratory is 10624. The analytical data for all of the samples were reported in a NYS DEC Analytical Services Protocol (ASP) Category B deliverables package.

### **5.1 Data Validation**

The analytical results were subject to review and data validation by Mr. Mike Veraldi, who is the Quality Assurance Officer (QAO) for the project. Mr. Veraldi reviewed all analytical data packages which were received as part of the Focused Remedial Investigation, and developed a Data Usability Summary Report (DUSR) as per the requirements of the NYSDEC Guidance for the Development of Data Usability Summary Reports.

Based upon a review of the data packages, Mr. Veraldi indicated that the data was valid and the analytical results could be accurately relied upon. There were minor procedural deficiencies found in two (2) samples, however it is believed that these deficiencies did not contravene the quality of the data. The DUSR for each of the collected soil samples is included with this report as Appendix B.

### **5.2 Applicable Regulatory Guidelines**

The analytical results were compared to the Groundwater Standards listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.

### **5.3 Groundwater Analytical Data - 40 Feet Below Land Surface**

The analytical results for the groundwater samples obtained from GSP-1, GSP-2, GSP-3, GSP-4, GSP-5, GSP-6, GSP-8, GSP-9 and GSP-11 indicated that there were no volatile organic compounds (VOCs) detected above their respective laboratory analytical method detection limit (MDL) of five (5) parts per billion (ppb).

The analytical results for the sample obtained from GSP-7 indicated that 1,1,1-trichloroethane (TCA) was present. Sample point GSP-7 is located directly downgradient of the subject building. The analytical results revealed that TCA was detected below the laboratory analytical MDL at a concentration of 4.9 ppb, which is less than the Groundwater Standard of 5.0 ppb. The concentration of TCA in the sample is an estimated value which is below current NYS DEC Groundwater Standards, as such it was determined that the presence of TCA in the sample does not represent a significant environmental threat. Furthermore, it does not appear that the low concentration of TCA is related to an on-site source of groundwater contamination.

The analytical results for the groundwater sample obtained from GSP-10 revealed that chloroform was present. Sample point GSP-10 is located downgradient of the sanitary system for the subject building. The analytical results revealed that chloroform was detected at a concentration of 10 ppb, which is above the Groundwater Standard of 7.0 ppb. Based upon the fact that chloroform was never utilized by Precision Concepts as well as the fact that it is not a primary contaminant of concern for the subject Site, it is believed that the presence of chloroform in the groundwater is related to a possible off-site source. It should be further noted that representative samples were collected and analyzed from all three (3) on-site septic cesspools as part of the original Focused Remedial Investigation (FRI) which was conducted in June 1999. The analytical results obtained during the initial investigation of the septic system revealed that chloroform was not detected in any of the samples.

The analytical results for the samples obtained from GSP-1 through GSP-6 are summarized in Table 1. The analytical results for the samples obtained from GSP-7 through GSP-11 are summarized in Table 2. The laboratory analytical data packages and the chain of custody are included as Appendix C.

**Table 1**  
**Groundwater Analytical Data - 40 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
Chloromethane	5	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND
Acetone	5	ND	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Analytical Data - 40 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.

**Table 2**  
**Groundwater Analytical Data - 40 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-7	GSP-8	GSP-9	GSP-10	GSP-11
Chloromethane	5	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND
Acetone	5	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	10	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	4.9*	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND

**Table 2**  
**Groundwater Analytical Data - 40 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-7	GSP-8	GSP-9	GSP-10	GSP-11
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.

#### **5.4 Groundwater Analytical Data - 60 Feet Below Land Surface**

The analytical results for the groundwater samples obtained from GSP-1, GSP-2, GSP-3, GSP-4, GSP-5, GSP-7, GSP-8, GSP-10 and GSP-11 indicated that there were no volatile organic compounds (VOCs) detected above their respective laboratory analytical method detection limit (MDL) of five (5) parts per billion (ppb).

The analytical results for the sample obtained from GSP-6 indicated that there were no VOCs detected above their respective MDL, however there was one (1) tentatively identified compound (TIC) present at a concentration of 6.8 ppb. Please note that the analytical results listed this as an unknown compound. Sample point GSP-6 is located downgradient of the subject building. It was determined that the presence of the unknown compound in the sample does not represent a significant environmental threat. The presence of the unknown compound may be attributed to a laboratory error. Furthermore, it does not appear that the low concentration of the unknown compound is related to an on-site source of groundwater contamination.

The analytical results for the groundwater sample obtained from GSP-9 revealed that chloroform was present. Sample point GSP-9 is located downgradient of the sanitary system for the subject building. The analytical results revealed that chloroform was detected at a concentration of 2.4 ppb, which is less than the Groundwater Standard of 7.0 ppb. The concentration of chloroform in the sample is an estimated value. Based upon the fact that chloroform was never utilized by Precision Concepts as well as the fact that it is not a primary contaminant of concern for the subject Site, it is believed that the presence of chloroform in the groundwater is related to a possible off-site source. It should be further noted that representative samples were collected and analyzed from all three (3) on-site septic cesspools as part of the original Focused Remedial Investigation (FRI) which was conducted in June 1999. The analytical results obtained during the initial investigation of the septic system revealed that chloroform was not detected in any of the samples.

The analytical results for the samples obtained from GSP-1 through GSP-6 are summarized in Table 3. The analytical results for the samples obtained from GSP-7 through GSP-11 are summarized in Table 4. The laboratory analytical data packages and the chain of custody are included as Appendix C.



**Table 3**  
**Groundwater Analytical Data - 60 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
Chloromethane	5	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND
Acetone	5	ND	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND

**Table 3**  
**Groundwater Analytical Data - 60 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.

**Table 4**  
**Groundwater Analytical Data - 60 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-7	GSP-8	GSP-9	GSP-10	GSP-11
Chloromethane	5	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND
Acetone	5	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	2.4*	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND

47.000

3.00

**Table 4**  
**Groundwater Analytical Data - 60 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-7	GSP-8	GSP-9	GSP-10	GSP-11
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.

## **5.5 Groundwater Analytical Data - 80 Feet Below Land Surface**

The analytical results for the groundwater samples obtained from GSP-2, GSP-3, GSP-4, GSP-5, GSP-6, GSP-7, GSP-9, GSP-10 and GSP-11 indicated that there were no volatile organic compounds (VOCs) detected above their respective laboratory analytical method detection limit (MDL) of five (5) parts per billion (ppb).

The analytical results for the sample obtained from GSP-1 indicated that acetone was present. Sample point GSP-1 is located at the northeast upgradient corner of the subject Site. The analytical results revealed that acetone was present at a concentration of 20 ppb, which is above the Groundwater Standard of 5.0 ppb. Based upon the fact that this sample was collected upgradient of the subject building as well all of the potential point sources of contamination at the Site, it was determined that the presence of acetone in the groundwater is related to an off-site groundwater contamination plume. There was no evidence nor analytical data which would indicate that the presence of acetone in the groundwater is related to an on-site contamination source.

The analytical results for the groundwater sample obtained from GSP-8 revealed that there were no VOCs detected above their respective MDL, however there was one (1) tentatively identified compound (TIC) present at a concentration of 6.1 ppb. Please note that the analytical results listed this compound as 2,5-dihydrofuran. Sample point GSP-8 is located downgradient of the subject building. Based upon the depth at which the compound was detected as well as the fact that it is not a primary contaminant of concern for the subject Site, it is believed that the presence of 2,5-dihydrofuran in the groundwater is related to a possible off-site source of contamination.

The analytical results for the samples obtained from GSP-1 through GSP-6 are summarized in Table 5. The analytical results for the samples obtained from GSP-7 through GSP-11 are summarized in Table 6. The laboratory analytical data packages and the chain of custody are included as Appendix C.

**Table 5**  
**Groundwater Analytical Data - 80 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
Chloromethane	5	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND
Acetone	5	20	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND

**Table 5**  
**Groundwater Analytical Data - 80 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-1	GSP-2	GSP-3	GSP-4	GSP-5	GSP-6
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.



**Table 6**  
**Groundwater Analytical Data - 80 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

<b>ANALYTICAL PARAMETERS</b>	<b>NYS DEC Groundwater Standard</b>	<b>GSP-7</b>	<b>GSP-8</b>	<b>GSP-9</b>	<b>GSP-10</b>	<b>GSP-11</b>
Chloromethane	5	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND
Acetone	5	ND	ND	ND	ND	ND
Carbon Disulfide	5	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
2-Butanone	5	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND

**Table 6**  
**Groundwater Analytical Data - 80 Feet Below Land Surface**  
**Volatile Organic Compounds (VOCs) - EPA Method 624**

ANALYTICAL PARAMETERS	NYS DEC Groundwater Standard	GSP-7	GSP-8	GSP-9	GSP-10	GSP-11
4-methyl-2-pentanone	5	ND	ND	ND	ND	ND
2-Hexanone	5	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND
m/p Xylene	5	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND

- Notes:
1. All results are in ug/Kg (parts per billion - ppb).
  2. ND = Non-detectable above analytical method detection limit (MDL).
  3. Groundwater Standards are listed in the NYS DEC Water Quality Regulations - Surface Water and Groundwater Classifications and Standards NYCRR Title 6, Chapter X, Parts 700-705.
  4. \* = Compound was detected below the MDL and is an estimated value.

## 6.0 CONCLUSIONS & RECOMMENDATIONS

The field observations and analytical data obtained during the performance of the Supplemental Remedial Investigation were utilized to determine whether or not the operations formerly conducted by Precision Concepts have impacted the subsurface groundwater at the Site and the surrounding neighborhood. The following conclusions were drawn based upon the data obtained during the Supplemental Remedial Investigation activities.

The primary contaminant of concern for the investigation is 1,1,1-trichloroethane (TCA). The analytical results revealed that TCA was detected in only one (1) sample. The analytical results for the sample obtained from GSP-7 indicated that 1,1,1-trichloroethane (TCA) was present. The analytical results revealed that TCA was detected below the laboratory analytical MDL at a concentration of 4.9 ppb, which is less than the Groundwater Standard of 5.0 ppb. The concentration of TCA in the sample is an estimated value which is below current NYS DEC Groundwater Standards, as such it was determined that the presence of TCA in the sample does not represent a significant environmental threat. The original suspected on-site source of TCA contamination at the site was believed to be a leaching pool located along the eastern side of the subject building. Please note that the location of GSP-7 is cross-gradient from the original suspected contamination source. In addition, it should be noted that representative soil samples were collected from the east side leaching pool during the performance of the FRI. The analytical results for the samples obtained from the east side leaching pool did not indicated the presence of TCA. Based upon the fact that TCA was not detected in any other samples as well as the fact that the location of GSP-7 is cross-gradient from the originally suspected contamination source at the Site, it was determined that the low concentration of TCA is not related to an on-site source of groundwater contamination.

The analytical results for the sample obtained from GSP-1 indicated that acetone was present. Sample point GSP-1 is located at the northeast upgradient corner of the subject Site. The analytical results revealed that acetone was present at a concentration of 20 ppb, which is above the Groundwater Standard of 5.0 ppb. Based upon the fact that this sample was collected upgradient of the subject building as well all of the potential point sources of contamination at the Site, it was determined that the presence of acetone in the groundwater is related to an off-site groundwater contamination plume. There was no evidence nor analytical data which would indicate that the presence of acetone in the groundwater is related to an on-site contamination source.

The analytical results for the sample obtained from GSP-6 indicated that there were no VOCs detected above their respective MDL, however there was one (1) tentatively identified compound (TIC) present at a concentration of 6.8 ppb. Please note that the analytical results listed this as an unknown compound. Sample point GSP-6 is located downgradient of the subject building. It was determined that the presence of the unknown compound in the sample does not represent a significant environmental threat. The presence of the unknown compound may be attributed to a laboratory error. Based upon the depth at which the sample was collected as well as the fact that it was not detected in any other groundwater samples, it was determined that the low concentration of the unknown compound is not related to an on-site source of groundwater contamination.

The analytical results for the groundwater sample obtained from GSP-9 at sixty (60) feet below land surface revealed that chloroform was present at a concentration of 2.4 ppb. In addition, the analytical results for the groundwater sample obtained from GSP-10 at forty (40) feet below land surface revealed that chloroform was present at a concentration of 10 ppb, which is above the Groundwater Standard of 7.0 ppb. Based upon the fact that chloroform was never utilized by Precision Concepts as well as the fact that it is not a primary contaminant of concern for the subject Site, it is believed that the presence of chloroform in the groundwater is related to a possible off-site source of contamination. It should be further noted that representative samples were collected and analyzed from all three (3) on-site septic cesspools as part of the original Focused Remedial Investigation conducted in June 1999. The analytical results obtained during the initial investigation of the septic system revealed that chloroform was not detected in any of the samples.

The analytical results for the groundwater sample obtained from GSP-8 revealed that there were no VOCs detected above their respective MDL, however there was one (1) tentatively identified compound (TIC) present at a concentration of 6.1 ppb. Please note that the analytical results listed this compound as 2,5-dihydrofuran. Based upon the depth at which the compound was detected as well as the fact that it is not a primary contaminant of concern for the subject Site, it is believed that the presence of 2,5-dihydrofuran in the groundwater is related to a possible off-site source of contamination.

Based upon the results of the Supplemental Remedial Investigation it is believed that the operations formerly conducted at the site did not lead to the TCA contamination plume which had impacted the residential neighborhoods down-gradient of the Site. There are no further investigation activities recommended with regard to the Site. The Site should be de-listed from the NYS DEC SHWS listing.

## 6.1 **Interim Remedial Measure (IRM)**

There was no significant source of on-site contamination found during the performance of the investigation activities. Therefore, there are no IRMs proposed as part of this report.

**SITE PHOTOGRAPHS**



**1. View of upgradient groundwater boring installation.**



**2. View of the north side of the subject site.**





**3. View of groundwater boring being installed downgradient of the subject building.**



**4. View of a groundwater boring being installed along the western border of the subject site.**



Appendix  
B

**DATA USABILITY SUMMARY REPORTS**

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: <b>GSP-1 (60')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/24/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1928-02</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: <b>GSP-1 (80')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1928-03</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: <b>GSP-2 (40')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1928-04</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

**RE: Data Validation samples Lab ID L1928-01 thru L1928-23**

Client Sample ID: <b>GSP-2 (60')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1928-05</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-2 (80')**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-06**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/08/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-3 (40')**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-07**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-3 (60')**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-08**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.



RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: <b>GSP-3 (80')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1929-09</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

Samples Lab ID L1928-01 thru L1928-23

RE: Data V#  
 Project #: GSP-4 (40')  
 Matrix: L1928ASP  
 Tests requested: Aqueous  
 Laboratory ID #: EPA 8260  
 L1928-10  
 Cleanup procedure: N/A

Sample collected by:  
 Date sample collected:  
 Date sample received:  
 Date extracted:  
 Date analyzed:  
 Extraction method:

Client  
 10/26/00  
 10/27/00  
 N/A  
 11/03/00  
 N/A

EPA 8260

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody			X		X	
Sample holding time			X		X	
Sample analysis time			X		X	
Sample preservation 4°C						
Proper analytical method cited 8260					X	
Column used DB624		X			X	
Quantitation Report		X			X	
BFB performance check					X	
GC/MS tuning frequency (24 hr)					X	
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-4 (60)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-11**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time				X	X	
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- Sample holding time exceeded.

No

*Same detector  
 other samples*

*7 holds  
 1/2/01*

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-4 (80')**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-12**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-5 (80')**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-15**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: <b>GSP-5 (60' Dup)</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1928ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1928-16</b>	Date analyzed: <b>11/03/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

**RE: Data Validation samples Lab ID L1928-01 thru L1928-23**

Client Sample ID: **GSP-6 (40)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-17**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-6 (60)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-18**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/03/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.



RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-6 (80)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-19**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/04/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

**RE: Data Validation samples Lab ID L1928-01 thru L1928-23**

Client Sample ID: **GSP-7 (40)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-20**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/04/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-7 (60)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-21**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/04/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **GSP-7 (80)**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-22**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/04/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1928-01 thru L1928-23

Client Sample ID: **Trip Blank**  
 Chemtech Project #: **L1928ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1928-23**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/04/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

Mr. Mat Brockel  
 GCI Inc.  
 125 Baylis Road Suite 330  
 Melville, New York 11747

December 13, 2000

RE: Data Validation samples L1929-01 thru 14

Client Sample ID: <b>GSP-8 (40')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1929ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1929-01</b>	Date analyzed: <b>11/02/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1929-01 thru L1929-14

Client Sample ID: <b>GSP-8 (60')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1929ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1929-02</b>	Date analyzed: <b>11/02/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1929-01 thru L1929-14

Client Sample ID: **GSP-8 (80')**  
 Chemtech Project #: **L1929ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1929-03**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/02/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.



**RE: Data Validation samples Lab ID L1929-01 thru L1929-14**

Client Sample ID: <b>GSP-9 (40')</b>	Sample collected by: <b>Client</b>
Chemtech Project #: <b>L1929ASP</b>	Date sample collected: <b>10/26/00</b>
Sample Matrix: <b>Aqueous</b>	Date sample received: <b>10/27/00</b>
Analysis requested: <b>EPA 8260</b>	Date extracted: <b>N/A</b>
Laboratory ID #: <b>L1929-04</b>	Date analyzed: <b>11/02/00</b>
Cleanup procedure: <b>N/A</b>	Extraction method: <b>N/A</b>

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1929-01 thru L1929-14

Client Sample ID: **GSP-9 (60')**  
 Chemtech Project #: **L1929ASP**  
 Sample Matrix: **Aqueous**  
 Analysis requested: **EPA 8260**  
 Laboratory ID #: **L1929-05**  
 Cleanup procedure: **N/A**

Sample collected by: **Client**  
 Date sample collected: **10/26/00**  
 Date sample received: **10/27/00**  
 Date extracted: **N/A**  
 Date analyzed: **11/02/00**  
 Extraction method: **N/A**

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

RE: Data Validation samples Lab ID L1929-01 thru L1929-14

Client Sample ID: Trip Blank)  
 Chemtech Project #: L1929ASP  
 Sample Matrix: Aqueous  
 Analysis requested: EPA 8260  
 Laboratory ID #: L1929-14  
 Cleanup procedure: N/A

Sample collected by: Client  
 Date sample collected: 10/26/00  
 Date sample received: 10/27/00  
 Date extracted: N/A  
 Date analyzed: 11/03/00  
 Extraction method: N/A

**EPA 8260**

Item	Pass	Fail	Met	Not met	Acceptable	Not acceptable
Sample chain of custody					X	
Sample holding time			X			
Sample analysis time			X			
Sample preservation 4°C			X			
Proper analytical method cited 8260					X	
Column used DB624					X	
Quantitation Report					X	
BFB performance check	X					
GC/MS tuning frequency (24 hr)	X					
SMC compound (ISTD) recovery					X	
SMC compound (surrogate) recovery					X	
GC/MS calibration					X	
Method Blank					X	
Five point calibration 5,20,50,100,250					X	
Calibration summary					X	
Surrogate summary					X	
ISTD summary					X	
Injection log sequence					X	
Matrix spike (MS)					X	
Matrix spike duplicate (MSD)					X	

**Explanation of non-conforming parameters:**

- No Non-conformities found.

Please check one:

110 Route 4  
Englewood, NJ 07631  
(201) 567-6868  
Fax (201) 567-1333

205 Campus Plaza 1  
Edison, NJ 08837  
(732) 225-4111  
Fax (732) 225-4110

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

### CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: GCI, Inc. STATE: Ny ZIP: 11788  
 ADDRESS: 1092 Motor Parkway  
 CITY: Hempstead  
 ATTENTION: Matt Beckel

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_  
 FAX: \_\_\_\_\_  
 DAYS: 14  
 DAYS: 21  
 DAYS: \_\_\_\_\_  
 TO BE APPROVED BY CHEMTECH  
 NORMAL TURNAROUND TIME - 14 DAYS

### PROJECT INFORMATION

PROJECT NAME: 26 Precision Drive  
 PROJECT NO.: 960155  
 PROJECT MANAGER: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_  
 DATA DELIVERABLE INFORMATION  
 RESULTS ONLY  
 RESULTS + QC  
 NJ REDUCED  
 NJ CLP  
 EDD FORMAT: \_\_\_\_\_  
 USE P&O/PLP  
 NYS ASP "B"  
 NYS ASP "A"  
 EDD

### BILLING INFORMATION

BILL TO: GCI, Inc. PO #:  
 ADDRESS:  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

### ANALYSIS

1	2	3	4	5	6	7	8	9
TCLV4-179797								

### DATA TURNAROUND INFORMATION

CHEMTECH SAMPLE ID

PROJECT IDENTIFICATION

COMMENTS

CHEMTECH SAMPLE ID	PROJECT IDENTIFICATION	RECEIVED BY	DATE/TIME	RECEIVED BY	DATE/TIME	RECEIVED FOR LAB BY	DATE/TIME	PRESERVATIVES									COMMENTS		
								A	B	C	D	E	F	7	8	9			
GSP-10 (80')			10/25/00 3:15					A											
GSP-11 (40')			10/26/00 9:20					X											
GSP-11 (60' Duplicate)			10/26/00 10:05					X											
GSP-11 (60')			10/26/00 10:00					X											
GSP-11 (80')			10/26/00 10:45					X											

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY: <u>Matt Beckel</u>	DATE/TIME: <u>10/26/00 10:00</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/26/00 10:00</u>
RELINQUISHED BY: _____	DATE/TIME: _____	RECEIVED BY: _____	DATE/TIME: _____
RELINQUISHED BY: _____	DATE/TIME: _____	RECEIVED FOR LAB BY: _____	DATE/TIME: _____



110 Route 4  
 Englewood, NJ 07631  
 (201) 567-6868  
 Fax (201) 567-1333

205 Campus Plaza 1  
 Edison, NJ 08837  
 (732) 225-4111  
 Fax (732) 225-4110

CHEMTECH JOB NO.:  
 CHEMTECH QUOTE NO.:

### CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: GCI, Inc.  
 ADDRESS: 1092 Motor Pkwy STATE: NJ ZIP: 11788  
 CITY: Hempstead  
 ATTENTION: Matt Boeckel  
 PHONE: 631-851-1600 FAX: 631-851-0535

### PROJECT INFORMATION

PROJECT NAME: 26 Precision Drive  
 PROJECT NO.: 960155  
 PROJECT MANAGER: Matt Boeckel  
 LOCATION: Shirley, N.Y.  
 PHONE: 631-851-1600 FAX: 631-851-0535

### BILLING INFORMATION

BILL TO: GCI, Inc. PO #:  
 ADDRESS: 1092 Motor Pkwy  
 CITY: Hempstead STATE: NJ ZIP: 11788  
 ATTENTION: Matt Boeckel PHONE: 631-851-1600

### DATA TURNAROUND INFORMATION

FAX: \_\_\_\_\_ DAYS \*  
 HARD COPY: \_\_\_\_\_ DAYS \*  
 EDD: \_\_\_\_\_ DAYS \*  
 \* TO BE APPROVED BY CHEMTECH  
 \*\* NORMAL TURNAROUND TIME - 14 DAYS!

### DATA DELIVERABLE INFORMATION

RESULTS ONLY  
 RESULTS + QC  
 NJ REDUCED  
 NJ CLP  
 EDD FORMAT:  
 USEPA CLP  
 NYS ASP "B"  
 NYS ASP "A"  
 EDD

ANALYSIS  
 100101 + 5217 799 771  
 1 2 3 4 5 6 7 8 9

CHEMTECH SAMPLE ID	PROJECT IDENTIFICATION
1.	GSP-1 (40')
2.	GSP-1 (60')
3.	GSP-1 (80')
4.	GSP-2 (40')
5.	GSP-2 (60')
6.	GSP-2 (80')
7.	GSP-3 (40')
8.	GSP-3 (60')

SAMPLE MATRIX	SAMPLE TYPE	SAMPLE COLLECTION		OR BOTTLES
		DATE	TIME	
L	✓	10/23/00	9:25 AM	2
L	✓	10/23/00	10:20	2
L	✓	10/23/00	11:00	2
L	✓	10/23/00	12:30 PM	2
L	✓	10/23/00	12:45	2
L	✓	10/23/00	1:30	2
L	✓	10/23/00	3:00	2
L	✓	10/23/00	3:45	2

PRESERVATIVES	COMMENTS								
	1	2	3	4	5	6	7	8	9
A									

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. <u>Matt Boeckel</u>	10/23/00 5:00	1. <u>[Signature]</u>	10/23/00
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
2.		2.	
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:	DATE/TIME:
3.		3.	

Conditions of bottles or coolers at receipt:  Compliant  Non-Compliant  Temp. of Cooler \_\_\_\_\_  
 Comments:  
 Page 1 of 3 Shipment Complete: Yes \_\_\_\_\_ No \_\_\_\_\_





## CHAIN OF CUSTODY RECORD

Please check one:

110 Route 4  
Englewood, NJ 07631  
(201) 567-6868  
Fax (201) 567-1333

205 Campus Plaza 1  
Edison, NJ 08837  
(732) 225-4111  
Fax (732) 225-4110

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

### CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: GCI, Inc.

ADDRESS:

CITY:

STATE:

ZIP:

ATTENTION:

PHONE:

FAX:

### DATA TURNAROUND INFORMATION

FAX: \_\_\_\_\_ DAYS \*  
HARD COPY: \_\_\_\_\_ DAYS \*  
EDD: \_\_\_\_\_ DAYS \*

TO BE APPROVED BY CHEMTECH

\* NORMAL TURNAROUND TIME - 14 DAYS ✓

### PROJECT INFORMATION

PROJECT NAME: 26 Precision Drive

PROJECT NO.: 960155

PROJECT MANAGER:

LOCATION:

PHONE:

FAX:

### DATA DELIVERABLE INFORMATION

RESULTS ONLY  
 RESULTS + QC  
 NJ REDUCED  
 NJ CLP  
 EDD FORMAT:

USEPA CLP

NY'S ASP "B"

NY'S ASP "A"

EDD

### BILLING INFORMATION

BILL TO: GCI, Inc. PO #:

ADDRESS:

CITY:

STATE:

ZIP:

ATTENTION:

PHONE:

ANALYSIS

(201) + 567-1333  
 1  
2  
3  
4  
5  
6  
7  
8  
9

### CHEMTECH SAMPLE ID

### PROJECT IDENTIFICATION

GSP-6 (40)  
GSP-6 (60)  
GSP-6 (80)  
GSP-7 (40)  
GSP-7 (60)  
GSP-7 (80)  
TRIP BLANK

### SAMPLE TYPE

COM GRAB

DATE

TIME

# OF BOTTLES

✓ 10/24/07 11:30 2  
✓ 10/24/07 2:50 2  
✓ 10/24/07 3:40 2  
✓ 10/24/07 3:20 2  
✓ 10/24/07 4:00 2  
✓ 10/24/07 4:30 2

### PRESERVATIVES

1 2 3 4 5 6 7 8 9

A

1  
2  
3  
4  
5  
6  
7  
8  
9

### COMMENTS

← Specify Preservatives

A-HCl

B-HNO<sub>3</sub>

C-H<sub>2</sub>SO<sub>4</sub>

D-NaOH

E-ICE

F-Other

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: [Signature]  
DATE/TIME: 10/24/07 5:00

RECEIVED BY: [Signature]  
DATE/TIME: 10/24/07

RECEIVED BY: [Signature]  
DATE/TIME: 10/24/07

RECEIVED FOR LAB BY: \_\_\_\_\_  
DATE/TIME: \_\_\_\_\_

Conditions of bottles or coolers at receipt:  Compliant  Non-Compliant  Temp. of Cooler \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

RECEIVED FOR LAB BY: \_\_\_\_\_

Page 3 of 3

Shipment Complete: Yes \_\_\_\_\_ No \_\_\_\_\_

## **LABORATORY REPORTS**



**Please see Addendum 1 and Addendum 2**